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Experion

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Reference

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About This Document

Provides information about parameters associated with configuration forms for function blocks in Control Builder.

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References

The following list identifies all documents that may be sources of reference for material discussed in this publication.

Document Title
Control Builder Components Reference EP-DCX364

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World Wide Web

The following Honeywell web sites may be of interest to Process Solutions customers.

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Corporate	http://www.honeywell.com
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Symbol Definitions

The following table lists those symbols used in this document to denote certain conditions.

Symbol	Definition
	ATTENTION: Identifies information that requires special consideration.
	TIP: Identifies advice or hints for the user, often in terms of performing a task.
	REFERENCE -EXTERNAL: Identifies an additional source of information outside of the bookset.
	REFERENCE - INTERNAL: Identifies an additional source of information within the bookset.
CAUTION	Indicates a situation which, if not avoided, may result in equipment or work (data) on the system being damaged or lost, or may result in the inability to properly operate the process.
	CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. **CAUTION** symbol on the equipment refers the user to the product manual for additional information. The symbol appears next to required information in the manual.
	WARNING: Indicates a potentially hazardous situation, which, if not avoided, could result in serious injury or death. **WARNING** symbol on the equipment refers the user to the product manual for additional information. The symbol appears next to required information in the manual.
	WARNING, Risk of electrical shock: Potential shock hazard where HAZARDOUS LIVE voltages greater than 30 Vrms, 42.4 Vpeak, or 60 VDC may be accessible.
	ESD HAZARD: Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices.

Symbol	Definition
	Protective Earth (PE) terminal: Provided for connection of the protective earth (green or green/yellow) supply system conductor.
	Functional earth terminal: Used for non-safety purposes such as noise immunity improvement. NOTE: This connection shall be bonded to Protective Earth at the source of supply in accordance with national local electrical code requirements.
	Earth Ground: **Functional earth connection.** NOTE: This connection shall be bonded to Protective Earth at the source of supply in accordance with national and local electrical code requirements.
	Chassis Ground: Identifies a connection to the chassis or frame of the equipment shall be bonded to Protective Earth at the source of supply in accordance with national and local electrical code requirements.

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Figures

O*xxxx* Parameters

OFFNRMALM.FL

Specific to Block(s)	Flag, Push.
Description	Off Normal Alarm Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	NORMAL, OFFNRMALM.PR, OFFNRMALM.SV, PUSHSP, PV.
Remarks	When On, it indicates that the Flag function block is not currently in the normal state.

Specific to Block(s)	DevCtl
Description	Off Normal Alarm Flag - Indicates the 'OFF-Normal' condition. The Device is 'OFF-Normal' wherever the Process Variable (PV) does not equal OPREQ.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE

Related Parameters	BYPASS, CMDDISALM.FL, CMDDISALM.PR, CMDDISALM.SV, CMDDISALM.TM[0..2], GOPREQ, GPV, HIALM, OPREQ, PUSHSP, PV.
Remarks	InActive when GOPREQ is Null.

OFFNRMALM.PR

Specific to Block(s)	Flag, Push.
Description	Off Normal Alarm Priority
Data Type	Enumeration ALMPR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OFFNRMALM.FL, OFFNRMALM.SV.
Remarks	

Specific to Block(s)	DevCtl
Description	Off Normal Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	None (0)
Config Load	Yes

Access Lock	Engineer
Residence	CEE
Related Parameters	GOPREQ OPREQ.
Remarks	InActive when GOPREQ is Null.

OFFNRMALM.SV

Specific to Block(s)	DevCtl, Flag, Push.
Description	Off Normal Alarm Severity
Data Type	Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OFFNRMALM.FL, OFFNRMALM.PR. DevCtl Only: GOPREQ, OPREQ.
Remarks	DevCtl only: InActive when GOPREQ is Null.

OFFNRMFL

Specific to Block(s)	DICHANNEL (PM I/O)
Description	Off-Normal Alarm Flag. Shows whether an off-normal alarm has been detected at this point or not.
Data Type	Boolean
Range	Off: No alarm exists. On: Current PV state is not the same as the configured PVNORMAL state.
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	This parameter is only exposed if ALMOPT is OFFNORML.

OFFPULSE

Specific to Block(s)	DOCHANNEL (PM I/O and Series C I/O)
Description	Off Pulse Command. Lets users specify how long a status output (SO) is to be set to Off in seconds. At the end of the OFFPULSE time, SO is set to On.
Data Type	64-Bit Real Number
Range	0.0 TO 60.0 seconds
Default	
Config Load	No
Access Lock	Operator
Residence	IOM
Related Parameters	
Remarks	An OFFPULSE setting of 0.0, immediately sets the SO to On. The DOTYPE must be configured as STATUS to use OFFPULSE functionality. When the OFFPULSE pin is connected to a Device Control's PO pin, the user must change the OP of the Device Control to start an OFFPULSE. The user cannot set a value to the OFFPULSE parameter of the DO Channel directly. Writes to SO and ONPULSE will also be rejected. When the SO, ONPULSE, and OFFPULSE pins are not connected to a Function Block, the user can store a value to the OFFPULSE parameter and start an OFF Pulse with the entered pulse width. This parameter exists in the IOM as a 32-bit floating-point value, however it is converted into a 64-bit floating-point value for convenience when wiring to other block parameters in CB.

OHMOFFSET

Specific to Block(s)	AIC
Description	10-Ohm Offset - Corrective value for use only with 10-ohm copper RTD.
Data Type	32-Bit Integer
Range	-99 to 99
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CALBIAS[0..numChans-1], SENSORTYPE[0..numChans-1].
Remarks	OHMOFFSET can only be configured on the RTD input module, and is only configurable when SENSORTYPE is set equal to 10_Cop_427.

OHMOFFSET[0..numChans-1]

Specific to Block(s)	AIM
Description	10-Ohm Offset - Corrective value for use only with 10-ohm copper RTD.
Data Type	32-Bit Integer
Range	-99 to 99
Default	0
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	CALBIAS[0..numChans-1], SENSORTYPE[0..numChans-1].
Remarks	OHMOFFSET can only be configured on the RTD input module.

OI[0..2]

Specific to Block(s)	DevCtl
Description	Override Interlock
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Engineer/ Other Function Block (see Remarks)
Residence	CEE
Related Parameters	BYPASS, BYPPERM, GOP, NUMDOUTS, OIALM.FL[0..2], OIALM.OPT[0..2], OIALM.PR[0..2], OIALM.SV[0..2], OP, SAFEOP, SI, SIALM.FL, SIALM.OPT, SIALM.PR, SIALM.SV.
Remarks	Engineer can change only if function block is inactive. OI(x) is illegal if NUMDOUTS is less-than x. These interlocks are not active is BYPASS is set On. The priority of the OI interlocks is determined by SAFEOP. • If SAFEOP = S0, then priority is SI, 0, 1, 2. • If SAFEOP = S1, then priority is SI, 1, 0, 2. • If SAFEOP = S2, then priority is SI, 2, 0, 1.

OIALM.FL[0..2]

Specific to Block(s)	DevCtl
Description	Override Interlock Alarm Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	BYPASS,

	BYPPERM, HIALM, INALM, NUMDOUTS, OIALM.FL[0..2], OIALM.PR[0..2], OIALM.SV[0..2].
Remarks	Always Off, if BYPASS is set On.

OIALM.OPT[0..2]

Specific to Block(s)	DevCtl
Description	Override Interlock Alarm Option.
Data Type	Enumeration OVRDALOP
Range	No (0) Yes (1)
Default	N/A
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMDOUTS
Remarks	Illegal if NUMDOUTS = 0.

OIALM.PR[0..2]

Specific to Block(s)	DevCtl
Description	Override Interlock Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMDOUTS, OI[0..2], OIALM.FL[0..2],

	OIALM.OPT[0..2], OIALM.SV[0..2].
Remarks	Illegal if NUMDOUTS = 0.

OIALM.SV[0..2]

Specific to Block(s)	DevCtl
Description	Override Interlock Alarm Severity
Data Type	16-Bit Integer
Range	0 to 255
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMDOUTS, OI[0..2], OIALM.FL[0..2], OIALM.OPT[0..2], OIALM.PR[0..2].
Remarks	Illegal if NUMDOUTS = 0.

OLDAV

Specific to Block(s)	Totalizer, Pulse Input Totalizer
Description	Old Accumulated Value - The value of the Process Variable (PV), just before it was reset. This parameter makes the old value available to those functions that need it.
Data Type	64-Bit Real Number
Range	Greater-than or equal-to 0.0
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

ONPULSE

Specific to Block(s)	DOCHANNEL (PM I/O and Series C I/O)
Description	On Pulse Command. Lets users specify how long a status output (SO) is to be set to On in seconds. At the end of the ONPULSE time, SO is set to Off.
Data Type	64-Bit Real Number
Range	0.0 TO 60.0 seconds
Default	N/A
Config Load	No
Access Lock	Operator
Residence	IOP
Related Parameters	
Remarks	An ONPULSE configuration of 0.0, immediately sets the SO to Off. The DOTYPE must be configured as STATUS to use ONPULSE functionality. When the ONPULSE pin is connected to a Device Control's PO pin, the user must change the OP of the Device Control to start an ONPULSE. The user cannot set a value to the ONPULSE parameter of the DO Channel directly. Writes to SO and OFFPULSE will also be rejected. When the SO, ONPULSE, and OFFPULSE pins are not connected to a Function Block, the user can store a value to the ONPULSE parameter and start an ON Pulse with the entered pulse width. The value read indicates the last specified pulse width. This parameter exists in the IOM as a 32-bit floating-point value, however it is converted into a 64-bit floating-point value for convenience when wiring to other XPKS parameters in CB.

OP

Specific to Block(s)	All RegCtl Blocks except Fanout: PID, PIDER, PIDFF, PID_PL, RatioCtl, RemCas, RatioBias, RegCalc, Switch, AutoMan, OvrdSel, IncrSummer, RegSummer, and RampSoak.
Description	Output Value (in Percent)
Data Type	64-Bit Real Number
Range	OPEXLOLM to OPEXHILM
Default	0.0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	OPEU
Remarks	Output Value (OP) is represented in percentage of the Calculated Value (CV) range (CVEULO and CVEUHI).

Specific to Block(s)	DevCtl	
Description	Commanded Output State	
Data Type	String	
Range	Length: 12 characters	
Default	STATETEXT[4]	
Config Load	No	
Access Lock	Operator	
Residence	CEE	
Related Parameters	BYPASS, CMDDISALM.FL, CMDDISALM.PR, CMDDISALM.SV, CMDDISALM.TM[0..2], CMDFALALM.FL, CMDFALALM.PR, CMDFALALM.SV, CMDFALALM.TM[0..2], GOP, GOPFINAL, GOPREQ, MOMSTATE,	NUMDOUTS, NUMSTATES, OI[0..2]. OPDOMAP[0..3][1..3], OPFINAL, OPREQ, SAFEOP, SAFEREDTAG, SI, STATETEXT[0..6], UNCMDALM.FL, UNCMDALM.PR, UNCMDALM.SV.
Remarks	OP is a String set equal to STATETEXT[GOP]. Access is illegal, if NUMDOUTS = 0.	

	STATETEXT[6] ['State2'] is illegal if NUMSTATES = 2. STATETEXT[2] ['Active'] is illegal if SAFEOP = S2.

Specific to Block(s)	PWM Channel
Description	Output Value in percent
Data Type	Real Number
Range	N/A
Default	0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O); AOCHANNEL, (Series C I/O)
Description	Output. Defines the output value from this point in percent.
Data Type	64-Bit Real Number
Range	-6.9 to 106.9 percent
Default	-6.9 percent of Full Scale
Config Load	No
Access Lock	Operator
Residence	IOM
Related Parameters	
Remarks	The control mode must be Manual before an operator can adjust the OP manually.

Specific to Block(s)	DOCHANNEL (PM I/O)
Description	PWM Output. Specifies the percent on-time for a DOTYPE PWM output. (For DOTYPE STATUS output, use SO.)
Data Type	64-Bit Real Number
Range	0.0 to 100.0 percent
Default	0.0 percent
Config Load	No
Access Lock	Operator
Residence	IOP
Related Parameters	PERIOD

Remarks	Pulse on-time is calculated as follows. For DIRECT action: Pulse On-Time = (OP percent x PERIOD) / 100 For REVERSE action: Pulse On-Time = (100 percent - OP percent x PERIOD) / 100

Specific to Block(s)	DOCHANNEL, Series C DOCHANNEL
Description	PWM Output
Data Type	FLOAT64
Range	0.0 to 100.0 %
Default	0.0 %
Config Load	No
Access Lock	Operator
Residence	IOM
Related Parameters	Refer to PERIOD parameter for length of period.
Remarks	The OP is the percent on time for the pulsed output. When the channel is configured as PWM and is connected to a Function Block, the value indicates the fetched value from the upstream Function Block. The value can be changed by changing the value in the upstream Function Block. When the channel is configured as PWM and the OP pin is not connected to a Function Block, the operator can store a value to this parameter and control the PWM. When the channel is configured as STATUS, the value indicates NaN, and user cannot control the value. For direct action, pulse-on time is calculated as follows: Pulse On-Time = (OP% * PERIOD) / 100 For reverse action: Pulse On-Time = (100% - OP% * PERIOD) / 100

OP[0..7]

Specific to Block(s)	Chassis HART AO IOM
Description	Output Value - Provides the output value of the 8 IOM channels which are updated by channel block
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OP[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) Values (in percent) for function blocks with Multiple Outputs - There is one value per output.
Data Type	64-Bit Real Number
Range	OPEXLOLM to OPEXHILM
Default	OPEXLOLM
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	OPEU[1..8]
Remarks	OP is represented in percentage of the Calculated Variable (CV) range (CVEULO and CVEUHI).

OP[1..NUMCHAN]

Specific to Block(s)	AO8, AO16
Description	Target Output Value
Data Type	64-Bit Real Number
Range	-6.9 to 106.9 percent
Default	-6.9 percent of Full Scale
Config Load	No
Access Lock	Operator
Residence	IOP
Related Parameters	
Remarks	The control mode must be Manual before an operator can adjust the OP manually.

OP[1..16].CONFIGASSOCPARAM

Specific to Block(s)	Step		
Description	Configure Associate Key Parameter Option		
Data Type	Boolean		
Range	0	Off	Cannot configure associate parameter
	1	On	Can configure associate parameter
Default	Off (0)		
Config Load			
Access Lock	Application Developer Only		
Residence	SR		
Related Parameters			
Remarks			

OP[1..16].CONFIGCODE

Specific to Block(s)	Step
Description	Output Configuration Code
Data Type	Enumeration CSCOCONFIGCODEOUTPUT
Range	None (0) Ok (1) UnknownError (2) ImplicitConv (3) LossOfPrecsn (4) UnexpctEnd (5) UnexpctComma (6) ColonWoQMark (7) FctNotMltArg (8) ClosParenExp (9) OperandExp (10) MissingArg (11) OperatorExp (12) ColonExp (13) TypeMismatch (14) TypeNotSupp (15) SyntaxError (16) ExprTooCmplx (17) NotEPcodeMe (18) NotEDataStak (19) UnsuppFeatur (20) ExprTooLong (21) DivideByZero (22) UnknownToken (23) UnexpTokenOS (24) UnknownFunc (25) UnexpOCExpr2 (26) UnexpOCExpr3 (27) ZeroArgument (28) UnexpToken (29) InvalResult (30) InvalTokenTb (31) IntegerExp (32) DoubleExp (33) MissedImpl (34) UnicodeConv (35) ConsstExprRem (36) DuplExprRem (37) DstnInvalid (38) DstnCRqInval (39) ExtUse40 (40)

	ExtUse41 (41) ExtUse42 (42) ExtUse43 (43) ExtUse44 (44) ExtUse45 (45) ExtUse46 (46) ExtUse47 (47) ExtUse48 (48) ExtUse49 (49) ExtUse50 (50) UnsupConTyp (51) UnExpClsParn (52) CantAssRVal (53) UnExpArrOpen (54) ArrClsExpect (55) ArrOpnExpect (56) ArrIndxError (57) StringExpect (58) InvalidRefer (59) TooManyConnS (60) CantConvInpt (61)
Default	None (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See OP[1..16].CONFIGSTS for additional information.

OP[1..16].CONFIGDESC

Specific to Block(s)	Step
Description	Output Configuration Descriptor
Data Type	String
Range	Maximum of 39 characters.
Default	Null String
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See OP[1..16].CONFIGSTS for additional information.

OP[1..16].CONFIGSTS

Specific to Block(s)	Step
Description	Output Configuration Status
Data Type	Enumeration CSCOCONFIGSTS
Range	Ok (0) Information (1) Warning (2) SevereWarn (3) Fail (4) Error (5) SevereError (6)
Default	Ok (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP[1..16].CONFIGASSOCPARAM, OP[1..16].CONFIGCODE, OP[1..16].CONFIGDESC.
Remarks	Step output configuration status parameters OP[1..16].CONFIGSTS, OP[1..16].CONFIGCODE, OP[1..16].CONFIGDESC are set on SCM STATE transition from Inactive to Validated.

OP[1..16].CURRDESCREF

Specific to Block(s)	Step
Description	Current Value Reference Descriptor
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].CURREUDESCREF

Specific to Block(s)	Step
Description	Current Value Reference Engineering Units Descriptor
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].CURRVALREF

Specific to Block(s)	Step
Description	Step Output Current Value Reference
Data Type	Parameter Id
Range	Any Tag.[Block].Parameter reference
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].CURRVALTREND
Remarks	Identifies a parameter as the Current Value for the Step Output. The identified parameter is monitored and shown on the SCM Table view associated with the Step Output. Example values are CMName.Pid.PV and SCMName.INALM.

OP[1..16].CURRVALTREND

Specific to Block(s)	Step
Description	Step Output Current Value add to Trend
Data Type	Boolean
Range	Off – OP[].CURRVALREF not added to Trend On – OP[].CURRVALREF is added to Trend
Default	Off
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].CURRDESCREF, OP[1..16].CURREUDESCREF, OP[1..16].CURRVALREF
Remarks	Specifies whether the parameter identified by OP[].CURRVALREF is added to the built-in Trend display that is part of the SCM Table view. Note that the built-in Trend display is not supported in the pilot release.

OP[1..16].DELAYTIME

Specific to Block(s)	Step
Description	Step Output Delay Time (in seconds)
Data Type	Integer32
Range	0 to 25000000
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OP[1..16].DELAYTIMEREM
Remarks	Specifies the number of seconds that an Output will delay/pause after its expression execution, before processing the next Output. Value stored is “rounded up” to the next multiple of the SCM PERIOD. For example, with an SCM PERIOD of 10secs, a value of 15 stored to OP[i].DELAYTIME will be rounded up to 20. Only applicable to “automatic” Outputs that have expressions configured. A non-zero Step Output Delay Time for an Output with only an Instruction configured will have no effect.

OP[1..16].DELAYTIMEREM

Specific to Block(s)	Step
Description	Step Output Delay Time Remaining (in seconds)
Data Type	Integer32
Range	0 to 25000000
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP[1..16].DELAYTIME
Remarks	Provides the number of seconds remaining for the current Output delay/pause in progress. Value will be 0 unless the Output delay/pause is in progress.

OP[1..16].DESC

Specific to Block(s)	Step
Description	Output Description
Data Type	String
Range	Maximum Length: 64 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	
Remarks	

OP[ ].DSTN

Specific to Block(s)	Step
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

OP[1..16].DSTNCTRLREQ

Specific to Block(s)	Step
Description	Output Destination Control Request Connector
Data Type	Output Connector
Range	N/A
Default	N/A
Config Load	No
Access Lock	Application Developer
Residence	CEE
Related Parameters	CONTROLREQ
Remarks	Step outputs that store to DevCtl or RegCtl function blocks configured as Level 1 Device Drivers must make a CONTROLREQ to the function block. OP[i] is configured to make a CONTROLREQ by exposing the block pin OP[i].DSTNCTRLREQ on the step, and connecting it (through a parameter connector) to the function block's CONTROLREQ parameter.

OP[1..16].ENTRYDESCREF

Specific to Block(s)	Step
Description	Entry Value Reference Descriptor
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].ENTRYEUDESCREF

Specific to Block(s)	Step
Description	Entry Value Reference Engineering Units Descriptor
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].ENTRYMAXREF

Specific to Block(s)	Step
Description	Entry Value Reference Maximum
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	

Remarks	

OP[1..16].ENTRYMINREF

Specific to Block(s)	Step
Description	Entry Value Reference Minimum
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].ENTRYVALREF

Specific to Block(s)	Step
Description	Step Output Entry Value Reference
Data Type	Parameter Id
Range	Any Tag.[Block].Parameter reference
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].TARGETVALREF
Remarks	Identifies a parameter as the Entry Value for the Step Output. The identified parameter is shown on the SCM Table view associated with the Step Output, and the Operator can store a value to this parameter as the result of the Step Output’s Instruction. Example values are CMName.Pid.PV and SCMName.INALM.

OP[1..16].EXECCODE

Specific to Block(s)	Step
Description	Output Execution Code
Data Type	Enumeration CSCOEXECCODE
Range	None (0) ConfigError (1) ExprEvalFail (2) StoreFailed (3) CommError (4) StoreWarning (5) InternalErr (6) CtrlReqErr (7) DataTypeErr (8) StorePending (9)
Default	None (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See OP[1..16].EXECSTS for additional information.

OP[1..16].EXECDESC

Specific to Block(s)	Step
Description	Output Execution Code Descriptor
Data Type	String
Range	Maximum of 39 characters.
Default	Null String
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See OP[1..16].EXECSTS for additional information.

OP[1..16].EXECSTS

Specific to Block(s)	Step
Description	Output Execution Status
Data Type	Enumeration CSCOEXECST
Range	Ok (0) Bypass (1) Info (2) Warning (3) Fail (4) Error (5) OkPaused (6) BypassPaused (7) InfoPaused (8) WarnPaused (9) FailPaused (10) ErrorPaused (11)
Default	Ok (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP[1..16].EXECCODE, OP[1..16].EXECDESC.
Remarks	Step output execution status parameters OP[1..16].EXECSTS, OP[1..16].EXECCODE, and OP[1..16].EXECDESC are updated when the step is in the SCM's current scope of execution.

OP[1..16].EXPRPCODE

Specific to Block(s)	Step
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

OP[1..16].FILTERABLE

Specific to Block(s)	Step		
Description	Step Output is Filterable		
Data Type	Boolean		
Range	0	Off	Filter is not used
	1	On	Filter can be used
Default	On (1)		
Config Load			
Access Lock	Application Developer Only		
Residence	SR		
Related Parameters			
Remarks			

OP[1..16].INSTRUCTCNFM

Specific to Block(s)	Step
Description	Step Output Instruction Confirmation
Data Type	Boolean
Range	Off – Confirmation not requested On – Confirmation requested for Instruction of the Step Output
Default	Off
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	OP[1..16].INSTRUCTCOMP, OP[1..16].INSTRUCTPEND
Remarks	Used to confirm the Instruction of the Step Output. Provided to the user via a checkbox on the SCM Table view.

OP[1..16].INSTRUCTCOMP

Specific to Block(s)	Step
Description	Step Output Instruction Complete
Data Type	Boolean
Range	Off – Instruction is not complete On – Instruction is complete
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP[1..16].FILTERABLE, OP[1..16].INSTRUCTCNFM, OP[1..16].INSTRUCTPEND
Remarks	Provides an indication of whether the Step Output Instruction has been completed.

OP[1..16].INSTRUCTION

Specific to Block(s)	Step
Description	Step Output Instruction
Data Type	BigString
Range	Maximum length of 20,000 characters
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].NOTE, OP[1..16].WARNING
Remarks	Contains raw HTML for configured Step Output Instruction. User does not have to be aware of or do anything with this parameter.

OP[1..16].INSTRUCTPEND

Specific to Block(s)	Step
Description	Step Output Instruction Pending
Data Type	Boolean
Range	Off – Instruction is not pending On – Instruction is pending
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP[1..16].FILTERABLE, OP[1..16].INSTRUCTCNFM, OP[1..16].INSTRUCTCOMP
Remarks	Provides an indication of whether the Step Output currently has an Instruction pending that requires operator interaction.

OP[1..16].INSTRUCTTYPE

Specific to Block(s)	Step
Description	Step Output Instruction Type
Data Type	Enumeration
Range	(0) None (1) Info (2) Confirm
Default	None
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	CEE
Related Parameters	OP[1..16].INSTRUCTION
Remarks	Selects the Instruction Type for the Step Output: None – no Instruction is configured Info – an Informational Instruction is configured that does not require operator confirmation Confirm – a Confirmable Instruction is configured that does require operator confirmation

OP[1..16].MONTASKREF

Specific to Block(s)	Step
Description	Step Output Monitoring Task Reference
Data Type	Parameter Id
Range	Any Tag.[Block].Parameter reference
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	
Remarks	Identifies a parameter as the Monitoring Task result associated with the Step Output. The identified parameter is interpreted as a Boolean value (0 is Off; non-0 is On) even if the parameter data type is not Boolean. The parameter is monitored and an indication shown on the SCM Table view associated with the Step Output. A “Monitoring Task” is a control strategy that evaluates a process condition for which the result is normally True/On or False/Off.

OP[1..16].NOTE

Specific to Block(s)	Step
Description	Step Output Note
Data Type	BigString
Range	Maximum length of 20,000 characters
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].INSTRUCTION, OP[1..16].WARNING
Remarks	Contains raw HTML for configured Step Output Note. User does not have to be aware of or do anything with this parameter.

OP[1..16].ROLE

Specific to Block(s)	Step
Description	Output Role
Data Type	String
Range	16 Characters
Default	Blank
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].SRCEXPR

Specific to Block(s)	Step
Description	Output Source Expression
Data Type	String
Range	Maximum Length: 255 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	
Remarks	

OP[1..16].STATE

Specific to Block(s)	Step
Description	Sequential Control Module (SCM) Step Output State
Data Type	Enumeration CSCOPARTSTATE
Range	Edit (0) Inactive (1) Disabled (2) Enabled (3) Active (4) ActiveComplt (5) ProcOutputs (6) ProcMessages (7) ProcMinWait (8)
Default	Edit (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OP[1..16].TARGETCHANGE

Specific to Block(s)	Step
Description	Step Output Target Value Change Allowed
Data Type	Boolean
Range	Off – Operator cannot change displayed Target Value On – Operator can change displayed Target Value
Default	Off
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].TARGETDESCREF, OP[1..16].TARGETEUDESCREF, OP[1..16].TARGETMAXREF, OP[1..16].TARGETMINREF, OP[1..16].TARGETVALREF
Remarks	Specifies whether the Operator will be able to change the Target Value associated with the Step Output shown on the SCM Table view.

OP[1..16].TARGETDESCREF

Specific to Block(s)	Step
Description	Target Value Reference Descriptor
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].TARGETEUDESCREF

Specific to Block(s)	Step
Description	Target Value Reference Engineering Units Descriptor
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].TARGETMAXREF

Specific to Block(s)	Step
Description	Target Value Reference Maximum
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	

Remarks	

OP[1..16].TARGETMINREF

Specific to Block(s)	Step
Description	Target Value Reference Minimum
Data Type	Parameter ID
Range	
Default	
Config Load	
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

OP[1..16].TARGETVALREF

Specific to Block(s)	Step
Description	Step Output Target Value Reference
Data Type	Parameter Id
Range	Any Tag.[Block].Parameter reference
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].TARGETCHANGE, OP[1..16].ENTRYVALREF, OP[1..16].ENTRYEUDESCREF
Remarks	Identifies a parameter as the Target Value associated with the Step Output. The identified parameter is shown on the SCM Table view associated with the Step Output. The Target Value can be used to show the operator the intended result for the Output’s Instruction.

OP[1..16].TYPE

Specific to Block(s)	Step
Description	Output Type
Data Type	Enumeration CSCOOPTYPE
Range	Null (0) Set (1) NotStored (2)
Default	Null (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	CONTROLREQ, MODEREQ, OPREQ, SCMOPT, SPRATEREQ, SPREQ, SPTVREQ.
Remarks	Null output type is valid only if ControlModule.SCMOPT = None. If ControlModule.SCMOPT = Fixed, then Control Requests (CONTROLREQ) to the RegCtl function block must use a set output type, output requests to the DevCtl function block, and use a set of NotStored output type.

OP[1..16].WARNING

Specific to Block(s)	Step
Description	Step Output Warning
Data Type	BigString
Range	Maximum length of 20,000 characters
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	OP[1..16].INSTRUCTION, OP[1..16].NOTE
Remarks	Contains raw HTML for configured Step Output Warning. User does not have to be aware of or do anything with this parameter.

OPBIAS

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Total Output Bias (in Engineering Units) – OPBIAS is the sum of two components: a user-specified fixed bias (OPBIAS.FIX) and a calculated floating bias (OPBIAS.FLOAT).
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	OPBIAS.FIX, OPBIAS.FLOAT, OPBIAS.RATE.
Remarks	User may only store values to this parameter if the mode is manual or if containing Control Module (CM) is inactive. The following occurs on a store to OPBIAS: OPBIAS and OPBIAS.FIX are both set to a new value. OPBIAS.FLOAT is set to zero.

OPBIAS[1..8]

Specific to Block(s)	Fanout
Description	Total Output Bias for function blocks with Multiple Outputs - OPBIAS is the sum of two components: a user-specified fixed bias (OPBIAS[1..8].FIX) and a calculated floating bias (OPBIAS[1..8].FLOAT).
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	OPBIAS[1..8].FIX, OPBIAS[1..8].FLOAT, OPBIAS[1..8].RATE

Remarks

OPBIAS.FIX

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDER, PIDFF, PID-PL, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RatioCtl, RegCalc, RegSummer, and Switch.
Description	Fixed Output Bias (in Engineering Units) - A user-specified bias that is applied to the function blocks' Calculated Variable (CV).
Data Type	64-Bit Real Number
Range	N/A
Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	OPBIAS, OPBIAS.FLOAT, OPBIAS.RATE.
Remarks	CV = OP + OPBIAS.FIX + OPBIAS.FLOAT

OPBIAS[1..8].FIX

Specific to Block(s)	Fanout
Description	Fixed Output Bias (in Engineering Units) - A user specified bias which is applied to the function blocks' Calculated Variable's Outputs (CV[1..8]).
Data Type	64-Bit Real Number
Range	N/A
Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	OPBIAS[1..8], OPBIAS[1..8].FLOAT, OPBIAS[1..8].RATE
Remarks	

OPBIAS.FLOAT

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, , OvrdSel, PID, PIDER, PIDFF, PID-PL PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RatioCtl, RegCalc, RegSummer, and Switch.
Description	Floating Output Bias (in Engineering Units) - Used in conjunction with OPBIAS.RATE.
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPBIAS, OPBIAS.FIX, OPBIAS.RATE.
Remarks	Floating bias is calculated as follows: OPBIAS.FLOAT = CV(init) - (CV(unbiased) + OPBIAS.FIX) CV (init) = initialization value received from secondary CV(unbiased) = unbiased calculated value OPBIAS.FIX = fixed bias (user specified)

OPBIAS[1..8].FLOAT

Specific to Block(s)	Fanout
Description	Floating Output Bias (in Engineering Units) - Calculated bias for each of Fanout Block's output which is applied to the function blocks' Calculated Variable's Output (CV[1..8]. OPBIAS[1..8].FLOAT is used to ensure a bumpless transition, following initialization or mode change.
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPBIAS[1..8], OPBIAS[1..8].FIX, OPBIAS[1..8].RATE

Remarks	OPBIAS.FLOAT(new value) = OPBIAS.FLOAT(current value) - (OPBIAS.RATE/ cycles/min) where cycles per minute is the number of function block executions per minute.

OPBIAS.RATE

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output Bias Ramp Rate (in Engineering Units per Minute) - Used in conjunction with OPBIAS.FLOAT to eliminate output bumps when initialization path is done by the user.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OPBIAS, OPBIAS.FIX, OPBIAS.FLOAT.
Remarks	The Output Bias is the sum of two parts (OPBIAS.FIXED - a fixed output bias, and OPBIAS.FLOAT - a calculated bias) and is generally used to ensure a bumpless transfer when the block initializes or changes mode.

OPBIAS[1..8].RATE

Specific to Block(s)	Fanout
Description	Output Bias Ramp Rate for function blocks with Multiple Outputs - There is a separate rate for each output when the initialization path is broken by the user.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OPBIAS[1..8], OPBIAS[1..8].FIX,

	OPBIAS[1..8].FLOAT
Remarks	

OPCHAR

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O); AOCHANNEL (Series C I/O)
Description	Output Characterization. Specifies whether the output characterization function is to be used for this data point or not.
Data Type	Boolean
Range	Off: Output characterization is not to be used. On: Output characterization is to be used.
Default	Off
Config Load	Yes
Access Lock	Application Developer
Residence	IOM
Related Parameters	
Remarks	If OPCHAR is On, you must configure the values for the input coordinates (OPIN1 to 4) and the output coordinates (OPOUT1 to 4). Refer to the Control Builder Component Theory document in Knowledge Builder for more information on output characterization. OPCHAR allows the user to ensure that between any two points the OP value isdetermined by plotting OP to a straight line which connects the two points. Each point is described as OPIN/OPOUT (X/Y) coordinate and the plotting of OP can be seen in the OPFINAL parameter.

OPCMD[0..2]

Specific to Block(s)	DevCtl
Description	Output Command
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Program

Residence	CEE
Related Parameters	GOPREQ, OPREQ, OPTYPE.
Remarks	If all the elements of OPCMD are Off, the OPREQ will be set to SAFEOP. The priority of the OPCMD is determined by SAFEOP. If SAFEOP = S0, then priority is 0, 1, 2. If SAFEOP = S1, then priority is 1, 0, 2. If SAFEOP = S2, then priority is 2, 0, 1.

OPDOMAP[0..3][1..3]

Specific to Block(s)	DevCtl
Description	Output (OP) to Digital Output Values (DO) Map of Settable State Assignments.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	DO[1..3], GOP, GOPFINAL, NUMDOUTS NUMSTATES, OP, OPFINAL, PO[1..3].
Remarks	Illegal if NUMDOUTS = 0. OPDOMAP[2, x] is illegal, if NUMSTATES = 2.

OPENLOOPRESP

Specific to Block(s)	PID-PL
Description	Open-Loop Response Time – The calculated settling time (in minutes) when the controller is in manual (MODE is MAN). The settling time is the amount of time required to line out the controller after an OP step change.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CLOSEDLOOPRESP, PRFRATIO
Remarks	OPENLOOPRESP does not include process deadtime or the effective delay due to inverse response dynamics. Add these to the OPENLOOPRESP to obtain a more accurate estimate of the open-loop settling time. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPEU

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDER, PIDFF, PID-PL, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RationCtl, RegCalc, RegSummer, and Switch.
Description	Output Value (in Engineering Units)
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	OP
Remarks	

OPEU[1..8]

Specific to Block(s)	Fanout
Description	Output Values (in Engineering Units) for Function Blocks with Multiple Outputs - There is one value per output.
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	OP[1..8]
Remarks	

OPEUMOVE

Specific to Block(s)	PID-PL
Description	Change in OPEU Value – The amount of change in the OP (EU) from the previous execution period.
Data Type	Float64
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEU
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPEUX

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	OPEU Value and Status
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEU
Remarks	OPEUX is a hidden connection in Control Builder. Refer to *Control Builder Components Theory*, OUTPUT of block specific documentation for more information. OPEUX is a two-part data structure that contains: OPEU (the output value in engineering units) and a status component. OPEUX should be used when making a cascade connection to a secondary control block. The OPEUX connection is required in order for the initialization path to be established between the primary and secondary blocks. This parameter will not indicate any value (it shows * * * *) on the chart when the pin is exposed.

OPEUX[1..8]

Specific to Block(s)	Fanout
Description	OPEU Value and Status for function blocks with multiple outputs.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP[1..8], OPEU[1..8].
Remarks	

OPEXHIFL

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Extended High Limit Flag. Indicates if OP is at its extended high limit.
Data Type	Boolean
Range	Off (0): OP is below its extended high limit. On (1): OP is at its extended high limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEXHILM
Remarks	

OPEXHIFL[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) Extended High Limit Flag. Indicate if OP[1..8] are at their extended high limit.
Data Type	Boolean
Range	Off (0): Corresponding OP is below its extended high limit. On (1): Corresponding OP is at its extended high limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEXHILM
Remarks	

OPEXHILM

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Extended High Limit (in percentage)
Data Type	64-Bit Real Number
Range	Greater than OPLOLM
Default	106.9%
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OPEXHIFL
Remarks	Only the Operator is permitted to specify an Output (OP) value that exceeds the OPHILM value. Even the operator is prohibited from specifying values greater than the OPIXHILM, however.

OPEXLOFL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Extended Low Limit Flag. Indicates if OP is at its extended low limit.
Data Type	Boolean
Range	Off (0): OP is above its extended low limit. On (1): OP is at its extended low limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEXLOLM
Remarks	

OPEXLOFL[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) Extended Low Limit Flag. Indicates if OP[1..8] are at their extended low limit.
Data Type	Boolean
Range	Off (0): Corresponding OP is above its extended low limit. On (1): Corresponding OP is at its extended low limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEXLOLM
Remarks	

OPEXLOLM

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Extended Low Limit (in percentage)
Data Type	64-Bit Real Number
Range	Less than OPHILM
Default	-6.9%
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OPEXLOFL
Remarks	

OPFINAL

Specific to Block(s)	DevCtl
Description	Field Output State
Data Type	String
Range	Length: 12 characters
Default	STATETEXT[4]
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	DO[1..3], GOPFINAL, NUMDOUTS, NUMSTATES, NUMTRANS, OPDOMAP[0..3][1..3], SEALOPT, STATETEXT[0..6], STATETIME[0..2].
Remarks	OPFINAL is a String set equal to STATETEXT (GOPFINAL). Access is illegal if NUMDOUTS = 0. STATETEXT[6] ['State2'] is illegal if NUMSTATES = 2.

Specific to Block(s)	AO8, AO16, AO16HART
Description	Output Final. Shows the final output value sent to the control element after direct or reverse control action and output characterization have been applied.
Data Type	64-Bit Real Number
Range	N/A
Default	-6.9 percent of Full Scale
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	
Remarks	If OPTDIR parameter configuration is DIRECT, 0.0 percent OP represents 4mA and 100 percent OP represents 20mA. If OPTDIR parameter configuration is REVERSE, 0.0 percent OP represents 20mA and 100 percent OP represents 4mA.

Specific to Block(s)	AOCHANNEL, HAOCHANNEL, Series C AOCHANNEL
Description	Final Percent Output (Sent to Control Element)
Data Type	FLOAT32
Range	
Default	-6.9% of Full
Config Load	No
Access Lock	View Only
Residence	IOM
Related Parameters	
Remarks	This parameter is the output value after direct or reverse control action and output characterization have all been applied. If output has been configured for direct action (OPTDIR), 0.0% represents 4 mA to the control element and 100% represents 20 mA. If configured for reverse action, 0.0% represents 20 mA, and 100% represents 4 mA

OPFINAL[0..numChans-1]

Specific to Block(s)	AOM
Description	Adjusted Output Value.
Data Type	64-Bit Real Number
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OPHIACTIVE

Specific to Block(s)	PID-PL
Description	OP (output) High Limit Active – Upper OP limit used by the Profit Loop PKS control algorithm. This value may differ from the user-entered limit, OPHILM, if controller windup exists.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPHILM, OPLOACTIVE.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPHIALM.DB

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Alarm Deadband
Data Type	64-Bit Real Number
Range	0.0 to 100.0 if alarm deadband units (OPHILAM.DBU) are Percent. CVEULO to CVEUHI if alarm deadband units (OPHIALM.DBU) are Engineering Units.
Default	0.0
Config Load	Yes
Access Lock	Engineer/Application Developer
Residence	CEE
Related Parameters	OP, OPHIALM.DBU, OPHIALM.FL, OPHIALM.PR, OPHIALM.SV, OPHIALM.TM,

	OPHIALM.TP.
Remarks	The following rule is applied to OPHIALM.DB to prevent OPHI and OPLO alarm are both active at the same time: OPHIALM.DB <= (OPHIALM.TP - OPLOALM.TP)/2 (or PVLOALM.TP <= PVHIALM.TP - 2 * PVLOALM.DB) Individual alarm deadbands are not individually configurable. The ALMDB that is configured is loaded to the block, then the block copies the ALMDB value to all the xxALM.DB of all analog alarms on the block. This includes ALMDBU and ALMTM - thus, all analog alarms get the same three values through a one-time configuration entering of the three values. If desired, the individual alarm parameters (xxALM.DB, xxALM.DBU, and xxALM.TM) may be modified after the block is loaded. The block load will always set all individual alarm parameters to the three configured values. When OPHIALM.DB is in Percent, the deadband units (OPHIALM.DBU) cannot be changed.

OPHIALM.DBU

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Alarm Deadband Units - Indicates if OPHILAM.DB is in Percent or Engineering Units.
Data Type	Enumeration ALMDBU
Range	Percent (0) EU (1)
Default	Percent (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	OP, OPHIALM.DB, OPHIALM.FL, OPHIALM.PR, OPHIALM.SV, OPHIALM.TM, OPHIALM.TP.
Remarks	Individual alarm deadbands are not individually configurable. The ALMDB that is configured is loaded to the block, then the

	block copies the ALMDB value to all the xxALM.DB of all analog alarms on the block. This includes ALMDBU and ALMTM - thus, all analog alarms get the same three values through a one-time configuration entering of the three values. If desired, the individual alarm parameters (xxALM.DB, xxALM.DBU, and xxALM.TM) may be modified after the block is loaded. The block load will always set all individual alarm parameters to the three configured values.

OPHIALM.FL

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	OP High Alarm Flag
Data Type	Boolean
Range	Off (0) (not in OP High alarm) On (1) (in Op High alarm)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP, OPHIALM.DB, OPHIALM.DBU, OPHIALM.PR, OPHIALM.SV, OPHIALM.TM, OPHIALM.TP.
Remarks	

OPHIALM.PR

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OP, OPHIALM.DB, OPHIALM.DBU, OPHIALM.FL, OPHIALM.SV, OPHIALM.TM, OPHIALM.TP.

Remarks

OPHIALM.SV

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OP, OPHIALM.DB,

	OPHIALM.DBU, OPHIALM.FL, OPHIALM.PR, OPHIALM.TM, OPHIALM.TP.
Remarks	

OPHIALM.TM

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Alarm Filter Time (in seconds) - The purpose of this variable is to prevent input spikes from causing OP High alarms. An alarm will only be generated if the OP consistently exceeds the high trip point for more than the configured alarm filter time.
Data Type	32-Bit Unsigned Integer
Range	0 to 60
Default	0
Config Load	Yes
Access Lock	Engineer/Application Developer
Residence	CEE
Related Parameters	OP, OPHIALM.DB, OPHIALM.DBU, OPHIALM.FL, OPHIALM.PR, OPHIALM.SV, OPHIALM.TP.
Remarks	If OPHIALM.TM = 0, alarm will be generated as soon as OP exceeds the high trip point. Individual alarm deadbands are not individually configurable. The ALMDB that is configured is loaded to the block, then the block copies the ALMDB value to all the xxALM.DB of all analog alarms on the block. This includes ALMDBU and ALMTM - thus, all analog alarms get the same three values through a one-time configuration entering of the three values. If desired, the individual alarm parameters (xxALM.DB, xxALM.DBU, and xxALM.TM) may be modified after the block is loaded. The block load will always set all individual alarm

parameters to the three configured values.

OPHIALM.TP

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Alarm Trip Point (in Percent)
Data Type	64-Bit Real Number
Range	NaN, or OPLOLM to OPEXHILM
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OP, OPHIALM.DB, OPHIALM.DBU, OPHIALM.FL, OPHIALM.PR, OPHIALM.SV, OPHIALM.TM.
Remarks	If OPHIALM.TP = NaN, OP high alarms are inhibited. The following restriction is applied to OPHIALM.TP to prevent that OPHI and OPLO alarm are both active at the same time: OPHIALM.DB <= (OPHIALM.TP - OPLOALM.TP)/2 (or OPHIALM.TP >= OPLOALM.TP + 2 * OPHIALM.DB)

OPHIFL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Limit Flag - Indicates if OP has reached the high limit, as specified by OPHILM.
Data Type	Boolean
Range	Off (0): Output has not reached the high limit. On (1): Output has reached the high limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPHILM
Remarks	

OPHIFL[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) High Limit Flag – Indicates if OP[1..8] have reached the high limit, as specified by OPHILM.
Data Type	Boolean
Range	Off (0): Output has not reached the high limit. On (1): Output has reached the high limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPHILM
Remarks	

OPHILM

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) High Limit (in percentage)
Data Type	64-Bit Real Number
Range	NaN, or OPLOLM to OPEXHILM
Default	105.0%
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OPHIFL
Remarks	Entering NaN disables limit checking. Only the operator is permitted to specify an OP value that exceeds the OPHILM value. Programs (SCM, etc.) can specify output values up to the OPHILM limit. If values larger than this are requested, then they are clamped at the OPHILM value.

OPHILMOPT

Specific to Block(s)	PID-PL
Description	OP High Limit for Optimization – Defines an upper limit for optimization.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CTLEQN, CTRLMODE, OPTDIR, OPHILM, OPHIOPTOFFSET, OPLOLM, OPLOLMOPT, OPTMODE
Remarks	Profit Loop PKS can be configured to optimize the process

over a limited operating range. As a guard against process excursions, the range used for optimization, OPLOLMOPT to OPHILMOPT, may be more restrictive than the normal control range, OPLOLM to OPHILM.

OPHILMOPT is calculated as:
OPHILMOPT = OPHILM - OPHIOPTOFFSET

If a conflict exists between the OP optimization limits and the SP optimization limits, the SP limits are enforced; the OP limits are ignored.

This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE.

This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPHIOPTOFFSET

Specific to Block(s)	PID-PL
Description	OP High Limit Offset for Optimization – Offset applied to OPHILM to restrict the range over which the Profit Loop PKS algorithm optimizes.
Data Type	Float64
Range	≥ 0
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CTLEQN, CTRLMODE OPTDIR, OPHILM, OPHILMOPT OPLOLM, OPLOLMOPT, OPTMODE
Remarks	Profit Loop PKS can be configured to optimize the process over a limited operating range. To guard against process excursions, the range used for optimization, OPLOLMOPT to OPHILMOPT, may be more restrictive than the normal control range, OPLOLM to OPHILM. OPHILMOPTis calculated as: OPHILMOPT = OPHILM - OPHIOPTOFFSET If a conflict exists between the OP optimization limits and

	the SP optimization limits, the SP limits are enforced while the OP limits are ignored. This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPIN

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Output Value in Percent Input - Shows the value brought from the primary in percent.
Data Type	Float64
Range	-6.9 to 106.9 percent
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	OPOUT, REMCASTYPE
Remarks	

OPIN0

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Input Coordinate Number 0. Defines the number 0 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	N/A
Default	Fixed at –6.9 percent
Config Load	Yes
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	This paramter can only be set when PTEXECST is INACTIVE.

OPIN1

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Input Coordinate Number 1. Specifies the number 1 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate.
Default	NaN
Config Load	Yes
Access Lock	Application Developer
Residence	IOM
Related Parameters	
Remarks	This paramter can only be set when PTEXECST is INACTIVE.

OPIN2

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Input Coordinate Number 2. Specifies the number 2 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate.
Default	NaN
Config Load	Yes
Access Lock	Application Developer
Residence	IOM
Related Parameters	
Remarks	This paramter can only be set when PTEXECST is INACTIVE.

OPIN3

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Input Coordinate Number 3. Specifies the number 3 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate.
Default	NaN
Config Load	Yes
Access Lock	Application Developer
Residence	IOM
Related Parameters	PTEXECST
Remarks	This paramter can only be set when PTEXECST is INACTIVE.

OPIN4

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Input Coordinate Number 1. Specifies the number 1 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate.
Default	NaN
Config Load	Yes
Access Lock	Application Developer
Residence	IOM
Related Parameters	PTEXECST
Remarks	This paramter can only be set when PTEXECST is INACTIVE.

OPIN5

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Input Coordinate Number 5. Defines the number 5 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	N/A
Default	Fixed at 106.9 percent
Config Load	Yes
Access Lock	ViewOnly
Residence	IOM
Related Parameters	OPCHAR
Remarks	

OPINITVAL

Specific to Block(s)	DOCHANNEL (PM I/O) DOCHANNEL (Series C I/O)
Description	OP Initialize Value. Defines the pulsed output value from the IOP in percent.
Data Type	64-Bit Real Number
Range	0.0 to 100.0 percent
Default	0.0 percent
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	OP, DOTYPE
Remarks	The data is available only when DOPTYPE is configured as PWM. Pulse on-time is calculated as follows. For DIRECT action: Pulse On-Time = (OP percent x PERIOD) / 100 For REVERSE action: Pulse On-Time = (100 percent - OP percent x PERIOD) / 100

OPLOACTIVE

Specific to Block(s)	PID-PL
Description	Active OP Low Limit – Lower OP limit used by the Profit Loop PKS control algorithm. This value may differ from the user-entered limit, OPLOLM, if controller windup exists.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CTLEQN, OPHIACTIVE, OPLOLM.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPLOALM.DB

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Alarm Deadband
Data Type	64-Bit Real Number
Range	0.0 to 100.0 if alarm deadband units (OPLOALM.DBU) are Percent. CVEULO to CVEUHI if alarm deadband units (OPLOALM.DBU) are EUs.
Default	0.0
Config Load	Yes
Access Lock	Engineer/Application Developer
Residence	CEE
Related Parameters	OP, OPLOALM.DBU, OPLOALM.FL, OPLOALM.PR, OPLOALM.SV OPLOALM.TM,

	OPLOALM.TP.
Remarks	The following restriction is applied to OPLOALM.DB to prevent that OPHI and OPLO alarm are both active at the same time: OPLOALM.DB <= (OPHIALM.TP - OPLOALM.TP)/2 Individual alarm deadbands are not individually configurable. The ALMDB that is configured is loaded to the block, then the block copies the ALMDB value to all the xxALM.DB of all analog alarms on the block. This includes ALMDBU and ALMTM - thus, all analog alarms get the same three values through a one-time configuration entering of the three values. If desired, the individual alarm parameters (xxALM.DB, xxALM.DBU, and xxALM.TM) may be modified after the block is loaded. The block load will always set all individual alarm parameters to the three configured values. When the OPLOALM.DB is in Percent; the deadband units (OPLOALM.DBU) cannot be changed.

OPLOALM.DBU

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Alarm Deadband Units - Indicates if OPLOALM.DB is in Percent or Engineering Units.
Data Type	Enumeration ALMDBU
Range	Percent (0) EU (1)
Default	Percent (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	OP, OPLOALM.DB, OPLOALM.FL, OPLOALM.PR, OPLOALM.SV, OPLOALM.TM, OPLOALM.TP.

Remarks	Individual alarm deadbands are not individually configurable. The ALMDB that is configured is loaded to the block, then the block copies the ALMDB value to all the xxALM.DB of all analog alarms on the block. This includes ALMDBU and ALMTM - thus, all analog alarms get the same three values through a one-time configuration entering of the three values. If desired, the individual alarm parameters (xxALM.DB, xxALM.DBU, and xxALM.TM) may be modified after the block is loaded. The block load will always set all individual alarm parameters to the three configured values.

OPLOALM.FL

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Alarm Flag
Data Type	Boolean
Range	Off (0): Not in OP Low alarm. On (1): In OP Low alarm.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OP, OPLOALM.DB, OPLOALM.DBU, OPLOALM.PR, OPLOALM.SV, OPLOALM.TM, OPLOALM.TP.
Remarks	

OPLOALM.PR

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Engineer
Access Lock	Yes
Residence	CEE
Related Parameters	OP, OPLOALM.DB, OPLOALM.DBU, OPLOALM.FL, OPLOALM.SV, OPLOALM.TM, OPLOALM.TP.
Remarks	

OPLOALM.SV

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, Regsummer, and Switch.
Description	Output (OP) Low Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OP, OPLOALM.DB, OPLOALM.DBU, OPLOALM.FL, OPLOALM.PR OPLOALM.TM, OPLOALM.TP.
Remarks	

OPLOALM.TM

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Alarm Filter Time (in seconds) - The purpose of this variable is to prevent input spikes from causing OP Low alarms. An alarm will only be generated if the OP is consistently below the low trip point for more than the configured alarm filter time.
Data Type	32-Bit Unsigned Integer
Range	0 to 60
Default	0
Config Load	Yes
Access Lock	EngineerApplication Developer
Residence	CEE
Related Parameters	OP, OPLOALM.DB, OPLOALM.DBU, OPLOALM.FL, OPLOALM.PR, OPLOALM.SV OPLOALM.TP.
Remarks	If OPLOALM.TM = 0, an alarm will be generated as soon as OP falls below the low trip point. Individual alarm deadbands are not individually configurable. The ALMDB that is configured is loaded to the block, then the block copies the ALMDB value to all the xxALM.DB of all analog alarms on the block. This includes ALMDBU and ALMTM - thus, all analog alarms get the same three values through a one-time configuration entering of the three values. If desired, the individual alarm parameters (xxALM.DB, xxALM.DBU, and xxALM.TM) may be modified after the block is loaded. The block load will always set all individual alarm parameters to the three configured values.

OPLOALM.TP

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Alarm Trip Point (in percentage)
Data Type	64-Bit Real Number
Range	NaN, or OPEXLOLM to OPEXHILM
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OP, OPLOALM.DB, OPLOALM.DBU, OPLOALM.FL, OPLOALM.PR, OPLOALM.SV, OPLOALM.TM.
Remarks	If OPLOALM.TP = NaN, OP low alarms are inhibited. The following restriction is applied to OPLOALM.TP to prevent that OPHI and OPLO alarm are both active at the same time: OPLOALM.DB <= (OPHIALM.TP - OPLOALM.TP)/2 (or OPLOALM.TP <= OPHIALM.TP - 2 * OPLOALM.DB)

OPLOFL

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Limit Flag - Indicates if OP has reached its low limit, as specified by OPLOLM.
Data Type	Boolean
Range	Off (0): Output has not reached the low limit. On (1): Output has reached the low limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPLOLM
Remarks	

OPLOFL[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) Low Limit Flag - Indicates if OP[1..8] have reached its low limit, as specified by OPLOLM.
Data Type	Boolean
Range	Off (0): Output has not reached the low limit. On (1): Output has reached the low limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPLOLM
Remarks	

OPLOLM

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Low Limit (in percentage)
Data Type	64-Bit Real Number
Range	NaN, or OPEXLOLM to OPHILM
Default	-5.0%
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OPLOFL
Remarks	Entering NaN disables limit checking.

OPLOLMOPT

Specific to Block(s)	PID-PL
Description	Lower OP Limit for Optimization
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CTLEQN, CTRLMODE, OPTDIR, OPHILM, OPHILMOPT OPLOLM, OPLOOPTOFFSET, OPTMODE
Remarks	Profit Loop PKS can be configured to optimize the process over a limited operating range. As a guard against process excursions, the range used for optimization, OPLOLMOPT to OPHILMOPT, may be more restrictive than the normal control range, OPLOLM to OPHILM. OPLOLMOPT is calculated as: OPLOLMOPT = OPLOLM + OPLOOPTOFFSET

	If a conflict exists between the OP optimization limits and the SP optimization limits, the SP limits are enforced while the OP limits are ignored. This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPLOOPTOFFSET

Specific to Block(s)	PID-PL
Description	OP Low Limit Offset for Optimization – Offset applied to OPLOLM to restrict the range over which the Profit Loop PKS algorithm optimizes.
Data Type	Float64
Range	Greater than or equal to 0
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CTLEQN, CTRLMODE, OPTDIR, OPHILM, OPHILMOPT OPHIOPTOFFSET, OPLOLM, OPLOLMOPT, OPTMODE
Remarks	Profit Loop PKS can be configured to optimize the process over a limited operating range. As a guard against process excursions, the range used for optimization, OPLOLMOPT to OPHILMOPT, may be more restrictive than the normal control range, OPLOLM to OPHILM. OPLOLMOPT is calculated as: OPLOLMOPT = OPLOLM + OPLOOPTOFFSET If a conflict exists between the OP optimization limits and the SP optimization limits, the SP limits are enforced while the OP limits are ignored. This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to

	Profit Loop PKS, and is ignored in PID control equations.

OPMINCHG

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Minimum Change Limit (in Percent)
Data Type	64-Bit Real Number
Range	NaN, or a real number greater than or less than zero.
Default	0.0%
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OP
Remarks	Defines the minimum amount that the output must change before the function blocks actually change the OP. If this value is NaN, then there is no minimum limit set. Entering NaN disables limit checking.

OPNUMSRCCONN[1..16]

Specific to Block(s)	Step Block
Description	Number of Source Connections for Output expression. Represents number of source references in the expression of Output *i*, where *i* is the parameter index from 1..16.
Data Type	Integer32
Range	0 to 200
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	ACE, C200, SIM_C200
Related Parameters	OPPCODESIZE[1..16]
Remarks	

OPOUT0

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Output Coordinate Number 0. Defines the number 0 Output coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	N/A
Default	Fixed at –6.9 percent
Config Load	Yes
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	This parameter can only be set when PTEXECST is INACTIVE. See the *Control Builder Component Theory* document in Knowledge Builder for more information.

OPOUT1

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Output Coordinate Number 1. Specifies the number 1 output coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter can only be set when PTEXECST is INACTIVE. See the *Control Builder Component Theory* document in Knowledge Builder for more information.

OPOUT2

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Output Coordinate Number 2. Specifies the number 2 Output coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter can only be set when PTEXECST is INACTIVE. See the *Control Builder Component Theory* document in Knowledge Builder for more information.

OPOUT3

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Output Coordinate Number 3. Specifies the number 3 Output coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate.
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter can only be set when PTEXECST is INACTIVE. See the *Control Builder Component Theory* document in Knowledge Builder for more information.

OPOUT4

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Output Coordinate Number 4. Specifies the number 4 Output coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Greater than previous coordinate; Less than next coordinate.
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter can only be set when PTEXECST is INACTIVE. See the *Control Builder Component Theory* document in Knowledge Builder for more information.

OPOUT5

Specific to Block(s)	AOCHANNEL, HAOCHANNEL (PM I/O) AOCHANNEL (Series C I/O)
Description	Input Coordinate Number 5. Defines the number 5 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	N/A
Default	Fixed at 106.9 percent
Config Load	Yes
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	

OPOUT

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Output Value sent to UCN - Indicates the output value that is being stored to the UCN Process Manager in percent.
Data Type	Floata64
Range	-6.9 to 106.9 percent
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	OPIN, REMCASTYPE
Remarks	

OPPCODESIZE[1..16]

Specific to Block(s)	Step Block
Description	Number of Pcode Bytes for Output expression. Represents number of bytes required for the Psuedo code for the expression of Output *i*, where *i* is the parameter index from 1..16.
Data Type	Integer32
Range	0 to 200
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	ACE, C200, SIM_C200
Related Parameters	OPNUMSRCCONN[1..16]
Remarks	

OPREQ

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	The requested OP (Output) value. The SCM CONTROLREQ wants to change the regulatory control block's output (OP).
Data Type	64-Bit Real Number
Range	OPEXLOLM to OPEXHILM
Default	0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	CONTROLREQ, HOLDOPT, LASTOPMNAME, LASTOPREQ, LASTOPTYPE, RESTARTOPT, SCMOPT, STOPOPT.
Remarks	OPREQ is illegal if ControlModule. SCMOPT = None. While MODEATTR is Operator, a pending OPREQ can be terminated by the operator setting it to NaN.

Specific to Block(s)	DevCtl
Description	The Output State Requested
Data Type	String
Range	Length: 12 characters
Default	STATETEXT[0]
Config Load	No
Access Lock	Other Function Block
Residence	CEE

Related Parameters	GOP, GOPREQ, HOLDOPT, LASTOPMNAME, LASTOPREQ, MODEATTR, NUMSTATES, OP, OPTYPE, RESTARTOPT, SAFEOP, STARTOPT, STATETEXT[0..6], STOPOPT.
Remarks	OPREQ is a String set equal to STATETEXT(GOPREQ). If OPTYPE = Set, and MODEATTR is Operator, the Engineer may change OPREQ. STATETEXT[6] is illegal if NUMSTATES = 2

OPROCLM

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Rate of Change Limit (in Percent per minute)
Data Type	64-Bit Real Number
Range	NaN, or Greater-than or equal-to 0.1
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	OPROCNEGFL, OPROCPOSFL.
Remarks	Entering NaN disables limit checking.

OPROCNEGFL

Specific to Block(s)	All RegCtl Blocks except Fanout: AutoMan, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Negative Rate of Change Flag
Data Type	Boolean
Range	Off (0): OP negative rate of change is above the limit. On (1): OP negative rate of change is less-than or equal-to the limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPROCLM
Remarks	

OPROCNEGFL[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) Negative Rate of Change Flag
Data Type	Boolean
Range	Off (0): OP negative rate of change is above the limit. On (1): OP negative rate of change is below or equal to the the limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPROCLM
Remarks	This flag is set when the Output rate of change exceeds OPROCLM in the negative direction

OPROCPOSFL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Output (OP) Positive Rate of Change Flag
Data Type	Boolean
Range	Off (0): OP positive rate of change is below the limit. On (1): OP positive rate of change is above or equal to the limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPROCLM
Remarks	

OPROCPOSFL[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) Positive Rate of Change Flag
Data Type	Boolean
Range	Off (0): OP positive rate of change is < the limit. On (1): OP positive rate of change is >= the limit.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPROCLM
Remarks	This flag is set when the Output rate of change exceeds OPROCLM in the positive direction.

OPSECDATA

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

OPSECDATA[1..8]

Specific to Block(s)	Fanout
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

OPSECDATA.ARWSTS

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	Integer
Range	N/A
Default	0
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSECDATA.EUHI

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	Real
Range	N/A
Default	NaN
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSECDATA.EULO

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	Real
Range	N/A
Default	NaN
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSECDATA.INITREQ

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSECDATA.INITVAL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	Real
Range	N/A
Default	NaN
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSECDATA.ONESHOT

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	Integer
Range	N/A
Default	0
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSECDATA.ORFBVA

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSECDATA.OROFFS

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OPSOURCE

Specific to Block(s)	AOC, PWM Channel
Description	Output Source Connector
Data Type	
Range	
Default	
Config Load	
Access Lock	Application Developer
Residence	
Related Parameters	
Remarks	

OPSRC[1..16][1..6]

Specific to Block(s)	Step
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

OPTDIR

Specific to Block(s)	PWMCHANNEL (PM I/O, IO Channel)
Description	Output Direction. Direct or Reverse mode settings for the PWM Channel define the output action to be applied to an associated digital output. The input connection (OP) coming into PWM Channel Block Function Block is always scaled from 0-100%. The OPTDIR in **direct mode** will cause the block to pass the unchanged OP value directly to the control element as a percentage of on/off time. The initialization value returning from the control element will also not be changed. When **reverse mode** is selected, the OP to the control element is rescaled before final output as follows: OPFINAL = 100 – OP. The initialization value is also converted so that INITVAL is consistent with OP. The PWM Channel gauges on/off time for the assigned digital output according to the PWM Period (PWMPERIOD), the input percentage (OP), and the output direction (OPTDIR). When the **direct mode** is specified, the digital output is set ON for the input percentage portion of time determined by the PWM period. The remaining period time the digital output is set OFF. The digital output is cycled in this manner. When the **reverse mode** is specified, the digital output is set OFF for the input percentage portion of time determined by the PWM period. The remaining period time the digital output is set ON. The digital output is cycled in this manner. The PWM Channel initialization value (INITVAL) is also converted in **reverse mode** so that is consistent with the OP input.
Data Type	Enum
Range	DIRECT(0): OP is the percent On time. REVERSE(1): OP is the percent Off time.
Default	DIRECT(0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE

Related Parameters	OP, OPFINAL, PWMPERIOD
Remarks	

Specific to Block(s)	AOCHANNEL , HAOCHANNEL (PM I/O) AOCHANNEL, (Series C I/O)		
Description	Output Direction. Direct or Reverse mode settings define the output action to be applied to OP that determines the OPFINAL value used to control the actual field device. The output (OP) coming into the AO Channel Function Block is always scaled from 0-100%. The OPTDIR in **direct mode** will cause the block to pass the unchanged OP value directly to the control element. The initialization value returning from the control element will also not be changed. When **reverse mode** is selected, the OP to the control element is rescaled before final output as follows: OPFINAL = 100 – OP. The initialization value is also converted so that INITVAL is consistent with OP.		
Data Type	Enum		
Range	0	DIRECT	Example: For OPFINAL, 0% = 4mA and 100% = 20mA.
	1	REVERSE	Example: For OPFINAL, 0% = 20mA and 100% = 4mA.
Default	DIRECT (0)		
Config Load	Yes		
Access Lock	Engineer		
Residence	CEE		
Related Parameters	OP, OPFINAL		
Remarks			

Specific to Block(s)	DOCHANNEL, Series C DOCHANNEL		
Description	Output Direction		
Data Type	ENUM		
Range	0	DIRECT	OP is the % On time
	1	REVERSE	OP is the % Off time
Default	DIRECT		
Config Load	Yes		
Access Lock	Engineer		

Residence	IOM
Related Parameters	
Remarks	This parameter defines the direct/reverse action of the PWM digital output.

OPTMODE

Specific to Block(s)	PID-PL	
Description	Optimization Objective – PV operating objective for the optimizer in the Profit Loop PKS algorithm.	
Data Type	Enum	
Range	NONE	No optimization.
	MINIMIZE	Minimize PV – drive toward low limit.
	MAXIMIZE	Maximize PV – drive toward high limit.
	OPTTARGET	Optimize toward user-specified target value (SP).
	DUALRANGE	Strive to keep optimal solution between optimization limits, SPLOLMOPT to SPHILMOPT.
Default	OPTTARGET	
Config Load	Yes	
Access Lock	Supervisor	
Residence	CEE	
Related Parameters	CTLEQN, Error! Reference source not found., OPTSPEED.	
Remarks	The rate of movement toward the optimal target is dictated by the optimization speed, OPTSPEED. This parameter is applicable only when CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.	

OPTOL

Specific to Block(s)	ENHREGCALC, RATIOCTL, Incrsummer, RegSummer
Description	Output (OP) Tolerance – Define tolerance value for output in percent.
Data Type	Float64
Range	0 to OPEXHILM
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

OPTSPEED

Specific to Block(s)	PID-PL
Description	Optimization Speed – Unitless parameter controlling how fast the optimizer drives the process toward the optimal target.
Data Type	Float64
Range	0.1 – 10.0
Default	1
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	CTRLMODE, OPTMODE
Remarks	Profit Loop PKS uses the formula: $\frac{6 \times \text{CLOSEDLOOP RESP}}{\text{OPTSPEED}} = \text{OPTRESP}$ Where: CLOSEDLOOPRESP = Closed loop response time OPTSPEED = Optimization speed OPTRESP = Settling time associated with changes induced through optimization

	An optimization speed of 6.0 makes the optimizer as aggressive as the controller. Decreasing the optimization speed increases the time to the optimal target allowing for less aggressive OP movement. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

OPTYPE

Specific to Block(s)	DevCtl, All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Sequential Control Module (SCM) Control Output Request Type Option
Data Type	Enumeration OPTYPE
Range	Null (0) Set (1) NotStored (2) Default (3)
Default	Null (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	RegCtl only: ASTEPID, CONTROLREQ, LASTOPTYPE, OP[1..16].TYPE, SCMASTEP[1..10], SCMOPT, SCMSTATE. DevCtl only: HOLDOPT, LASTOPTYPE, OPREQ, RESTARTOPT, STARTOPT, STOPOPT.
Remarks	

OPTYPEENUMMASK

Specific to Block(s)	Step
Description	Step Output Type Enumeration Mask
Data Type	String
Range	
Default	
Config Load	
Access Lock	Appliction Developer Only
Residence	SR
Related Parameters	
Remarks	

OPX

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, and Switch.
Description	Output (OP) Value in Percent and Status.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEU
Remarks	OPX is a two-part data structure that contains: OP (the output value in percent) and a status component. OPX can be used when making a connection to an AOC block. The OPX connection is required in order for the initialization path to be established between the Regulatory Control (RegCtl) block and the AOC block. OPEUX can also be used in the same capacity as the OPX parameter. This parameter will not indicate any value (it shows * * * *) on the chart when the pin is exposed.

OPX[1..8]

Specific to Block(s)	Fanout
Description	Output (OP) Value and Status.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OPEU
Remarks	

ORBYPASSFL[1..4]

Specific to Block(s)	OvrdSel
Description	Override Bypass Flags – Indicates which Override Selector inputs (if any) should be bypassed.
Data Type	Boolean
Range	Off (0): Input is not bypassed. On (1): Input is bypassed.
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

ORBYPPERM

Specific to Block(s)	Ovrdsel
Description	Bypass Enable
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer/Applications Developer
Residence	CEE
Related Parameters	
Remarks	

ORDER

Specific to Block(s)	DevCtl
Description	Execution Order within containing Control Module
Data Type	Integer
Range	0 to 65535
Default	A multiple of 10, established by Control Builder when the block is created.
Config Load	Yes
Access Lock	Point Build
Residence	CEE
Related Parameters	
Remarks	

ORDERINCEE

Specific to Block(s)	CM, SCM, IOM
Description	Order of execution of a container block relative to other container blocks within the same cycle of the CEE.
Data Type	16-Bit Integer
Range	0 to 32,767
Default	10
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	ORDERINCM, PERIOD, PHASE.
Remarks	Determines the relative execution order of container blocks when they execute within the same cycle. Block with lower value execute first. If user assigns the same value to different blocks, the CEE assigns a distinct and repeatable execution order (based on the independent object code), but does not change the value of ORDERINCEE. In this case, the user cannot readily determine the order of execution of any two container blocks. Note that ORDERINCEE can only be changed through block load.

ORDERINCM

Specific to Block(s)	All basic function blocks
Description	Execution order of a component block relative to other component blocks within a Control Module (CM) function block.
Data Type	32-Bit Integer
Range	1 to 32,767 A linearly increasing multiple of 10 starting at 10, the actual value assigned by Control Builder according to the order of insertion into a CM function block during configuration.
Default	10
Config Load	Yes
Access Lock	Application Developer
Residence	SR

Related Parameters	ORDERINCEE, PERIOD, PHASE.
Remarks	Determines the relative execution order of component blocks within a Control Module (CM) function block. In a given CM, a block with a lower value for ORDERINCM executes before any block with a higher value. If the same value is assigned to multiple blocks, the Control Builder assigns a distinct and repeatable execution order (based on the dependent object code), but does not change the value of ORDERINCM. Note that ORDERINCM does not apply to CM, IOM, SCM, or SCM component blocks.

ORED

Specific to Block(s)	NooN
Description	Ored output value
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

ORFBSTSSRC

Specific to Block(s)	RegCalc
Description	Override feedback status (ORFBSTS source selector.
Data Type	Enumeration
Range	X1 to C8STS (0 - 27)
Default	X1 (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

ORFBVALSRC

Specific to Block(s)	RegCalc
Description	Override feedback value source selector
Data Type	Enumeration REGCALCSELECTOR
Range	X1 to C8STS (0 - 27)
Default	X1 (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

ORIAPPCONNID[1..48]

Specific to Block(s)	FTEB
Description	Originators Application Connection ID – Identifies initiator's application connection ID.
Data Type	16-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

ORICONNSTATE[1..48]

Specific to Block(s)	FTEB
Description	Originators Connection State – Identifies initiator's connection state.
Data Type	Enumeration
Range	1 = Closed 2 = Closing 4 = Opening 8 = Open
Default	Closed (1)
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

ORIPATH[1..48]

Specific to Block(s)	FTEB
Description	Originators Path – Identifies initiator's connection path.
Data Type	String
Range	32 Characters Maximum
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

ORITCLASS[1..48]

Specific to Block(s)	FTEB
Description	Originators Transport Class – Identifies the initiator's transport class.
Data Type	8-Bit Integer
Range	

Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

ORMUXED[1..48]

Specific to Block(s)	FTEB
Description	Originators Multiplexed – Identifies number of initiators using multiplexed connections.
Data Type	8-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

OROFFSET

Specific to Block(s)	OvrdSel
Description	Override Offset
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer/Application Developer
Residence	CEE
Related Parameters	OROPT
Remarks	This flag applies only to upstream PIDs. It indicates if the PID should apply a calculated offset to the override feedback value.

OROPT

Specific to Block(s)	OvrdSel
Description	Override Option - Indicates how the nonselected inputs to the Override Selector block should track the selected input.
Data Type	Boolean
Range	Off (0): Nonselected inputs do not use override feedback data. The block acts as a simple high/low selector. On (1): Nonselected inputs should use override feedback data.
Default	Off (0)
Config Load	Yes
Access Lock	Engineer/Applications Developer
Residence	CEE
Related Parameters	
Remarks	

OSVER

Specific to Block(s)	CAB types
Description	Operating System Version. Contains the version of the operating system that was executing when the user's CAB program was built. It is set by the CAB Build environment when a CAB type is created or edited.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	String
Range	32 characters
Default	Blank
Config Load	No
Access Lock	ViewOnly
Residence	System Repository
Related Parameters	CABSOFTVER, DOTNETVER[ ]
Remarks	

OTDENBL

Specific to Block(s)	LLAI
Description	Open Thermocouple Detection Enable. Defines whether an open-sensor condition is to be detected for all eight channels.
Data Type	Boolean
Range	Off (0): Do not detect an open thermocouple condition. On (1): Detect an open thermocouple condition.
Default	On (1)
Config Load	Yes
Access Lock	Supervisor
Residence	IOM
Related Parameters	PIUOTDCF
Remarks	

OUT

Specific to Block(s)	And, Checkbad, Delay, EQ, FTrig, GE, GT, LE, LT, Maxpulse, Minpulse, Mux, Nand, NE, Nor, Not, Offdelay, Ondelay, Or, Pulse, Qor, RTrig, Sel, Trig, Watchdog, Xor
Description	Current output value
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	Limit, Muxreal, Max, Min, SelReal
Description	Current output value
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	ROL, ROR, SHL, SHR
Description	Current output value
Data Type	16-Bit Integer
Range	16-Bit Integer
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT[0..12]

Specific to Block(s)	Genlin
Description	Output Coordinates 0 to 12 - These Parameters define the output value at the respective coordinate for the General Linearization function block.
Data Type	64-Bit Real Number
Range	Any Real Number, not NaN.
Default	N/A
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	IN[0..12], NUMSEGS.
Remarks	

OUT[1..8]

Specific to Block(s)	CheckBool Logic Block
Description	Output Value
Data Type	Boolean
Range	(0) OFF) (1) ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OUTSTS[1..8]
Remarks	Provides the current value of the connected output

OUT.BOOLEAN

Specific to Block(s)	TypeConvert, Push.
Description	Boolean Output Value
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT.ENUM

Specific to Block(s)	TypeConvert, Push.
Description	Enumerated Output Value
Data Type	Enumeration
Range	N/A
Default	ENUM0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT.FLOAT32

Specific to Block(s)	TypeConvert, Push.
Description	32-Bit Floating Point Output Value
Data Type	Real
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT.FLOAT64

Specific to Block(s)	TypeConvert, Push.
Description	64-Bit Floating Point Output Value
Data Type	Real
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	

Remarks

OUT.INT8

Specific to Block(s)	TypeConvert, Push.
Description	8-Bit Integer Output Value
Data Type	8-Bit Integer
Range	-128 to 127
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT.INT16

Specific to Block(s)	TypeConvert, Push.
Description	16-Bit Integer Output Value
Data Type	16-Bit Integer
Range	-32768 to 32767
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT.INT32

Specific to Block(s)	TypeConvert, Push.
Description	32-Bit Integer Output Value
Data Type	32-Bit Integer
Range	-2147483648 to 2147483647
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT.SDENUM

Specific to Block(s)	TypeConvert, Push.
Description	Self-defining Enumeration Output
Data Type	SDENUM
Range	12 character string corresponding to ordinal value.
Default	SDENUM0
Config Load	No
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

OUT.UINT 8

Specific to Block(s)	TypeConvert, Push.
Description	8-Bit Unsigned Integer Output Value
Data Type	Integer
Range	0 to 255
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	

Remarks

OUT.UINT16

Specific to Block(s)	TypeConvert, Push.
Description	16-Bit Unsigned Integer Output Value
Data Type	Integer
Range	0 to 65535
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUT.UINT32

Specific to Block(s)	TypeConvert, Push.
Description	32-Bit Unsigned Integer Output Value
Data Type	Integer
Range	0 to 4294967295
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

OUTSENSE

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Output Safe State – Selects safe state of the associated Output. When target is reached, the Output is set to this state.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Affects Channels 6-7 only.

OUTSENSE[6..7]

Specific to Block(s)	Pulse Input IOM
Description	Output Safe State – Selects safe state of the associated Output. When target is reached, the Output is set to this state.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Affects Channels 6-7 only.

OUTTYPE

Specific to Block(s)	All Regulatory Control Blocks
Description	Output Type – Defines whether the connected output is a digial or analog type.
Data Type	Enumeration

Range	(0) Digital (1) Analog
Default	Analog
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	Most regualtory control blocks are connected to analog outputs except POSPROP blocks, which have digital output connections

OUTSTS[1..8]

Specific to Block(s)	CheckBool Logic Block
Description	Output Status
Data Type	Enumeration
Range	0 – 6 • (0) kBadValSts • (1) kUncertainValSts • (2) kNormalValSts • (3) kManualValSts • (4) kInitAckValSts • (5) kInitRegValStst • (6) kInitBadValSts
Default	kNormalValSts
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OUT[1..8]
Remarks	Provides the current status of the connected output

OVERCAPACITY[1..24]

Specific to Block	QIPACTERM	
Description	Scale Over Capacity	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Over Capacity
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 2 of the Status 1 byte in the input assembly for the designated position [1-24].	

OVERCAPACITY[1..200]

Specific to Block	QIPACCHAN	
Description	Scale Over Capacity	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Over Capacity
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 2 of the Status 1 byte in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

OVERRANGE

Specific to Block(s)	AIC
Description	Over Range Alarm Indicator - Indicates the input value is above the valid hardware input range of the channel. Overrange and Underrange parameters are not supported for the Series A Analog Input Module (TC-FIAH81). When

	selected, Parameter ID error Err2088 will appear.
Data Type	Boolean
Range	Input is not in an over-range state (0) Input is in an over-range state (1)
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	UNDERRANGE
Remarks	

OVERRANGE[0..numChans-1]

Specific to Block(s)	AIM
Description	Over Range Alarm Indicator - Indicates the input value is above the valid hardware input range of the channel.
Data Type	Boolean
Range	Input is not in an over-range state (0) Input is in an over-range state (1)
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	UNDERRANGE[0..numChans-1]
Remarks	

OVERRUNSCUR

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Overruns in Current Hour. Shows the number of I/O link overruns that have occurred in the current hour.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	

Remarks	

OVERRUNSPREV

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Overruns in Previous Hour. Shows the number of I/O link overruns that have occurred in the previous hour.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	
Remarks	

OVERTEMPTHLD

Specific to Block(s)	Primary/Secondary C300 FBs, Series C FIM
Description	Over Temperature Threshold
Data Type	32-Bit Integer
Range	0 to 100 ºC
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	C300, Series C FIM
Related Parameters	C300TEMP [1…3]
Remarks	Configurable threshold value, above which function block posts a soft failure from any of its thermometers. The default value 0 disables the alarm.

OVERTOLRNCE[1..200]

Specific to Block	QIPACCHAN	
Description	Over Tolerance	
Data Type	BOOLEAN	
Range	Off(0)	OK

	On(1)	Over Tolerance
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	MATERIALPATH, COMMAND, COMMANDSTATS, MXFERSTATUS, MXFERSTATQ, UNDERTOLRNCE, POWERFAIL, DELIVEREDWGT, TARGETERROR, AVGFLOWRATE, AVGSPILL	
Remarks	This is the value of bit 0 of the MXFERSTATQ word in the Command Status Object. This value provides material transfer results and is valid after the material transfer for the designated channel [1..200] in the QiMPACT cluster completes.	

OVRRUNCURHR[1..40]

Specific to Block(s)	IOLINK, C300 IOLINK
Description	Process Data Cycle Overruns Current Hour.
Data Type	16-Bit Integer
Range	0 to 32767
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	OVRRUNPREVHR[0..40]
Remarks	Each element gives a count of cycle overruns that have occurred during the current hour for each IOP. The time is not synchronized with wall clock time.

OVRRUNPREVHR[1..40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Process Data Cycle Overruns in Previous Hour.
Data Type	16-Bit Integer
Range	0 to 32767
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	OVRRUNCURRHR[0..40]
Remarks	Each element gives a count of cycle overruns that have occurred during the previous hour for each IOP. The time is not synchronized with wall clock time.

OVRSIGNA

Specific to Block(s)	IOLINK, Secondary IOLINK
Description	P-Data Overrun Signature
Data Type	UINT32
Range	
Default	0
Config Load	No
Access Lock	Operator
Residence	IOLINK
Related Parameters	
Remarks	

OWDENBL

Specific to Block(s)	Series C AICHANNEL and Series C DICHANNEL		
Description	Open Wire Detection Enable		
Data Type	BOOLEAN		
Range	0	OFF	Do not detect an open wire condition.
	1	ON	Detect an open wire sensor condition.
Default	OFF		
Config Load	Yes		

Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter defines whether an open wire condition is to be detected for an individual channel. This parameter is only exposed and thus configurable and settable when: IOPTYPE is AI-HART OR (IOPTYPE is AI_LLMUX) AND (SENSRTYP is THERMCPL or 0_100_MV) OR IOPTYPE is DI-24 In the case of AI IOMs, an open wire condition could mean either a faulty sensor or an open (faulty) wiring. Note: Open wire detection is an automatic part of AO channels. Open wire detection does not exist for DO channels.

P*xxxx* Parameters

P

Specific to Block(s)	FLOWCOMP
Description	Pressure Input - Indicates the value of the gage pressure.
Data Type	64-Bit Real Number
Range	
Default	1.0
Config Load	No
Access Lock	Other Function Block
Residence	ACE/C200
Related Parameters	
Remarks	

P[1..6]

Specific to Block(s)	AUXCALC, SIGNALSEL
Description	Process Input Values 1 through 6.
Data Type	64-Bit Real Number
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	P1STS
Remarks	

P[1..10]

Specific to Block(s)	AUXSUMMER
Description	Process Input Values 1 through 10.
Data Type	64-Bit Real Number
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PSTS[1..10]
Remarks	

P0

Specific to Block(s)	FLOWCOMP
Description	Zero Reference for Pressure - Define value to compensate for ambient atmospheric pressure.
Data Type	64-Bit Real Number
Range	NaN is not allowed
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	
Remarks	P0 must be in the same engineering units as the P input. P0 is typically 14.696, if P is in psia, or 101.325 if P is in kPascals.

P1

Specific to Block(s)	DataAcq, Deadtime, Totalizer, GenIn, LeadLag.
Description	Process Input Value #1 - The current value of the process input to a Data Acquisition function block.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	Pulse Input Totalizer
Description	PV Equation Type – Defines the equation (EqA, EqB, ...) to be used with a given function block.
Data Type	Enumeration PVEQN
Range	0 – EqA 1 – EqB 2 – EqC 3 – EqD 4 – EqE 5 - EqF
Default	EqA
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

P1CLAMPOPT

Specific to Block(s)	DataAcq	
Description	Process Input Value #1 (P1) Clamping Option - Defines whether P1 clamping is used for this function block. If P1CLAMPOPT = Clamp, and the Process Variable (PV) is beyond its limits (PVEXLOLM or PVEXHILM), then PUSHSPPV is set equal to the limit that was violated; PVSTS is set to Uncertain.	
Data Type	Enumeration ENABLE	
Range	Disable (0):	Do not clamp the Process Variable (PV) value.
	Enable (1):	Clamp the Process Variable (PV) to its high or low limit.
Default	Disable (0)	
Config Load	Yes	

Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

P1EU

Specific to Block(s)	DataAcq
Description	P1EU value
Data Type	Real
Range	N/A
Default	NaN
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

P1FILTINIT

Specific to Block(s)	DataAcq
Description	Process Input Value #1 (P1) Filter Initialization Request Flag - Used to reset the filtered P1 value.
Data Type	Boolean
Range	Off (0): Initialization is not requested. On (1): Initialization is requested.
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	
Remarks	If the flag is set, the function block will set the filtered P1 value to the current P1 value.

P1FILTTIME

Specific to Block(s)	DataAcq
Description	Process Input Value #1 (P1) Filter Time (in minutes)
Data Type	64-Bit Real Number
Range	0.0 to 60.0 minutes
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	The default reading, 0.0, means that no filtering will be done.

P1STS

Specific to Block(s)	DataAcq, Deadtime, Totalizer, Genlin, Leadlag, Pulse Input Totalizer	
Description	Status of the Process Input #1 – Indicates the current status of P1.	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The P1 value is bad (i.e., NaN).
	Uncertn (1):	The status of the value is uncertain.
	Normal (2):	The P1 value is good.
	Manual (3):	The P1 value was manually stored.
Default	Bad (0)	
	Pulse Input Totalizer only: Normal (2)	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	P1	
Remarks		

P2

Specific to Block(s)	Deadtime
Description	Process Input Value #2
Data Type	Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	P2STS
Remarks	

P2STS

Specific to Block(s)	Deadtime	
Description	Status of Process Input #2	
Data Type	Enumeration PVVALSTS	
Range	Bad: (0)	(ORD.0)The value is bad and has been replaced with NaN.
	Uncertn: (1)	(ORD.1)The status of the value is uncertain.
	Normal: (2)	(ORD.2)The value is good.
	Manual: (3)	(ORD.3)The value was manually stored.
Default	Normal (2)	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	P2	
Remarks		

PARENTASSET

Specific to Block(s)	All FBs
Description	Parent Asset - Specifies the Asset Group to be used for asset management and area grouping for alarms and events.
Data Type	String

Range	Length: 132 Characters
Default	Null
Config Load	Yes
Access Lock	Application Developer
Residence	Server/SR
Related Parameters	
Remarks	

PARTMISMATCH

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Partner Interface mismatch on the I/O Link.	
Data Type	Boolean	
Range	Off (0):	Correct Partner Interface.
	On (1):	Partner Interface Mismatch.
Default	Off (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	When On (1), it shows the synchronized Primary IOLINK has detected the presence of an incorrect partner interface module across the I/O Link. Specifically, in the case of an IOLIM, the primary IOLINK in the chassis m slot n is connected via IOL with another IOLIM that does not reside in the secondary chassis x slot n. A system diagnostic alarm is generated for this condition. In the case of C300, the Device Index of the partner where the C300 IOLINK EE resides in not what is expected.	

PARTNOTVIS

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Partner Interface not visible on the I/O Link.	
Data Type	Boolean	
Range	Off (0):	Parter Interface is Visible.
	On (1):	Partner Interface is Not Visible.
Default	Off (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	When On (1), it shows the Primary IOLINK is unable to view it's redundant partner across the I/O Link. This only applies if an RM is resident in the same chassis as the IOLIM.	
	A system diagnostic alarm is generated for this condition.	

PATH

Specific to Block(s)	All Exchange Library Request Array function blocks.
Description	Path to the target device when the target device is on either a ControlNet or Fault Tolerant Ethernet (FTE) network. Path to the DHRIO module when the target device is on DH+. The path is specified as a comma-separated string of path segments.
Data Type	String
Range	Maximum of 40 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Enter a PATH to indicate the relative path from the originator device, such as a C300 or C200 Controller, to the target device.
	If the originator device is a C200 Controller, its communications network could be either ControlNet or Fault Tolerant Ethernet (FTE). In either case, you must specify the

path as a comma separated list of path segments. Each path segment is specified as an X, Y pair; where X can either be 1 to indicate that it is an ICP Backplane segment, or 2 to indicate that it is a ControlNet/FTE segment. When X is 1, Y denotes a slot number and is in the 0 to 16 range. When X is 2, Y denotes a ControlNet MAC ID and is in the 1 to 99 range or IP address of node (C300) on FTE, depending on the target network in use. The first path segment must be an ICP Backplane segment. The path segment types, MAC IDs or IP address and slot numbers must be specified in decimal values.

If the originator device is a C300 Controller on a FTE network, you must specify the path as a comma separated list of path segments. Each path segment is specified as an X, Y pair. It must start with 2 to indicate that it is a FTE segment followed by the IP address of the target device. When the target device is a C300 Controller, path segment must be only a single X, Y pair with X as 2 and Y as the IP address of the target C300. When the target device is a C200 Controller, path segment must be specified as 2, IP address of Fault Tolerant Ethernet Bridge module (FTEB) followed by the X, Y pair. When X is 1 (indicating that this is an ICP Backplane segment), Y denotes a slot number of the target and is in the 1 to 16 range.

In a special case of exchange communication between a C200 Controller on ControlNet and C300 Controller on FTE, the path will have multiple hops. For example, hops could be C200-CNI-CNI-FTEB-C300. Then the path should be 1, slot number of the CNI, 2 to indicate that it is a ControlNet segment, MAC ID of the CNI, 1, slot number of the FTEB, 2 to indicate that it is a FTE segment, IP address of the C300.

PAUSEFL

Specific to Block(s)	SCM
Description	Pause Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	
Access Lock	ViewOnly
Residence	

Related Parameters	
Remarks	

PB

Specific to Block(s)	AGA8GS_94 AGA8DL_94 AGA30M_92
Description	Base Pressure
Data Type	FLOAT64
Range	Input
Default	101.325 (kPa)
Config Load	Yes
Access Lock	Operator
Residence	CEE
Active Connections	No
Related Parameter	TB
Remarks	

PCMCOMMAND

Specific to Block(s)	CPM
Description	Command parameter for changing PCMSTATE
Data Type	Enumeration PCMCOMMAND
Range	None (0) Shutdown (1)
Default	None (0)
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PCMSTATE
Remarks	Shutdown can be commanded when the CEESTATE is IDLE, which takes the CPM to the PIREADY (RDY) state. No other value of PCMSTATE can be commanded. Note that in the future the name of this parameter will be changed to CPMCOMMAND.

PCMSTATE

Specific to Block(s)	CPM
Description	Current state of CPM block.
Data Type	Enumeration of PCMSTATE
Range	OFFNET (0) TESTING (1) BOOTING (2) ALIVE (3) LOADING (4) OK (5) FAILED (6) PIREADY (7) BACKUP (8) NOTLOADED (9) NOCEE (10) CEEIDLE (11) CEERUN (12) CEEMIX (13)
Default	OK (5)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PCMCOMMAND
Remarks	Note that in the future the name of this parameter will be changed to CPMSTATE.

Specific to Block(s)	Primary/Secondary C300 FBs
Description	C300 Module State.
Data Type	Enumeration
Range	OFFNET (0) TESTING (1) BOOTING (2) ALIVE (3) LOADING (4) OK (5) FAILED (6) PIREADY (7) BACKUP (8) NOTLOADED (9) NOCEE (10) CEEIDLE (11) CEERUN (12)

	CEEMIX (13)
Default	NOTLOADED (9)
Config Load	No
Access Lock	View Only
Residence	C300
Related Parameters	PCMCOMMAND
Remarks	

PCODESIZE[1..8]

Specific to Block(s)	AUXCALC, ENHAUXCALC, ENHREGCALC, REGCALC
Description	Pcode Size – Defines the size of the pcode for each expression.
Data Type	32-Bit Integer
Range	0 to 100
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	CEE
Related Parameter	
Remarks	This parameter must be set by Control Builder.

PCONN[1..10]

Specific to Block(s)	AUXSUMMER, SIGNALSEL
Description	Process Input Connection - Holds the connector of each input (P[1..10]) parameter
Data Type	64-Bit Real Number
Range	
Default	
Config Load	No
Access Lock	Application Developer Only
Residence	CEE
Related Parameter	P[1..10]
Remarks	

PDELAYDIRCHG

Specific to Block(s)	Pulse Length Control, Pulse Count Control
Description	Delay (in seconds) before Pulse Output begins to react.
Data Type	64-Bit Real Number
Range	Greater-than or equal-to 0.0 and a multiple of the containing Control Module PERIOD.
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameter	
Remarks	Pulse Delay after Direction Change – specifies (in seconds) the delay time for starting a pulse (on PORAISE, POLOWER, and PO outputs) after a change in direction (PODIR output).

PDESC[1..10]

Specific to Block(s)	AUXSUMMER, ENHAUXCALC, SIGNALSEL
Description	Process Input Description – Specifies description associated with each input (P[1..10] parameter.
Data Type	String
Range	
Default	
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	P[1..10]
Remarks	

PDFIFORATEA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Average Process Data FIFO Access Rate. Shows the average number of parameters accessed through process data FIFO per second.
Data Type	32-Bit Real Number
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	
Remarks	

PDFIFORATEM

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Maximum Process Data FIFO Access Rate. Shows the maximum number of parameters accessed through process data FIFO per second.
Data Type	32-Bit Real Number
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	
Remarks	

PEERAGETIME

Specific to Block(s)	SCM
Description	Peer Age Time- Specifies the peer age time in seconds
Data Type	FLOAT64
Range	0.0075-160.0 (Min SCM PERIOD * 1.5 … Max SCM PERIOD * 4)
Default	3.0

Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PERIOD,
Remarks	Parameter has no effect, if PEERALGOPT is set to None. Range check: If the value is lower than 1.5 * PERIOD, a **Value Clamped** warning appears and the value will be set to 1.5 * PERIOD. If the value is greater than 8 * PERIOD, a **Value Clamped** warning appears and the value will be set to 8 * PERIOD. Be aware, that PEERAGETIME value must be greater then SUBSCPERIOD value.

PEERENV[ ]

Specific to Block(s)	CEEC300, CEE, CEEACE, CEESIMC200
Description	Peer Environment - Specifies the peer environment that is to have specific peer subscription period (PEERSUBSCPER[ ]) and peer store response time (PEERSTRRESP[ ]) values configured for it.
Data Type	BlockId
Range	N/A
Default	N/A
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), C200(CEE), ACE(CEEACE), SIM_C200(CEESIMC200)
Related Parameters	NUMPEERENV[ ], PEERSTRRESP[ ], PEERSUBSCPER[ ], STRRESP[ ], SUBSCPERIOD.
Remarks	

PEERGETAVG[1..30]

Specific to Block(s)	CEEC300, CEE, CEEACE, CEESIMC200
Description	Average Peer Get Requests - Provides the running average of get responses per second to this CEE received from the peer environment, identified by corresponding PEERENV[index]. If there is no connection between the two peer environments, 0 will be returned.
Data Type	Float64
Range	N/A
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300), C200(CEE), ACE(CEEACE), SIM_C200(CEESIMC200)
Related Parameters	NUMPEERENV[ ], PEERENV[ ], STATSRESET.
Remarks	The characteristic time constant of the average is 1 minute. Wait 2-3 minutes to be sure averaging has fully settled. Averaging can be restarted by triggering the STATSRESET parameter.

PEERRATEAVG

Specific to Block(s)	IOLIM, Secondary IOLIM, C300 IOLINK , FIM, CPM
Description	Peer Rate Average. Shows the average peer-to-peer update rate in parameters per second.
Data Type	32-Bit Real Number
Range	N/A
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	IOLIM, C300 IOLINK
Related Parameters	
Remarks	

PEERRATEMAX

Specific to Block(s)	IOLIM, Secondary IOLIM, C300 IOLINK, FIM, CPM
Description	Peer Rate Maximum. Shows the maximum peer-to-peer update rate in parameters per second.
Data Type	32-Bit Real Number
Range	N/A
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	IOLIM, C300 IOLINK
Related Parameters	
Remarks	

PEERSTRAVG[1..30]

Specific to Block(s)	CEEC300, CEE, CEEACE, CEESIMC200
Description	Average Peer Store Requests - Provides the running average of acyclic stores added per second from this CEE sent to the peer environment, identified by corresponding PEERENV[index]. If there is no connection between the two peer environments, 0 will be returned.
Data Type	Float64
Range	N/A
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300), C200(CEE), ACE(CEEACE), SIM_C200(CEESIMC200)
Related Parameters	NUMPEERENV[ ], PEERENV[ ], STATSRESET.
Remarks	The characteristic time constant of the average is 1 minute. Wait 2-3 minutes to be sure averaging has fully settled. Averaging can be restarted by triggering the STATSRESET parameter.

PEERSTRRESP[ ]

Specific to Block(s)	CEEC300, CEE, CEEACE, CEESIMC200
Description	Peer Store Response Time - Specifies the specific store response expiration time to be used for the corresponding peer environment number (PEERENV[ ]) in seconds.
Data Type	Float64
Range	Greater than 0
Default	15.0
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), C200(CEE), ACE(CEEACE), SIM_C200(CEESIMC200)
Related Parameters	NUMPEERENV[ ], PEERENV[ ], STRRESP[ ].
Remarks	If a store response is not received within the configured expiration time, the store is marked failed.

PEERSUBSCPER[ ]

Specific to Block(s)	CEEC300, CEE, CEEACE, CEESIMC200
Description	Peer Subscription Period - Specifies the specific update period to be used for the corresponding peer environment number (PEERENV[ ]) in seconds.
Data Type	Enumeration
Range	Varies for given CEE
Default	Varies for given CEE
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), C200(CEE), ACE(CEEACE), SIM_C200(CEESIMC200)
Related Parameters	NUMPEERENV[ ], PEERENV[ ], SUBSCPERIOD.
Remarks	

PERIOD

Specific to Block(s) CM, IOM, SCM

Description Execution Period – Specify an execution/processing period (or scan rate) of a CM or SCM in milliseconds (ms). The Execution Period is the amount of time between two consecutive executions of the block. For example, if the Execution Period of a CM is 500 ms, then the block will run twice per second. The valid values and function of the Default value for PERIOD are different for the 50 and 5 ms CEE personalities as described in the Remarks section.

Data Type Enumeration of PERIOD

Range

IOM only:	5 TO 2000 ms:	
	DEFAULT(0)	100ms(5)
	5ms(1),	200ms(6)
	10ms(2)	500ms(7)
	20ms(3)	1000ms(8)
	50ms(4)	2000ms(9)
CEE Configurable Range:	5 TO 2000 ms:	
	DEFAULT(0)	100ms(5)
	5ms(1),	200ms(6)
	10ms(2)	500ms(7)
	20ms(3)	1000ms(8)
	50ms(4)	2000ms(9)
Valid Range, 50 ms CEE	50 to 2000 ms:	
	DEFAULT(0)*	500ms(7)
	50ms(4)	1000ms(8)
	100ms(5)	2000ms(9)
	200ms(6)	
Valid Range, 5 ms CEE	5 to 200 ms:	
	DEFAULT(0)*	50ms(4)
	5ms(1)	100ms(5)
	10ms(2)	200ms(6)
	20ms(3)	

	* DEFAULT(0) is converted to an actual value upon load: Converted to 1000 ms for the 50 ms CEE Converted to 200 ms for the 5 ms CEE
Default	DEFAULT
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	ORDERINCEE, ORDERINCM, PHASE.
Remarks	Determines execution period for a container block and its component blocks. Units are in milliseconds. Can be changed while the container block is Inactive without requiring reload. If you change the value of PERIOD online, a check is made to determine whether the new PERIOD matches the currrent PEERAGETIME value or not. If it does not match, the store of the new PERIOD value generates an **Invalid Period For Peer Age Time** error.

Specific to Block(s)	DOCHANNEL, Series C DOCHANNEL
Description	Pulse Width Modulated (PWM) Period. Specifies the status output period length in seconds for a digital output point with DOTYPE configuration of PWM.
Data Type	32-Bit Real Number
Range	1.0 to 120.0 seconds
Default	10.0 seconds
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	

PERSWAPENB

Specific to Block(s)	C200IOLINK, C300 IOLINK
Description	I/O Link Periodic Cable Swap. Lets users initiate a periodic cable swap.
Data Type	Boolean
Range	Off (0): Swapping of I/O Link cables A & B is disabled. On (1): Swapping of I/O Link cables A & B is enabled.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	COMMAND, PERSWAPTHRES.
Remarks	When more than PERSWAPTHRES parameter errors are detected within a one-minute period, the PERSWAPENB parameter is automatically set to Off (disabled). Note that this is the same as the IOLPERSW parameter in a TPS system.

PERSWAPTHRES

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Periodic Cable Swap Error Threshold (err/min). Defines the acceptable rate of I/O link communication errors in errors per minute before the status of the cable transitions to ERROR.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	10
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	IOLCHNSTSA, IOLCHNSTSB.
Remarks	Note that this is the same as the IOLCHERT parameter in a TPS system.

PF

Specific to Block(s)	AGA8GS_94 AGA8DL_94 AGA30M_92
Description	Flowing Pressure
Data Type	FLOAT64
Range	Input
Default	-
Config Load	No
Access Lock	Operator
Residence	No Load
Active Connections	No
Related Parameter	HW
Remarks	

PGR

Specific to Block(s)	AGA8GS_94
Description	Gas Relative Density Reference Pressure
Data Type	FLOAT64
Range	Input
Default	101.325 kPa (EUB Test Case)
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameter	GRB, GRS, TGR, GRGR
Remarks	

PHASE

Specific to Block(s)	CM, IOM, SCM
Description	Determines the set of cycles in which a container block executes.
Data Type	16-Bit Integer
Range	0 to (PERIOD ms / 50 ms) - 1
Default	0
Config Load	Yes
Access Lock	Engineer

Residence	CEE
Related Parameters	CPUCYCLEAVG[0..39], ORDERINCEE, ORDERINCM, PERIOD.
Remarks	The combination of PHASE and PERIOD uniquely determine the set of cycles in which a container block executes.

PHYCHNERRA1 [1…15] through PHYCHNERRA8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Errors Channel A.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNERRA[1…40], SECCHNERRA [1…40]
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel A Error count. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCHNERRB1 [1…15] through PHYCHNERRB8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Errors Channel B.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNERRB [1…40], SECCHNERRB [1…40]
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel B Error count. The

	index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCHNMNA1 [1…15] through PHYCHNMNA8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel A- Edges. Minus edge transitions missed on Channel A.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNMNA and SECCHNMNA
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel A missed minus edge transitions count. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCHNMNB1 [1…15] through PHYCHNMNB8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel B- Edges. Minus edge transitions missed on Channel B.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNMNB, SECCHNMNB
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel B missed minus edge transitions count. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCHNPLA1 [1…15] through PHYCHNPLA8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel A+ Edges. Plus edge transitions missed on Channel A.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNPLA, SECCHNPLA
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel A missed plus edge transitions count. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCHNPLB1 [1…15] through PHYCHNPLB8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel B+ Edges. Plus edge transitions missed on Channel B.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNPLB, SECCHNPLB
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel B missed plus edge transitions count. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCHNMNASC1 [1…20] through PHYCHNMNASC4 [1…20]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel A- Edges. Minus edge transitions missed on Channel A.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNMNA, SECCHNMNA
Remarks	These parameters are arrays of up to 20 entries each containing the associated Series C IOM's Channel A missed minus edge transitions count.

PHYCHNMNBSC1 [1…20] through PHYCHNMNBSC4 [1…20]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel B- Edges. Minus edge transitions missed on Channel B.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNMNB, SECCHNMNB
Remarks	These parameters are arrays of up to 20 entries each containing the associated Series C IOM's Channel B missed minus edge transitions count.

PHYCHNPLASC1 [1…20] through PHYCHNPLASC4 [1…20]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel A+ Edges. Plus edge transitions missed on Channel A.
Data Type	16-Bit Unsigned Integer

Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNPLA, SECCHNPLA
Remarks	These parameters are arrays of up to 20 entries each containing the associated Series C IOM's Channel A missed plus edge transitions count.

PHYCHNPLBSC1 [1…20] through PHYCHNPLBSC4 [1…20]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel B+ Edges. Plus edge transitions missed on Channel B.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNPLB, SECCHNPLB
Remarks	These parameters are arrays of up to 20 entries each containing the associated Series C IOM's Channel B missed plus edge transitions count.

PHYCHNSILA1 [1…15] through PHYCHNSILA8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Silences Channel A.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNSILA, SECCHNSILA
Remarks	These parameters are arrays (corresponding to PMIO

	chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel A Silences count. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCHNSILB1 [1…15] through PHYCHNSILB8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Silences Channel B.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNSILB, SECCHNSILB
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Channel B Silences count. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PHYCOMMERR1 [1…15] through PHYCOMMERR8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Last Error	
Data Type	Enumeration	
Range	None	0
	InvAlert	1
	InvDest	2
	InvChCnt	3
	InvSourc	4
	InvCmd	5
	CheckSum	6
	No_Resp	7
	ChTimOut	8
	MsgOvRun	9
	GapError	10

	LpbckErr	11
	NTH_O	12
	TknRecov	13
	RplBufOv	14
	TknTmOut	15
	IolDrver	16
	---	17
Default	None 0	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters	N/A	
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Last Error Code. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.	

PHYLHFSTA[1..8]

Specific to Block(s)	IOLINK	
Description	Last Hard Fail Status.	
Data Type	Enum	
Range	Unknown (0):	Unknown Status.
	PowerDown (1):	This IOP Powered Down.
	InvPrgExec (2):	Invalid Program Execution.
	EpromErr (3):	EPROM Checksum Error.
	RamCntErr (4):	RAM Contents Error.
	RamAdrErr (5):	RAM Addressing Error.
	DpaError (6):	Device Physical Address Error.
	DsaError (7):	Device Soft Address Error.
	RxBufOvFl (8):	I/O Link Receive Buffer Overflow.
	IolJabber (9):	I/O Link Jabber Circuit Failure.
	BadPgJmp (11):	Illegal Value Case Control.
	AdConvInmcp (12):	A-D Conversion Incomplete.
	AdOutOvfl (13):	A-D Output Value Overflow.
	AdOutUndef (14):	A-D Output is Undefined.

	AdCalibErr (15):	A-D Calibration is Incorrect.
	BadLcLtc (16):	Bad DC LTC.
	Dmt_Tmot (17):	Dead Man Timer Timeout.
	MltOutFail (18):	Multiple Output Failures.
	BadDaRange (20):	Bad D-A Range.
	MstrTmot (21):	Master 68K Timeout.
	Um51WDog (22):	Um51 Watchdog Timer Timed Out
	CntrCrtFail (23):	IOP Counter Circuit Failure
	SOECntFail (24):	SOE Counter Failure
	OpCntrlHwFail (25):	Output Control HW Failure
	BadIopType (26):	Wrong Processor Type
Default	N/A	
Config Load	No	
Access Lock	ViewOnly	
Residence	PCM	
Related Parameters		
Remarks	Refer to the *Control Hardware Troubleshooting and Maintenance Guide* in Knowledge Builder for more information.	

PHYRCVCHN1 [1…15] through PHYRCVCHN8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK		
Description	Active Receive Channel.		
Data Type	Enumeration		
Range	0	CHANNEL_A:	Channel A is active.
	1	CHANNEL_B:	Channel B is active.
	2	UNKNOWN:	No active channel.
	3	---	IOP is not configured.
Default	UNKNOWN		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOLINK		
Related Parameters	PRIRCVCHAN, SECRCVCHAN		

Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's Active Receive Channel. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number. If the PERSWAPENB parameter is On, the active receive channel toggles between A and B once a minute.

PHYSDSA1 [1…15] through PHYSDSA8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	IOP Number
Data Type	16-Bit Unsigned Integer
Range	0 to 40
Default	0
Config Load	Yes
Access Lock	Application Developer
Residence	IOLINK
Related Parameters	IOMNUM
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's logical address on the I/O Link. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number. If IOMNUM=0 and the IOP block is assigned to an I/O Link block, Control Builder automatically defaults the IOMNUM to the next available value on the I/O Link.

PHYSIOPSTS1 [1…15] through PHYSIOPSTS8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	IOP Status	
Data Type	Enumeration	
Range	POWER_ON (0):	Transient state when power is turned on.
	IDLE (1):	In the Idle state.
	OK (2):	Running.
	NO_RESP (3):	No response.
	IDLE_SF (4):	In the Idle state and has a Soft Failure.
	SOFT_FAIL (5):	In the Running state and has a Soft Failure.
	COMM_ERR (6):	Communication Error.
	CONFIG_MIS (7):	Configuration Mismatch.
	NO_CONFIG (8):	This IOP is Not Configured.
	--- (9):	This IOP does not exist.
Default	POWER_ON	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters	IOMSTSA, IOMSTSB	
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's status. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.	

PHYSMODTYPE1[1…15] through PHYSMODTYPE8 [1…15]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Actual Module Type.
Data Type	Enumeration
Range	Refer to IOPTYPE parameter of the IOP Block.
Default	Null
Config Load	No
Access Lock	ViewOnly

Residence	IOLINK
Related Parameters	IOPTYPE
Remarks	These parameters are arrays (corresponding to PMIO chassis numbered 1 through 8) with up to 15 entries each indicating the associated IOP's type. The index of each array [1 to 15] corresponds to the physical slot in the PMIO Chassis Number.

PI[0..2]

Specific to Block(s)	DevCtl
Description	Permissive Interlocks
Data Type	Boolean
Range	Off (0) On (1)
Default	On (1)
Config Load	No
Access Lock	Other Function Block (see Remarks)
Residence	CEE
Related Parameters	BYPASS, GOP, NUMDOUTS, NUMSTATES, OP.
Remarks	Engineer can change only when the function block is InActive or Box is idle. Illegal if NUMDOUTS = 0. PI[2] is illegal if NUMSTATES = 2. Permissives are ignored if BYPASS is set On.

PIUOTDCF

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O)
Description	Open Thermocouple Detection Enable. Specifies whether or not this point is to detect an open thermocouple condition.
Data Type	Boolean
Range	Off: Disabled. Do not detect an open thermocouple condition. On: Enabled. Detect an open thermocouple condition.
Default	On
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	OTDENBL
Remarks	This parameter is only exposed if ASSOCIOPTYP is STI-MV, LLMUX, or RHMUX. It is only configurable when: a) ASSOCIOPTYP is STI-MV, LLMUX, or RHMUX, and b) SENSRTYP is THERMCPL, 0_100_MV, or STT.

PL

Specific to Block(s)	Pulse Input IOC
Description	Pulse Length Value – Engineering Units value corresponding to the measured pulse length.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PLSTS
Remarks	PL = C3 * (pulse / period length in microseconds)

PL[0..5]

Specific to Block(s)	Pulse Input IOM
Description	Pulse Length Value – Engineering Units value corresponding to the measured pulse length. If pulses stop accumulating the last non-zero value will be reported.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	For Pulse Input IOM (Channels 0-5 only), PL in EU = C3 * Timer Latch Value in microseconds.

PLSTS

Specific to Block(s)	Pulse Input IOC	
Description	Pulse Length Value Status	
Data Type	Enumeration	
Range	Bad (0):	Bad Status is set during loss of cummunication, IOC or IOM function block is inactive.
	Uncertn (1):	
	Normal (2):	Associated data is valid.
	Manual (3):	
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	PL	
Remarks		

PLVERSION

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs.
Description	Programmable Logic Version
Data Type	String
Range	Length: 5 characters
Default	Null
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	Factory programmed logic device version differs from the boot/application image version, (which is updated with firmware load) in that the hardware has to be returned to the factory for this version to be updated.

PNTFORM

Specific to Block(s)	PMIO Channel Blocks; Series C I/O Channel Blocks	
Description	Point Form. Defines the form of the data point that is used.	
Data Type	Enum	
Range	Full (0):	Point is fully displayed and alarmed.
	Component (1):	Point is partially displayed and not alarmed.
Default	Component (1)	
Config Load	Yes	
Access Lock	DICHANNEL block only: Application Developer All other blocks: ViewOnly	
Residence	IOM	
Related Parameters		
Remarks	This parameter is configurable only for DICHANNEL blocks assigned to a DISOE block.	

PNTTYPE

Specific to Block(s)	All PM I/O Channels		
Description	Point Type		
Data Type	ENUM		
Range	0	NULL	Point is not configured.
	1	AI	Analog Input.
	2	AO	Analog Output.
	3	DI	Digital Input.
	4	DO	Digital Output.
Default	Based on channel type		
Config Load	Yes		
Access Lock	Application Developer		
Residence	IOM		
Related Parameters			
Remarks	This parameter is always loaded first.		

Specific to Block(s)	All Series C I/O Channels		
Description	Point Type		
Data Type	ENUM		
Range	0	NULL	Point is not configured.
	1	AI	Analog Input.
	2	AO	Analog Output.
	3	DI	Digital Input.
	4	DO	Digital Output.
Default	Based on channel type.		
Config Load	Yes		
Access Lock	Application Developer, but hidden from user		
Residence	IOM		
Related Parameters	N/A		
Remarks	This parameter is always loaded first.		

PO

Specific to Block(s)	Pulse Length Control, Pulse Count Control
Description	Pulse Output for both Raise and Lower pulses.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameter	PODIR, POLOWER, PORAISE.
Remarks	This is an output parameter which produces pulses on either a +PULSETIME or –PULSETIME value.

PO[1..3]

Specific to Block(s)	DevCtl
Description	Pulsed Output Values
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	DO[1..3], GOPFINAL, NUMDOUTS, OPDOMAP[0..3][1..3], OPFINAL, PULSEWIDTH.
Remarks	Only valid if NUMDOUTS allows the respective output.

POCONNECTED[1..3]

Specific to Block(s)	DevCtl
Description	Pulse Connection Flag - Whenever the respective PO(1..3) is connected to a DOC.ONPULSE or DOC.OFFPULSE, the parameter POCONNECTED(1..3) must be set to “On”. This allows the Device Control function block to know which outputs are configured for pulsing. POCONNECTED[ ] may not be configured on the form until at least one PO[ ] parameter is exposed on the block.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	PO[1..3], PULSEWIDTH.
Remarks	

PODIR

Specific to Block(s)	Pulse Length Control, Pulse Count Control
Description	Indicates direction for Pulse Output: Off-Lower, On-Raise.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameter	P0, POLOWER, PORAISE.
Remarks	

POLOWER

Specific to Block(s)	Pulse Length Control, Pulse Count Control
Description	Pulse Output for Lower pulses.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameter	P0, PODIR, PORAISE.
Remarks	This is an output parameter which produces pulses on a –PULSETIME value.

POPERIOD

Specific to Block(s)	Pulse Count Control
Description	Period used for the pulses generated (in seconds).
Data Type	64-Bit Real Number
Range	Greater-than 0.0. Only values that are multiples of two times the FB's execution period are valid, other values are clamped to the greatest multiple of two times the function block's execution period less than the entered value.
Default	0.010
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameter	
Remarks	

PORAISE

Specific to Block(s)	Pulse Length Control, Pulse Count Control
Description	Pulse Output for Raise pulses.
Data Type	Boolean

Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameter	P0, PODIR, POLOWER.
Remarks	This is an output parameter which produces pulses on a +PULSETIME value.

POSTTRANSEXECSTS

Specific to Block(s)	Step
Description	Execution Status of Post (succeeding) Transitions.
Data Type	Enumeration
Range	
Default	Ok
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

POWERFAIL[1..200]

Specific to Block	QIPACCHAN	
Description	Power Failure	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Power Failure During Feed
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	MATERIALPATH, COMMAND, COMMANDSTATS, MXFERSTATUS, MXFERSTATQ, OVERTOLRNCE,	

	UNDERTOLRNCE, DELIVEREDWGT, TARGETERROR, AVGFLOWRATE, AVGSPILL
Remarks	This is the value of bit 2 of the MXFERSTATQ word in the Command Status Object. This value provides material transfer results and is valid after the material transfer for the designated channel [1..200] in the QiMPACT cluster completes.

PP[1..10]

Specific to Block(s)	ENHAUXCALC
Description	Scale Input - Each P-input has a corresponding scaled input.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	ACE/C200
Related Parameter	P[1..10], ENABLE[1..10], PSUB[1..10].
Remarks	

PREDPVHIALM.FL

Specific to Block(s)	PID-PL	
Description	Predicted PV High Alarm Flag – This alarm detects high excursions in the predicted steady state PV, STEADYSTATEPV. Because the alarm is associated with the steady state operation, it is an early indication of potential control problems or prolonged process upsets.	
Data Type	Boolean	
Range	Off (0):	Not in Predicted PV High alarm
	On (1):	In Predicted PV High alarm
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	

Related Parameters	PREDPVHIALM.PR, PREDPVHIALM.SV, PREDPVHIALM.TP.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREDPVHIALM.PR

Specific to Block(s)	PID-PL
Description	Predicted PV High Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PREDPVHIALM.FL, PREDPVHIALM.SV, PREDPVHIALM.TP.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREDPVHIALM.SV

Specific to Block(s)	PID-PL
Description	Predicted PV High Alarm Severity
Data Type	INT16
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PREDPVHIALM.FL, PREDPVHIALM.PR, PREDPVHIALM.TP.

Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREDPVHIALM.TP

Specific to Block(s)	PID-PL
Description	Predicted PV High Alarm Trip Point (in Engineering Units) – Defines the upper limit for the predicted steady state PV.
Data Type	Float64
Range	PREDPVLOALM.TP – PVHIALM.TP, NaN
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PREDPVHIALM.FL, PREDPVHIALM.PR, PREDPVHIALM.SV.
Remarks	NaN disables this alarm. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREDPVLOALM.FL

Specific to Block(s)	PID-PL
Description	Predicted PV Low Alarm Flag – This alarm detects low excursions in the predicted steady state PV, STEADYSTATEPV. Because the alarm is associated with the steady state operation, it is an early indication of potential control problems or prolonged process upsets.
Data Type	Boolean
Range	Off (0): Not in Predicted PV Low alarm On (1): In Predicted PV Low alarm
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PREDPVLOALM.PR, PREDPVLOALM.SV, PREDPVLOALM.TP.

Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREDPVLOALM.PR

Specific to Block(s)	PID-PL
Description	Predicted PV Low Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PREDPVLOALM.FL, PREDPVLOALM.SV, PREDPVLOALM.TP.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREDPVLOALM.SV

Specific to Block(s)	PID-PL
Description	Predicted PV High Alarm Severity
Data Type	INT16
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PREDPVLOALM.FL, PREDPVLOALM.PR, PREDPVLOALM.TP.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREDPVLOALM.TP

Specific to Block(s)	PID-PL
Description	Predicted PV Low Alarm Trip Point (in Engineering Units) – Defines the lower limit for the predicted steady state PV.
Data Type	Float64
Range	PVLOALM.TP -PREDPVHIALM.SV, NaN
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PREDPVLOALM.FL, PREDPVLOALM.PR, PREDPVLOALM.SV.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PREVISION

Specific to Block(s)	RM
Description	Platform Revision. Identifies the minor revision of the RM.
Data Type	8-Bit Unsigned Integer
Range	0 to 255
Default	N/A
Config Load	No
Access Lock	ViewOnly Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

PREVLOADSTAT

Specific to Block(s)	CM, SCM
Description	Previous container block load state.
Data Type	Enumeration of LOADSTATE

Range	LOADFAILED (0) UNLOADED (1) LOADINGPROG (2) LOADINGCMPTYPES (3) CMLOADINGTBR (4) LOADINGCONFG (5) LOADINGCONN (6) READY (7)
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	LOADSTATE
Remarks	This parameter captures the previous value of LOADSTATE during the container block load process. This information is useful in debugging in the event that a load failure is encountered by the container block.

PREVTRANSEXECSTS

Specific to Block(s)	Step
Description	Execution Status of Previous Transistions
Data Type	Enumeration
Range	
Default	Ok
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PRFRATIO

ATTENTION

This parameter is for non-integrating processes (D[1]<>0). For integrating systems, use CLOSEDLOOPRESP to alter the speed of response.

Specific to Block(s)	PID-PL
Description	Performance Ratio – Ratio of desired closed loop control response to open loop response. Tells the function block how hard to push to a setpoint or range limit.
Data Type	Float64
Range	0.1 – 10.0
Default	1
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	CLOSEDLOOPRESP, OPENLOOPRESP.
Remarks	Increasing the ratio slows the loop response time. PRFRATIO has no meaning for integrating processes and is set to 1. Use CLOSEDLOOPRESP to specify integrator performance. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PRIBLOCKNAME[1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	IOP Block Name. Indicates the corresponding Primary IOP/IOM Tag. The index of this array corresponds to the IOP/IOM Number.
Data Type	BlockId
Range	N/A
Default	0
Config Load	No
Access Lock	View Only
Residence	IOLINK, C300 IOLINK
Related Parameters	SECBLOCKNAME [1…40]

Remarks

PRICHNERRA[1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Input/Output Processor (IOP) Errors on Channel A. Shows the number of I/O link channel A errors encountered by the primary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRA
Remarks	Note that this is the same as the IOMCHAER parameter in a TPS system.

PRICHNERRB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Input/Output Processor (IOP) Errors on Channel B. Shows the number of I/O link channel B errors encountered by the primary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRB
Remarks	Note that this is the same as the IOMCHBER parameter in a TPS system.

PRICHNMNA [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel A- Edges. Shows the number of I/O link channel A missed minus edge transitions encountered by the primary IOM, where the index of this array corresponds to the number of the IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNMNA
Remarks	

PRICHNMNB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel B- Edges. Shows the number of I/O link channel B missed minus edge transitions encountered by the primary IOM, where the index of this array corresponds to the number of the IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNMNB
Remarks	

PRICHNPLA [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel A+ Edges. Shows the number of I/O link channel A missed plus edge transitions encountered by the primary IOM, where the index of this array corresponds to the number of the IOM.

Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLA
Remarks	

PRICHNPLB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Channel B+ Edges. Shows the number of I/O link channel B missed plus edge transitions encountered by the primary IOM, where the index of this array corresponds to the number of the IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLB
Remarks	

PRICHNSILA [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Input/Output Processor (IOP) Silences on Channel A. Shows the number of I/O link channel A silences encountered by the primary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK

Related Parameters	TOTCHNSILA
Remarks	Note that this is the same as the IOMCHASL parameter in a TPS system.

PRICHNSILB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Input/Output Processor (IOP) Silences on Channel B. Shows the number of I/O link channel B silences encountered by the primary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNSILB
Remarks	Note that this is the same as the IOMCHBSL parameter in a TPS system.

PRICOMMERR [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Primary Input/Output Processor (IOP) Last Communication Error. Shows the last I/O link communication error experienced by the primary IOP/IOM, where the index of the array corresponds to the number of the IOP/IOM.	
Data Type	Enumeration	
Range	None (0):	No communication error.
	InvAlert (1):	Invalid Alert – message bit problem.
	InvDest (2):	Invalid Destination.
	InvChCnt (3):	Invalid Character Count.
	InvSourc (4):	Invalid Source.
	InvCmd (5):	Invalid Command.
	CheckSum (6):	Data record Checksum Error.
	No_Resp (7):	No Response.
	ChTimOut (8):	Channel Time Out.

	MsgOvRun (9):	Message Overrun.
	GapError (10):	Message gap is too long.
	LpbckErr (11):	Loop Back Error.
	NTH_O (12):	Next Token Holder equals zero.
	TknRecov (13):	Token Recovery in progress.
	RplBufOv (14):	Reply Buffer Overflow.
	TknTmOut (15):	Token Pass Time Out.
	IolDrver (16):	IOL Driver Error.
	---(17):	IOP is not configured.
Default	None (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	Note that this is the same as the IOMCOMER parameter in a TPS system.	

PRIIFCARD

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Interface File Card Number. Shows the current primary I/O link interface's card number that is a component of its physical address.
Data Type	16-Bit Unsigned Integer
Range	1 to 16
Default	16
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRIIFFILE
Remarks	The card number will be 16 only, although for C300 the parameter is not meaningful. It is supported only for compatibility and its value will be 2 or 3.

PRIIFCHNERRA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Link Interface Errors on Channel A. Shows the number of I/O link channel A errors encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRA
Remarks	Note that this is the same as the PMMCHAER parameter in a TPS system.

PRIIFCHNERRB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Link Interface Errors on Channel B. Shows the number of I/O Link Channel B errors encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRB
Remarks	Note that this is the same as the PMMCHBER parameter in a TPS system.

PRIIFCHNMNA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Link Interface Channel A- Edges. Shows the number of I/O link channel A missed minus edge transitions encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer

Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNMNA
Remarks	

PRIIFCHNMNB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Link interface Channel B- Edges. Shows the number of I/O link channel B missed minus edge transitions encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNMNB
Remarks	

PRIIFCHNPLA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primanry Link Interface Channel A+ Edges. Shows the number of I/O link channel A missed plus edge transitions encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLA
Remarks	

PRIIFCHNPLB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Link Interface Channel B+ Edges. Shows the number of I/O link channel B missed plus edge transitions encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLB
Remarks	

PRIIFCHNSILA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Link Interface Silences on Channel A. Shows the number of I/O link silences on channel A encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNSILA
Remarks	Note that this is the same as the PMMCHASL parameter in a TPS system.

PRIIFCHNSILB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Link Interface Silences on Channel B. Shows the number of I/O link silences on channel B encountered locally by the primary link interface.
Data Type	16-Bit Unsigned Integer

Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNSILB
Remarks	Note that this is the same as the PMMCHBSL parameter in a TPS system.

PRIIFCOMMERR

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Primary Link Interface Last Communication Error. Shows the last I/O link communications error experienced by the primary link interface.	
Data Type	Enum	
Range	None (0)	No communication error.
	InvAlert (1)	Invalid Alert – message bit problem.
	InvDest (2)	Invalid Destination.
	InvChCnt (3)	Invalid Character Count.
	InvSourc (4)	Invalid Source.
	InvCmd (5)	Invalid Command.
	CheckSum (6)	Data record Checksum Error.
	No_Resp (7)	No Response.
	ChTimOut (8)	Channel Time Out.
	MsgOvRun (9)	Message Overrun.
	GapError (10)	Message gap is too long.
	LpbckErr (11)	Loop Back Error.
	NTH_O (12)	Next Token Holder equals zero.
	TknRecov (13)	Token Recovery in progress.
	RplBufOv (14)	Reply Buffer Overflow.
	TknTmOut (15)	Token Pass Time Out.
	IolDrver (16)	IOL Driver Error.
Default	None (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	

Related Parameters	
Remarks	Note that this is the same as the PMMCOMER parameter in a TPS system.

PRIIFFILE

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Primary Interface File Number. Shows the current primary I/O link interface's file number that is a component of its physical address.
Data Type	16-Bit Unsigned Integer
Range	1 to 8
Default	1
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRIIFCARD
Remarks	The file number will be 1 or 2 only. For the C300 this parameter is not meaningful. It is supported for compatibility and its value will be 6 for both partners.

PRIIFRCVCHN

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Primary Link Interface Active Receive Channel. Shows the channel that is actively listening to transmitted messages.	
Data Type	Enumeration	
Range	UNKNOWN:	No active channel.
	CHANNEL_A:	Channel A is active.
	CHANNEL_B:	Channel B is active.
Default	UNKNOWN	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters	PERSWAPENB	
Remarks	If the PERSWAPENB parameter is On, the active receive channel toggles between A and B once a minute. (Note that	

this is the same as the PMMRECHN parameter in a TPS system.)

PRIIFSTS

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Primary Link Interface Processor Status. Shows the status of the link processor for the primary link interface.	
Data Type	Enumeration	
Range	UnAvailable (0)	Module is unavailable for communication.
	Idle (1)	Module is idle with no soft failures.
	Ok (2) *	Module is running with no soft failures.
	NoResponse (3)	No response from module.
	IdleSF (4)	Module is idle with soft fail error(s) present.
	SoftFail (5) *	Module is running with soft fail error(s) present.
	CommError (6)	Communication error to IOM.
	ConfgMis (7)	Configuration mismatch detected.
	NotConfig (8)	IOM not configured.
	NonExist (9)	Module does not exist at this address.
Default	UnAvailable (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	* Only the values of Ok (2) or SoftFail (5) are displayed.	
	Note that this is the same as the PMMIOLST parameter in a TPS system.	

PRIM.[1..8].INITIALIZABLE

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Initializable – Determines if a regulatory control point is connected to initializable primaries.
Data Type	Boolean
Range	(0) False (1) True
Default	False
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PRIMARYSIG

Specific to Block(s)	Most Function Blocks
Description	Primary Signature – Lets you specify the meaning associated with entering the primary signature.
Data Type	String
Range	Length: 24 characters
Default	Null
Config Load	Yes
Access Lock	Engineer
Residence	SR
Related Parameters	NUMSIGS
Remarks	

PRIMDATA.[1..8].ARWSTS

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Anti-Reset Windup Status – Determines the windup status for the primary
Data Type	Enumeration ARWSTS
Range	(0) Normal (1) HI (2) Lo

	(3) HiLo
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8]. EUHI

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Engineering Unit High – Determines the Engineering Unit High (EUHI) value propagated to the primaries.
Data Type	Float64
Range	
Default	
Config Load	
Access Lock	Control
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8]. EULO

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Engineering Unit Low – Determines the Engineering Unit Low (EULO) value propagated to the primaries.
Data Type	Float64
Range	
Default	
Config Load	
Access Lock	Control
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].HISELECT

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data High Selector – Determines if the override selector in an override strategy is configured as a high or low selector for type of override propagation.
Data Type	Boolean
Range	(0) False (1) True
Default	False
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].INITSTS

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Initialization Status – Determines the initialization status propagated to the primaries.
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].INITVAL

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Initialization Value – Determines the initialization value propagated to the primaries.
Data Type	Float64
Range	

Default	
Config Load	
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].LOCALMAN

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Local Manual – Determines the local manual status propagated to the primaries.
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].ORFBSTS

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Override Feedback Status – Indicates the override feedback status for the primary.
Data Type	Enumeration
Range	(0) Notconnected (1) Selected (2) Notselected
Default	Notconnected
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].ORFBVAL

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Override Feedback Value – Specifies the override feedback value for the primary.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].OROFFSET

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Override Offset – Determines if an offset value is to be added to PID blocks connected upstream.
Data Type	Boolean
Range	(0) Off (1) On
Default	On
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	
Remarks	

PRIMDATA.[1..8].PROPOVRD

Specific to Block(s)	All Regulatory Control Blocks
Description	Primary Data Propagation Override – Determines if override status is to be propagated to the primary.
Data Type	Boolean
Range	(0) False (1) True
Default	False

Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	
Remarks	

PRIMOVERLAP[1..24]

Specific to Block	QIPACTERM	
Description	Primary Overlapped Feed in Progress	
Data Type	Boolean	
Range	Off(0)	Off
	On(1)	In Progress
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 14 of the Status 2 word in the input assembly for the designated position [1-24].	

PRIMOVERLAP[1..200]

Specific to Bloc:	QIPACCHAN	
Description	Primary Overlapped Feed in Progress	
Data Type	Boolean	
Range	Off(0)	Off
	On(1)	In Progress
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 14 of the Status 2 word in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

PRIORITYIOM

Specific to Block(s)	Series C I/O Modules		
Description	Priority IOM		
Data Type	Boolean		
Range	0	Off	Not configured to be a Priority IOM
	1	On	Configured to be a Priority IOM
Default	Off (0)		
Config Load	CEE		
Access Lock	Application Developer		
Residence	IOM		
Related Parameters			
Remarks	When this parameter is set, the IO module's process data collection from the IOLINK will be better synchronized with the control cycle providing lower latency. NOTE: IO Modules with this parameter set will use up a large amount of additional Link Units. Excessive use of this option will result in overruns. Therefore, it is recommended to use only for strategies with strict latency requirements. If a change in the status of an IO Module is desired, it must be changed in the Project Tree and then reloaded. This does not require IO Module deletion from the Monitoring Tree first.		

PRIRCVCHN [1..40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Primary IOP Active Receive Channel. Shows the channel that is actively listening to the transmitted messages, where the index of this array corresponds to the number of the Input/Output Processor (IOP).	
Data Type	Enumeration	
Range	UNKNOWN:	No active channel.
	CHANNEL_A:	Channel A is active.
	CHANNEL_B:	Channel B is active.
	---	IOP is not configured.
Default	UNKNOWN	
Config Load	No	

Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	IOPCOMMAND
Remarks	If the PERSWAPENB parameter is On, the active receive channel toggles between A and B once a minute. Note that this is the same as the IOMRECHN parameter in a TPS system.

PROCDEADTIME

Specific to Block(s)	PID-PL
Description	Process Deadtime, in Minutes – Process deadtime (transportation lag) as defined in the Laplace transfer function model.
Data Type	Float64
Range	0 – 3000 * Ts
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	D[1..5], N[1..5], NUMCOEFDEN, NUMCOEFNUM, PROCDEADTIMEACT, PROCDEADTIMEBIAS, PROCGAIN, RESETMODEL, UPDATEMODEL.
Remarks	The Profit Loop PKS control algorithm requires a dynamic model of the process for prediction, control, and optimization. This model is entered as a Laplace transfer function. After the function block has been loaded, this parameter must be updated (see UPDATEMODEL.) before any change in its value is implemented. The effective model deadtime of an active function block can be altered without updating using a separate deadtime bias, PROCDEADTIMEBIAS, or directly through PROCDEADTIMEACT. This parameter is applicable only when CTLEQN is set to

Profit Loop PKS, and is ignored in PID control equations.

PROCDEADTIMEACT

Specific to Block(s)	PID-PL
Description	Active Process Deadtime, in Minutes – Active value of the process deadtime (transportation lag) used in the Profit Loop PKS control algorithm.
Data Type	Float64
Range	0 to 1.2*PROCDEADTIME
Default	
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	PROCDEADTIME, PROCDEADTIMEBIAS.
Remarks	The Profit Loop PKS control algorithm requires a dynamic model of the process for prediction, control, and optimization. This model is entered as a Laplace transfer function. After the function block has been loaded, PROCDEADTIME must be updated (see UPDATEMODEL.) before any change in its value is implemented. The effective model deadtime of an active function block can be altered without updating using a separate deadtime bias, PROCDEADTIMEBIAS, or directly through PROCDEADTIMEACT. PROCDEADTIMEACT is overwritten when the Laplace transfer function model is updated or when a deadtime bias value is entered. In this situation, PROCDEADTIMEACT = PROCDEADTIME + PROCDEADTIMEBIAS PROCDEADTIMEACT is intended for use with external gain scheduling programs. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PROCDEADTIMEBIAS

Specific to Block(s)	PID-PL
Description	Process Deadtime Bias, in Minutes – Bias applied to the process deadtime to alter the effective delay used in the Profit Loop PKS control algorithm.
Data Type	Float64
Range	(-PROCDEADTIME) to (0.2 * PROCDEADTIME)
Default	0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	PROCDEADTIME, PROCDEADTIMEACT.
Remarks	The Profit Loop PKS control algorithm requires a dynamic model of the process for prediction, control, and optimization. This model is entered as a Laplace transfer function. After the function block has been loaded, PROCDEADTIME must be updated (see UPDATEMODEL.) before any change in its value is implemented. The effective model deadtime on an active function block can be altered using a separate deadtime bias, PROCDEADTIMEBIAS, or directly through PROCDEADTIMEACT. PROCDEADTIMEBIAS is overwritten when the Laplace transfer function model is updated or when the deadtime is directly entered in PROCDEADTIMEACT. In this situation, PROCDEADTIMEBIAS = PROCDEADTIMEACT - PROCDEADTIME This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PROCESSED

Specific to Block(s)	Handler, Step, Transition
Description	Component has been processed flag.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	An SCM component's Processed flag is set if it has been included in the SCM's execution thread. All components' processed flags reset only when the SCM STATE transitions to Checking (either by a Reset command or Check Handler's Invoke Transition).

PROCGAIN

Specific to Block(s)	PID-PL
Description	Process Gain –
Data Type	Float64
Range	1
Default	1
Config Load	
Access Lock	Engineer
Residence	
Related Parameters	D[1..5], N[1..5], NUMCOEFNUM, NUMCOEFDEN, PROCDEADTIME, UPDATEMODEL, RESETMODEL, MODELUPDATED
Remarks	Confirmation/Information if CTLACTN changes. Update when button pushed.

PROCGAINACT

Specific to Block(s)	PID-PL
Description	Active Process Gain, in Engineering Units – Active value of the process gain used in the Profit Loop PKS control algorithm.
Data Type	Float64
Range	<>0
Default	
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	PROCGAINEU, PROCGAINMULT.
Remarks	The Profit Loop PKS control algorithm requires a dynamic model of the process for prediction, control, and optimization. This model is entered as a Laplace transfer function. After the function block has been loaded, PROCGAINEU must be updated (see UPDATEMODEL) before any change in its value is implemented. The effective model gain of an active function block can be altered without updating using a separate gain multiplier, PROCGAINMULT, or directly through PROCGAINACT. PROCGAINACT is overwritten when the Laplace transfer function model is updated or when a gain multiplier is entered. In this situation, PROCGAINACT = PROCGAINEU * PROCGAINMULT PROCGAINACT is intended for use with external gain scheduling programs. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PROCGAINEU

Specific to Block(s)	PID-PL
Description	Process Gain, in Engineering Units – Process gain associated with the Laplace transfer function model of the process.
Data Type	Float64
Range	<>0
Default	1
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CTLACTN, D[1..5], N[1..5], NUMCOEFNUM, NUMCOEFDEN, PROCDEADTIME, PROCDEADTIMEACT, PROCGAINMULT, PROCGAINPCT, PROCGAINUNITS, RESETMODEL, UPDATEMODEL.
Remarks	The Profit Loop PKS control algorithm requires a dynamic model of the process for prediction, control, and optimization. This model is entered as a Laplace transfer function. After the function block has been loaded, this parameter must be updated (See UPDATEMODEL.) before any change in its value is implemented. The effective model gain of an active function block can be altered without updating using a separate gain multiplier, PROCGAINMULT, or directly through PROCGAINACT. PROCGAINEU and PROCGAINPCT are two views of the same Laplace transfer function model gain with the latter being scaled. If the sign of the process gain changes, CTLACTN is automatically altered to reflect the new control action. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PROCGAINMULT

Specific to Block(s)	PID-PL
Description	Process Gain Multiplier – Multiplier applied to the process gain to alter the effective gain used in the Profit Loop PKS control algorithm.
Data Type	Float64
Range	0.01 – 100
Default	1
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	PROCGAINACT, PROCGAINEU.
Remarks	The Profit Loop PKS control algorithm requires a dynamic model of the process for prediction, control, and optimization. This model is entered as a Laplace transfer function. After the function block has been loaded, PROCGAINEU must be updated (see UPDATEMODEL.) before any change in its value is implemented. The effective model gain of an active function block can be altered without updating using a separate gain multiplier, PROCGAINMULT, or directly through PROCGAINACT. PROCGAINMULT is overwritten when the Laplace transfer function model is updated or when a gain multiplier is entered. In this situation, PROCGAINMULT = PROCGAINACT / PROCGAINEU This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PROCGAINPCT

Specific to Block(s)	PID-PL
Description	Process Gain, in %PV/%OP – Process gain associated with the Laplace transfer function model of the process.
Data Type	Float64
Range	<>0
Default	1
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CTLACTN, D[1..5], N[1..5], NUMCOEFNUM, NUMCOEFDEN, PROCDEADTIME, PROCDEADTIMEACT, PROCGAINMULT, PROCGAINEU, PROCGAINUNITS, RESETMODEL, UPDATEMODEL.
Remarks	The Profit Loop PKS control algorithm requires a dynamic model of the process for prediction, control, and optimization. This model is entered as a Laplace transfer function. After the function block has been loaded, this parameter must be updated (see UPDATEMODEL.) before any change in its value is implemented. The effective model gain of an active function block can be altered without updating using a separate gain multiplier, PROCGAINMULT, or directly through PROCGAINACT. PROCGAINEU and PROCGAINPCT are two views of the same Laplace transfer function model gain with the latter being scaled. If the sign of the process gain changes, CTLACTN is automatically altered to reflect the new control action. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PROCGAINUNITS

Specific to Block(s)	PID-PL
Description	Process Gain Units – Flag indicating whether to display process gain in engineering units or in percent.
Data Type	Enumeration PLPROCGAINUNITS
Range	PVEU/OPEU: Display gain in engineering units %PV/%OP: Display gain in percent
Default	%PV/%OP
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PROCGAINEU, PROCGAINPCT.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

PRODCODE

Specific to Block(s)	RM
Description	Product Code. Identification of RM within product type (per ASA specification).
Data Type	16-Bit Unsigned Integer
Range	0 to 65535
Default	0
Config Load	No
Access Lock	ViewOnly Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

PRODCODEA

Specific to Block(s)	RM
Description	Module Product Code. For each module in the host chassis, factory assigned product code
Data Type	16-Bit Unsigned Integer [20]
Range	0 to 65535
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PRODTYPE

Specific to Block(s)	All IOM Function Blocks
Description	IO Module Product Type – The numeric representation of a high level classification of module type; see default values.
Data Type	32-Bit Integer
Range	N/A
Default	10 for Analog Input/Output Modules, including Thermocouple and RTD. 7 for Digital Input/Output Modules 12 for Serial Interface Module 109 for Pulse Input Module
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	IOMTYPE
Remarks	Although loaded, this parameter is not exposed on any configuration form.

Specific to Block(s)	RM
Description	Product Type. Identification of general RM type (per ASA specification).
Data Type	16-Bit Unsigned Integer
Range	0 to 65535

Default	0
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

PRODTYPEA

Specific to Block(s)	RM
Description	Module Product Type. For each module in the host chassis, factory assigned product type.
Data Type	16-Bit Unsigned Integer [20]
Range	0 to 65535
Default	0
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

PROFILEDESC[1..NUMPROFILES]

Specific to Block(s)	RampSoak
Description	Profile Descriptor
Data Type	String
Range	15 Characters
Default	Profile<#> where <#> is the number of profile.
Config Load	
Access Lock	Engineer
Residence	CEE
Related Parameters	

Remarks

PROFILEID

Specific to Block(s)	RampSoak
Description	Profile ID
Data Type	Integer
Range	N/A
Default	1
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

PROGCMD

Specific to Block(s)	RM
Description	Program Command Recognition
Data Type	Enumeration
Range	Disabled (0) Enabled (1)
Default	Disabled (0)
Config Load	No
Access Lock	Operator
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

PROGCMDRECOG

Specific to Block(s)	RM
Description	Program Command Recognition. Configurable option regarding Redundancy Module recognition of user program commands

Data Type	Enumeration
Range	Disabled (0) Enabled (1)
Default	Disabled (0)
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

PROGID[0..40]

Specific to Block(s)	OPC
Description	Program Identification - Specifies the Microsoft COM object Program ID for the intended OPC sever. For example, use HCI .TpnServer for the TPN server of a TPS APP node.
Data Type	String
Range	N/A
Default	N/A
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameter	HOSTIPPRI
Remarks	You can specify this parameter as either version specific or general. For example, Hci.TpnServer.3 would be version specific and Hci.TpnServer would be general. The general type makes the version upgrade of OPC server component more automatic, since it requires fewer user actions.

PROGLCKTOIDLE

Specific to Block(s)	CEE, CEEC300, CEEACE, CEESIMC200
Description	Program Access may command CEE from Run to Idle
Data Type	Boolean
Range	N/A
Default	True
Config Load	Yes
Access Lock	Application Developer Only
Residence	CEE
Related Parameter	PROGLCKTORUN, USERLCKTORUN, USERLCKTOIDLE.
Remarks	

PROGLCKTORUN

Specific to Block(s)	CEE, CEEC300, CEEACE, CEESIMC200
Description	Program Access may command CEE from Idle to Run
Data Type	Boolean
Range	N/A
Default	True
Config Load	Yes
Access Lock	Application Developer Only
Residence	CEE
Related Parameter	PROGLCKTOIDLE, USERLCKTOIDLE, USERLCKTORUN.
Remarks	

PROGPACKET[0..2]

Specific to Block(s)	SCM, CM
Description	Internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	

Related Parameters	
Remarks	

PROGSTSDESC

Specific to Block(s)	CAB types
Description	Program Status Descriptor. String valued parameter that can be used within a CAB program to publish the last error detected by the program.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	String
Range	64 characters
Default	Blank
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CABSTATE, EXCPTNTYPE, EXECSTATE of parent CM
Remarks	PROGSTSDESC is never automatically written by CAB run-time services except for a small set of conditions upon which it is automatically cleared. These conditions are as follows: • CAB instance load. • Parent CM transitions to Active. • CABSTATE transitions to Normal. PROGSTSDESC only conveys information if the CAB program is written to detect and report error information. Otherwise, it always shows blank.

PSTS

Specific to Block(s)	FLOWCOMP	
Description	Pressure Input Value Status - Indicates the current status of pressure input P.	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The value is bad and has been replaced with NaN.
	Uncertn (1):	The status of the value is uncertain.
	Normal (2):	The value is good.
	Manual (3):	The value was manually stored.
Default	Normal	
Config Load	No	
Access Lock	ViewOnly	
Residence	ACE/C200	
Related Parameters	P	
Remarks		

PSTS[1..6]

Specific to Block(s)	Auxcalc, SignalSel	
Description	Status of PV Input Values 1 through 6 – The current value status of up to six PV inputs to an Auxiliary function block.	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The value is bad and has been replaced with NaN.
	Uncertn (1):	The status of the value is uncertain.
	Normal (2):	The value is good.
	Manual (3):	The value was manually stored.
Default	Bad (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	

Related Parameters	P[1..6]
Remarks	

PSTS[1..10]

Specific to Block(s)	AUXSUMMER	
Description	Process Input Status – The current value status associated with given input (P[1..10]) parameter to the block.	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The value is bad and has been replaced with NaN.
	Uncertn (1):	The status of the value is uncertain.
	Normal (2):	The value is good.
	Manual (3):	The value was manually stored.
Default	Bad (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	P[1..10]	
Remarks		

PSUB[1..10]

Specific to Block(s)	AUXSUMMER, ENHAUXCALC
Description	Process Input Substitute - Defines the substitute value to be used in place of the given disabled input (P[1..10] parameter.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	P[1..10]

Remarks

PTEXECST

Specific to Block(s)	PM I/O Channels; Series C I/O Channels
Description	Point Execution State. Defines the execution state of the associated point as Inactive or Active.
Data Type	Enum
Range	Inactive (0): Point is not scanned or processed. Active (1): Point is scanned and processed.
Default	Inactive (0) For DO and DI IOMs, the unconfigured channel default value is ACTIVE (1).
Config Load	No
Access Lock	Supervisor
Residence	IOM
Related Parameters	
Remarks	When PTEXECST is Inactive, the point processing does not occur for the channel.

PTEXECST[1..NUMCHAN]

Specific to Block(s)	HLAI, HLAI_100, STI_MV, AO8, AO16, DI, DI24, DISOE, DO16, DO32
Description	Point Execution State. Defines the execution state of the associated point as Inactive or Active.
Data Type	Enum
Range	Inactive (0): Point is not scanned or processed. Active (1): Point is scanned and processed.
Default	Inactive (0) For DO and DI IOPs, the unconfigured channel default value is ACTIVE (1).
Config Load	No
Access Lock	Supervisor
Residence	IOP
Related Parameters	

Remarks	When PTEXECST is Inactive, the point processing does not occur for the channel.

PULSECMD

Specific to Block(s)	PosProp, PidPosProp	
Description	Pulse Command – Indicates the current pulse command.	
Data Type	Enumeration PULSECMD	
Range	Idle (0):	Output is not being affected by PULSECMD.
	Lower (1):	Output is being lowered.
	Raise (2):	Output is being raised.
Default	N/A	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks		

PULSECMDTEXT[0..2]

Specific to Block(s)	PosProp
Description	Pulse Command Descriptor Text - Defines text for the three states of the Pulse Command; PULSECMDTEXT[0] corresponds to the Boolean state of Idle for the Pulse Command, PULSECMDTEXT[1] corresponds to the Lower state, and PULSECMDTEXT[2] corresponds to the Raise state.
Data Type	String
Range	Length: 255 characters
Default	“Idle”, “Lower”, "Raise"
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PULSECMD
Remarks	

PULSEMODE

Specific to Block(s)	Pulse Input IOC, Pulse Input w/ Fast Cutoff IOC
Description	Pulse Length Measurement Mode – Selects the portion of pulse whose time is measured.
Data Type	Enumeration
Range	PulseHigh (0) PulseLow (1) Period (2)
Default	PulseHigh (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Period mode means the Timer and Timer Latch measures the period of the input. That is, the time elapsed between two consecutive Off-to-On transitions is recorded. PulseHigh means the Timer and Timer Latch measure the “high” pulse width of the input i.e. the time elapsed between an initial Off-to-On transition and a later On-to-Off transition is recorded. Pulse Low means the Time Measure Mode is Pulse Low. The Timer and Timer Latch measure the “low” pulse width of t he input i.e. the time elapsed between an initial On-to-Off transition and a later Off-to-On transition is recorded.

PULSEMODE[0..5]

Specific to Block(s)	Pulse Input IOM	
Description	Pulse Length Measurement Mode – Selects the portion of pulse whose time is measured.	
Data Type	Enumeration	
Range	PulseHigh (0):	Provides the elapsed time between an Off-to-On transition and the next On-to-Off transition.
	PulseLow (1):	Provides the elapsed time between an On-to-Off transition and the next Off-to-On transition.
	Period (2):	Provides the elapsed time between two consecutive Of-to-On transitions.
Default	PulseHigh (0)	

Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Affects channels 0 to 5 only.

PULSETIME

Specific to Block(s)	Pulse Length Control, Pulse Count Control, PosProp, PidPosProp.
Description	Pulse Time requested (in seconds)
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This parameter is a structure, the main value of which is the Pulse Time requested, in seconds. This parameter usually gets its input from the PosProp function block

PULSEWIDTH

Specific to Block(s)	NooN
Description	Pulsewidth in seconds
Data Type	32-Bit Integer
Range	0 to 8000 seconds
Default	5 seconds
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	Pulse, Maxpulse, Minpulse
Description	Pulsewidth in Seconds

Data Type	Integer
Range	0 to 8000 seconds
Default	2 seconds
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

PULSEWIDTH[1..3]

Specific to Block(s)	DevCtl
Description	Output Pulsewidth
Data Type	64-Bit Real Number
Range	0.000 to 60.000 seconds
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	DO[1..3] NUMDOUTS.
Remarks	Access is illegal if the index is greater-than NUMDOUTS. Resolution may be entered in .001 seconds (1 mSec), but is dependent upon the connected DO function block execution rate.

PURGEDBCMD

Specific to Block(s)	IOLIM, Secondary IOLIM, C300 IOLINK
Description	Purge IOLIM/C300 IOLINK Database
Data Type	Boolean
Range	Off (0): The command is not active. Of (1): The command is active.
Default	Off (0)
Config Load	No
Access Lock	Engineer
Residence	IOLIM, C300 IOLINK

Related Parameters	ENCMDS
Remarks	Pressing this button will purge the IOLIM's configuration and return it to the NODB state. Note: This command should only be used when there is a database mismatch between the ERDB and the IOLIM. A mismatch exists when an IOP appears in the IOLINK block's "IOP Status Summary" table but does not appear in the Control Builder monitoring tree. A mismatch can be caused by: – Reinitializing the ERDB without first deleting the loaded IOP blocks from the IOLIM. – Performing a Force Delete operation from Control Builder on an IOP or channel block during a loss of communication between the Server and the IOLIM. The 'Purge IOLIM Database' button is located on the Main tab of the IOLIM configuration form and is enabled only when Enable IOLIM Commands (ENCMDS) is set to ON.

WARNING

Performing an IOLIM Database Purge will result in a loss of control. All outputs will transition to their configured safe state.

Users should inactivate and delete all loaded IOP and channel blocks prior to purging the IOLIM database.

PUSHSP

Specific to Block(s)	PID, PID-PL, PIDER, PIDFF, ENHREGCALC, RATIOCTL		
Description	Push Set Point (SP) - Enables pushing SP from another block		
Data Type	Boolean		
Range	0	OFF	SP will be pulled by secondary
	1	ON	Secondary block allows SP to be pushed to it
Default	OFF		
Config Load	Yes		
Access Lock	Application Developer Only		
Residence	CEE		
Related Parameters			
Remarks			

PV

Specific to Block(s)	DataAcq
Description	Process Variable - Contains the current value of the PV, after it has been selected from one of the following sources: a field device, another function block, an operator, or a program.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	PVSOURCE, PVSRCOPT.
Remarks	A PV change by an operator requires that PVSRCOPT = All, and PVSOURCE = Man. A PV change by a program requires that PVSRCOPT = All, and PVSOURCE = Sub.

Specific to Block(s)	Flag, Push.
Description	Actual State - Indicates the current state of the function block.
Data Type	String (Future: Enumeration)
Range	STATETEXT[0]: PVFL = OFF STATETEXT[1]: PVFL = ON
Default	STATETEXT[0]
Config Load	No
Access Lock	Defined by ACCLOCK
Residence	CEE
Related Parameters	PVFL, STATETEXT[0..1].
Remarks	

Specific to Block(s)	Numeric
Description	Actual State - Indicates the current state of the Numeric function block.
Data Type	Real number
Range	PVLOLM to PVHILM
Default	NaN
Config Load	No

Access Lock	Defined by ACCLOCK
Residence	CEE
Related Parameters	PVLOLM, PVHILM.
Remarks	For out of range values stored by people (Operator, Engineer, etc.), an error is returned. For out of range values stored by other function blocks or programs, the value is clamped to the limit that is exceeded and then stored to PV.

Specific to Block(s)	Timer
Description	Elapsed Time – Indicates the current elapsed time value of the Timer function block.
Data Type	Integer
Range	0 to 2,147,483,647 (2^31 –1)
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	RV, SO, SP, TIMEBASE
Remarks	Units are set by TIMEBASE.

Specific to Block(s)	DevCtl	
Description	Current Active State	
Data Type	String	
Range	Length: 12 characters	
Default	STATETEXT[0]	
Config Load	No	
Access Lock	ViewOnly, Operator, Other Function Block (see Remarks)	
Residence	CEE	
Related Parameters	BADPVALM.FL, BADPVALM.PR, BADPVALM.SV, CMDDISALM.FL, CMDDISALM.PR, CMDDISALM.SV, CMDDISALM.TM[0..2],	GPV, GPVAUTO, NUMDINPTS, NUMSTATES, PVAUTO, PVSOURCE, PVSRCOPT,

	CMDFALALM.FL, CMDFALALM.PR, CMDFALALM.SV, CMDFALALM.TM[0..2], DIPVMAP[0..15], STATETEXT[0..6], UNCMDALM.FL, UNCMDALM.PR, UNCMDALM.SV.
Remarks	Access is illegal if NUMDINPTS = 0. PV is a String set equal to STATETEXT(GPV). Access lock is ViewOnly if PVSOURCE = AUTO or TRACK or PVSRCOPT is ONLYAUTO. Access lock is Operator if PVSOURCE = MAN. Access lock is Other Function Block if PVSOURCE = SUB. STATETEXT[6] ['State2'] is illegal if NUMSTATES = 2.

Specific to Block(s)	PID, PIDFF, PosProp
Description	Process Variable (in Engineering Units)
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVSTS, PVVALSTS.
Remarks	

Specific to Block(s)	Totalizer, Pulse Input Totalizer, Deadtime, LeadLag, Genlin, Auxcalc, RampSoak, SignalSel
Description	Function Block Output - The calculated output of an Auxiliary function block.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	Pulse Input IOC, Pulse Input w/ Fast Cutoff IOC

Description	Frequency/Rate Value – Engineering Units value corresponding to the rate of pulses.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVSTS
Remarks	PV = C1 / C2 * TIMEBASE * pulses / (frequency integration period)

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) ; AICHANNEL (Series C I/O)
Description	Process Variable (PV). Shows the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	The Analog Input Channel's PVEXEULO to PVEXEUHI.
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	The PV exists in the IOM as a 32-bit floating point value. It is converted to a 64-bit floating point value for convenience when wiring to other block parameters in Control Builder (CB).

Specific to Block(s)	DICHANNEL (PM I/O) DICHANNEL (Series C I/O)
Description	Process Variable. Shows the current state of this data point. It is derived from the open or closed state of field contacts and from the Input Direction parameter (INPTDIR) configuration.
Data Type	Boolean
Range	Off On
Default	Off
Config Load	No

Access Lock	Operator
Residence	IOM
Related Parameters	
Remarks	Operators can only change PV when the PVSOURCE configuration is MAN.

Specific to Block(s)	RATIOCTL
Description	Process Variable. Shows actual ratio between X1 and X2 inputs.
Data Type	
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVSTS
Remarks	

Specific to Block(s)	FLOWCOMP
Description	Process Variable. Compensated flow
Data Type	
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	ACE/C200
Related Parameters	
Remarks	

PV[0..7]

Specific to Block(s)	Pulse Input IOM
Description	Frequency/Rate Value – Engineering Units value corresponding to the rate of pulses.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN

Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVSTS, PVVALSTS.
Remarks	

Specific to Block(s)	Chassis HART AI IOM, HART AO IOM
Description	Process Variable - Shows the PV value for the 8 IOM channels
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PV[0..63]

Specific to Block(s)	REQNUMARRAY, RSPNUMARRAY
Description	Array of Real values to be read from or written to the third-party device. Stores are accepted to this parameter only if COMMAND indicates this is a “write” block.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	
Remarks	

PV[1..64]

Specific to Block(s)	SINUMARRCH
Description	Process Value, from device – Provides Numeric value form the device.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Determined by ACCLOCK
Residence	CEE
Related Parameters	ERRFL, NNUMERIC
Remarks	PV[i] provides access to the array of data, one element at a time, by all other function blocks of the CEE. Initial values can be configured, but these will be overwritten once good data is imaged from the Serial Interface Module. When ERRFL is On, an error will be returned on attempted Gets and Stores to this parameter, to indicate that there is a problem with the array data.

PV[1..200]

Specific to Block(s)	NUMERICARRAY
Description	Numeric Data – Provides access to the Numeric values, one element at a time, for all other function blocks of the CEE. Initial values can be configured.
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Determined by ACCLOCK
Residence	CEE
Related Parameters	NNUMERIC
Remarks	

PV[1..NUMCHAN]

Specific to Block(s)	HLAI, HLAI_100, STI_MV, DI, DI24, DISOE
Description	Process Variable
Data Type	64-bitReal Number
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVASYNCOPT

Specific to Block(s)	PID-PL	
Description	Enable Asynchronous PV Measurement – Tells the function block when *not* to expect a new PV measurement (that is, when not to expect a change) so that the function block does not react to obsolete information.	
Data Type	Enumeration PLPVASYNCOPT	
Range	CONTINUOUS (0):	PV measurement is updated at least once every execution.
	ONPVCHANGE(1):	PV measurement is updated when PV parameter changes.
	EXTERNALSYNC(2):	PV measurement is updated when an external flag, connected to NEWSAMPLE, is set.
Default	CONTINUOUS	
Config Load	Yes	
Access Lock	Engineer	
Residence	CEE	
Related Parameters	NEWSAMPLE	
Remarks	Many analyzers, such as gas chromatographs, operate at a period longer than the control execution period. PVASYNCOPT may be set to freeze the current model bias between analyzer measurement updates. When PVASYNCOPT is EXTERNALSYNC, the NEWSAMPLE flag must be set to indicate that a new PV value is available. This block does not alter the value of the NEWSAMPLE parameter; an external block, such as FTRIG, should be employed for this purpose. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.	

PVAUTO

Specific to Block(s)	DataAcq
Description	Filtered and clamped value of the Process Input 1 (P1)
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	DevCtl
Description	State of Actual Inputs
Data Type	String
Range	Length: 12 characters
Default	STATETEXT[0]
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVAUTO, GPV, GPVAUTO, NUMDINPTS, NUMSTATES, PUSHSP, PV, PVSOURCE, STATETEXT[0..6]
Remarks	Access is illegal if NUMDINPTS = 0. PVAUTO is a String set equal to STATETEXT(GPVAUTO). STATETEXT[6] ['State2'] is illegal if NUMSTATES = 2.

PVAUTOSTS

Specific to Block(s)	DataAcq
Description	Status of the filtered and clamped value of the Process Input 1 (PVAUTO)
Data Type	Enumeration PVVALSTS
Range	Bad (0): The PVAUTO value was bad, it was replaced with NaN. Uncertn (1): The status of the PVAUTO value is uncertain. Normal (2): The value is good. Manual (3): The value was manually stored.
Default	Bad (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVBIAS

Specific to Block(s)	PID-PL
Description	Bias – The bias added to model predictions.
Data Type	Float64
Range	
Default	0
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	PVBIAS is the feedback synchronizing internal model predictions with observed response. Absolute size of the bias is not as important as its volatility. If it perpetually swings, check for model inaccuracies. The bias should line out at steady state.

PVCALC

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Calculated Process Variable (PV). Shows the value of the PV after the PV algorithm has calculated it.
Data Type	32-Bit Real Number
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	

PVCHAR

Specific to Block(s)	DataAcq	
Description	PV Characterization Option: Defines the characterization to be used for characterizing the PI value.	
Data Type	Enumeration PVCHAR	
Range	None (0):	Do nothing (typically used for RTD and thermocouple inputs).
	Linear (1):	0 to 100 input to P1 is converted to Eus using configured PVEULO and PVEUHI.
	SquareRoot (2):	Square root of 0 to 100 input to P1 is taken, then this value is EUs using configured PVEULO and PVEUHI.

Default	None (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	A floating point parameter P1EU is used to represent the converted EU value of P1.

Specific to Block(s)	FLOWCOMP
Description	PV Characterization Option - Select whether COMPTERM is to be calculated as a square-root value or not.
Data Type	Enumeration PVCHAR
Range	None (0) Square Root (1)
Default	Square Root
Config Load	Yes
Access Lock	Application Developer
Residence	ACE/C200
Related Parameters	
Remarks	

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O)
Description	Process Variable (PV) Characterization Option. Defines the display characterization option to be used for characterizing the input PV value.
Data Type	Enum
Range	See Table 5: For IOM (also known as IOP) types HLAI, HLAIHART, LLAI, LLMUX, and RHMUX. See Table 6 and Table 7: For IOM (also known as IOP) type STI.
Default	12-Linear for LLAI, HLAI, HLAIHART, and STIMV 0 – Jtherm for LLMUX and RHMUX
Config Load	Yes
Access Lock	Application Developer
Residence	IOM
Related Parameters	PVEXEULO, PVEXEUHI
Remarks	

Table 5 PV Characterization Range for PM IOM Types HLAI, HLAIHART, LLAI, LLMUX, and RHMUX

ATTENTION

All Thermocouple and RTD types are not supported for IOM type HLAI.

Range	IOP TYPE (See Note 1)	X = Allowable Sensor Type (SENSTYPE)							Valid Normal Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Normal for SENSTYPE = THERMCPL	Valid Extended Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Extended for SENSTYPE = THERMCPL
		0.4 to 2V	0 to 5V	1 to 5V	0 to 100 MV	THERMCPL	SLIDEWIRE	RTD		
0-Jtherm	HLAI	X	X	X					-200 to 1200	N/A
	LLAI					X			-100 to 750	-200 to 1200
	MUX					X			-100 to 750	-200 to 1200
1-Ktherm	HLAI	X	X	X					-100 to 1370	N/A
	LLAI					X			0 to 1100	-100 to 1370
	MUX					X			0 to 1100	-100 to 1370
2-Etherm	HLAI	X	X	X					-200 to 1000	N/A
	LLAI					X			-150 to 500	-200 to 1000
	MUX					X			-150 to 500	-200 to 1000
3-Ttherm	HLAI	X	X	X					-230 to 400	N/A
	LLAI					X			-200 to 300	-230 to 400
	MUX					X			-200 to 300	-230 to 400
4-Btherm	HLAI	X	X	X					100 to 1820	N/A
	LLAI					X			600 to 1650	100 to 1820
	MUX					X			600 to 1650	100 to 1820
5-Stherm	HLAI	X	X	X					0 to 1700	N/A
	LLAI					X			550 to 1500	0 to 1700

Range	IOP TYPE (See Note 1)	X = Allowable Sensor Type (SENSTYPE)							Valid Normal Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Normal for SENSTYPE = THERMCPL	Valid Extended Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Extended for SENSTYPE = THERMCPL
		0.4 to 2V	0 to 5V	1 to 5V	0 to 100 MV	THERMCPL	SLIDEWIRE	RTD		
	MUX					X			550 to 1500	0 to 1700
6-Rtherm	HLAI	X	X	X					0 to 1700	N/A
	LLAI					X			550 to 1500	0 to 1700
	MUX					X			550 to 1500	0 to 1700
7-RPtherm	HLAI	X	X	X					0 to 1770	N/A
	LLAI					X			550 to 1500	0 to 1770
	MUX					X			550 to 1500	0 to 1770
8-DinRtd	HLAI	X	X	X					-180 to 800	N/A
	LLAI							X	-180 to 800	N/A
	MUX							X	-180 to 800	N/A
9-JisRtd	HLAI	X	X	X					-180 to 650	N/A
	LLAI							X	-180 to 650	N/A
	MUX							X	-180 to 650	N/A
10-NicklRtd	HLAI	X	X	X					-45 to 315	N/A
	LLAI							X	-45 to 315	N/A
	MUX							X	-45 to 315	N/A
11-CopprRtd	HLAI	X	X	X					-20 to 250	N/A
	LLAI							X	-20 to 250	N/A
	MUX							X	-20 to 250	N/A
12-Linear	HLAI Only	X	X	X			X		N/A	N/A
	LLAI		X	X	X				N/A	N/A
	MUX				X				N/A	N/A
13-Sqrroot	HLAI	X	X	X					N/A	N/A
	LLAI		X	X					N/A	N/A

Range	IOP TYPE (See Note 1)	X = Allowable Sensor Type (SENSTYPE)							Valid Normal Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Normal for SENSTYPE = THERMCPL	Valid Extended Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Extended for SENSTYPE = THERMCPL
		0.4 to 2V	0 to 5V	1 to 5V	0 to 100 MV	THERMCPL	SLIDEWIRE	RTD		
Notes: 1. MUX = LLMUX and RHMUX 2. HLAI = HLAI AND HLAIHART 3. N/A = Not Applicable										

Table 6 PV Characterization Range for PM IOM Type STI – ST3000 Pressure Transmitters and MagneW 3000 Flowmeters

Range	X = Allowable Sensor Type (SENSRTYP)			
	SPT_DP	***SPT_GP***	***SPT_AP***	***SFM***
12-Linear	X	X	X	X
13-Ssqrroot	X			

Table 7 PV Characterization Range for PM IOM Type STI – STT3000 Temperature Transmitters (SENSRTYP = STT)

Range	Normal Range (PVEULO to PVEUHI) In Degrees C (Except Where Noted)	Maximum Range (PVEXEULO to PVEXEUHI) In Degrees C (Except Where Noted)
Linear		
	-50 to 220 mV	-1000 to 1000 mV
Thermocouples		
0-Jtherm	-180 to 1200	-200 to 1200

Range	Normal Range (PVEULO to PVEUHI) In Degrees C (Except Where Noted)	Maximum Range (PVEXEULO to PVEXEUHI) In Degrees C (Except Where Noted)
1-Ktherm	-170 to 1250	-200 to 1370
2-Etherm	-100 to 1000	-200 to 1000
3-Ttherm	-120 to 400	-250 to 400
4-Btherm	400 to 1820	200 to 1820
5-Stherm	0 to 1760	-50 to 1760
6-Rtherm	0 to 1760	-50 to 1760
14-Ntherm	-100 to 1300	-200 to 1300
20-W5W26TC	0 to 2300	0 to 2300
21-W3W25TC	0 to 2300	0 to 2300
22-NiNiMoTC	600 to 1300	600 to 1300
RTDs		
8-Pt100 DinRtd	-200 to 450	-200 to 850
9-Pt100 JisRtd	-200 to 450	-200 to 640
15-Pt200 RTD	-200 to 450	-200 to 850
16-Pt500 RTD	-200 to 450	-200 to 850
17-Cu10 RTD	-20 to 250	-20 to 250
18-Cu25 RTD	-20 to 250	-20 to 250
19-RH Rad	420 to 1800	700 to 1800
23-RTD Ohms	0 to 4000 ohms	0 to 4000 ohms

Specific to Block(s)	Series C I/O AICHANNEL
Description	PV Characterization Option
Data Type	Enumeration
Range	See Table 8 for Series C IOM types AI-HART and AI-LLMUX
Default	Linear (12)
Config Load	Yes
Access Lock	Application Developer
Residence	IOM
Related Parameters	PVEXEULO PVEXEUHI
Remarks	This parameter defines the characterization to be used for characterizing the input PV value. Characterization is based on the field sensor type.

Table 8 PV Characterization Range for Series C IOM Types AI-HART and AI-LLMUX

Range	IOM TYPE (See Notes)	X = Allowable Sensor Type (SENSTYPE)						Valid Normal Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Normal for SENSTYPE = THERMCPL	Valid Extended Range (PVEULO-PVEUHI) In Degrees C (When TCRNGOPT = Extended for SENSTYPE = THERMCPL
		0.4 to 2V	0 to 5V	1 to 5V	0 to 100 MV	THERMCPL	RTD		
0-Jtherm	LLMUX					X		-100 to 750	-200 to 1200
1-Ktherm	LLMUX					X		0 to 1100	-100 to 1370
2-Etherm	LLMUX					X		-150 to 500	-200 to 1000
3-Ttherm	LLMUX					X		-200 to 300	-230 to 400
4-Btherm	LLMUX					X		600 to 1650	100 to 1820
5-Stherm	LLMUX					X		550 to 1500	0 to 1700
6-Rtherm	LLMUX					X		550 to 1500	0 to 1700
7-RPtherm	LLMUX					X		550 to 1500	0 to 1770
8-DinRtd	LLMUX						X	-180 to 800	
9-JisRtd	LLMUX						X	-180 to 650	
10-NicklRtd	LLMUX						X	-45 to 315	
11-CopprRtd	LLMUX						X	-20 to 250	
12-Linear	HART	X	X	X					
	LLMUX		X	X	X				
13-Sqrroot	HART	X	X	X	X				
	LLMUX		X	X					
26-DeviceRange	HART			X					

Notes:

- LLMUX = AI-LLMUX
- HART = AI-HART

PVCHGDLY

Specific to Block(s)	DICHANNEL
Description	Process Variable (PV) Change Delay Time. Specifies the time in seconds that a point with a previously detected PV change event is guaranteed to remain at the new value even if the PV returns to its original value.
Data Type	8-Bit Unsigned Integer
Range	0 to 60 seconds
Default	0 seconds
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter is only exposed when the ASSOCIOPTYP is DISOE IOM and the EVTOPT configuration is not NONE. If the point remains at its new PV value when the delay timer expires, the point is held at the new value.

PVCLAMP

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)		
Description	Process Variable Clamping Option. Specifies whether or not PV clamping action is to be used with this data point.		
Data Type	Enum		
Range	0	NOCLAMP	No clamping of the PV value.
	1	CLAMP	Clamp PV value at the extended range limit.
Default	NOCLAMP (0)		
Config Load	Yes		
Access Lock	Engineer		
Residence	IOM		
Related Parameters			
Remarks	If PVCLAMP is set to CLAMP and PV extended range limit is exceeded, PV status (PVSTS) is marked Uncertain and the PV is set equal to the extended limit that was violated.		

PVCONN

Specific to Block(s)	PID, PIDFF, PosProp, RampSoak
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

PVEQN

Specific to Block(s)	Totalizer, Pulse Input Totalizer, FLOWCOMP
Description	Process Variable (PV) Equation Type - Defines the equation (EqA, EqB, …) to be used with a given function block.
Data Type	Enumeration PVEQN

Range

Equation:	***Bad Input Handling:***	***Warm Restart Handling:***
EqA (0)	Stop accumulation while input is bad	Continue after input turns valid
EqB (1)	Use last good value if input is bad	Continue after input turns valid
EqC (2)	Stop if the input is bad and set PV to NaN	Continue after input turns valid
EqD (3)	Stop accumulation while input is bad	Stop after a warm restart
EqE (4)	Use last good value if input is bad	Stop after a warm restart
EqF (5)	Stop if the input is bad and set PV to NaN	Stop after a warm restart

Default	EqA (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE

Related Parameters
Remarks

PVERSION

Specific to Block(s)	SR
Description	Platform Version. Identifies the major revision of the RM.
Data Type	8-Bit Unsigned Integer
Range	0 to 255
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVEUHI

Specific to Block(s)	DataAcq, PID, PIDFF, PosProp, RampSoak.
Description	Process Variable (PV) High Range (in Engineering Units) - This value corresponds to 100% of full scale.
Data Type	Real
Range	Greater-than PVEULO and less-than or equal to PVEXHILM.
Default	100.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable Engineering Units High. Specifies the high range PV value in Engineering Units.
Data Type	32-Bit Real Number
Range	PVEULO to PVEXEUHI, NaN
Default	100.0

Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	Note that PVEUHI cannot be written with Not a Number (NaN). NaN is the default power up value only.

PVEULO

Specific to Block(s)	DataAcq, PID, PIDFF, PosProp, RampSoak
Description	Process Variable (PV) Low Range (in Engineering Units) - This value corresponds to 0% of full scale.
Data Type	Real
Range	Less-than PVEUHI and Greater-than or equal to PVEXLOLM.
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable Engineering Units Low. Specifies the low range PV value in Engineering Units.
Data Type	32-Bit Real Number
Range	PVEXEULO to PVEUHI, NaN
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	Note that PVEULO cannot be written with Not a Number (NaN). NaN is the default power up value only.

PVEXEUHI

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable Extended High Range. Specifies the extended high range PV value in Engineering Units.
Data Type	32-Bit Real Number
Range	Greater than or equal to PVEUHI, NaN.
Default	102.9 (See PVEXEULO parameter)
Config Load	Yes
Access Lock	LLAI IOM with Thermocouple and RTD sensor types: ViewOnly All others: Engineer
Residence	IOM
Related Parameters	PVEXEULO
Remarks	For PM I/O, this parameter is only exposed when the ASSOCIOPTYP is HLAI or STI-MV. It cannot be written with Not a Number (NaN). NaN is the default power up value only. Both PVEXEUHI and PVEXEULO are used to clamp or detect a bad PV value.

PVEXEULO

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable Extended Low Range. Specifies the extended low PV range in Engineering Units.
Data Type	32-Bit Real Number
Range	Less than or equal to PVEULO, NaN.
Default	See Table 9: For SENSRTYP equals THERMCPL and PVTEMP equals Degrees C. Valid for IOPTYPE = RHMUX, LLMUX, or LLAI. See Table 10: For SENSRTYP equals RTD and PVTEMP equals Degrees C. Valid for IOPTYPE = RHMUX, LLMUX, or LLAI. **READ/WRITE** defaults when SENSRTYP = 0-100 mV OR (SENSRTYP = 0-5 V or 1-5V) and (IOPTYPE = LLAI) and (PVCHAR = Linear or Sqrroot)

	OR SENSRTYP = STT (IOPTYPE = STIMV by default) OR IOPTYPE = HLAI, HLAIHART Default values for PVEXEULO and PVEXEUHI are –2.9 and 102.9. Limit error checking and range overlap error checking for PVEXEULO and PVEXEUHI are performed by the IOM. The unit of measure is engineering units
Config Load	Yes
Access Lock	When SENSRTYP = THERMCPL or RTD, access lock is ViewOnly All others: Engineer
Residence	IOM
Related Parameters	PVEXEUHI, PVTEMP, TCRNGOPT, SENSRTYP.
Remarks	For PM I/O, this parameter is only exposed when the ASSOCIOPTYP is HLAI or STI-MV. It cannot be written with Not a Number (NaN). NaN is the default power up value only. Both PVEXEUHI and PVEXEULO are used to clamp or detect a bad PV value. These parameters cannot be set to NaN.

Table 9 Extended Range Parameter Defaults when SENSRTYP equals THERMCPL and PVTEMP equals degrees C

PVCHAR	TCRNGOPT = NORMAL		TCRNGOPT = EXTENDED	
	PVEXEULO	***PVEXEUHI***	***PVEXEULO***	***PVEXEUHI***
Btherm	600	1650	100	1820
Etherm	-150	500	-200	1000
Jtherm	-100	750	-200	1200
Ktherm	0	1100	-100	1370
Rtherm	550	1500	0	1700
RPtherm	550	1500	0	1770
Stherm	550	1500	0	1700
Ttherm	-200	300	-230	400

Table 10 Extended Range Parameter Defaults when SENSRTYP equals RTD and PVTEMP equals degrees C

PVCHAR	PVEXEULO	PVEXEUHI
DinRTD	-180 for LLAI -200 for RHMUX and LLMUX	800
JisRTD	-180 for LLAI -200 for RHMUX and LLMUX	650
NicklRTD	-45	315
CopprRTD	-20	250

Notes:

- The parameter TCRNGOPT is not exposed
- In the **Monitoring** view, the above values are displayed. In the **Project** view, NaN is displayed for these values.

PVEXHIFL

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Limit Flag – Indicates if PV has exceeded its high limit.
Data Type	Boolean
Range	Off (0): PVs high limit is not exceeded. On (1): PVs high limit is exceeded.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable (PV) Extended High Range Flag. Shows if the PV has exceeded the extended high range trip point.
Data Type	Boolean
Range	Off: Extended high range limit not exceeded On: Extended high range limit exceeded

Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	
Remarks	

PVEXHILM

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Limit (in Engineering Units) - Used to detect and clamp a bad Process Variable (PV) value.
Data Type	64-Bit Real Number
Range	Greater-than or equal to PVEUHI.
Default	102.9
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

PVEXLOFL

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Limit Flag – Indicates if PV has exceeded its low limit.
Data Type	Boolean
Range	Off (0): PV low limit not exceeded. On (1): PV low limit exceeded.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable (PV) Extended Low Range Flag. Shows if the PV has exceeded the extended low range trip point.
Data Type	Boolean
Range	Off: Extended low range limit not exceeded. On: Extended low range limit exceeded.
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	
Remarks	

PVEXLOLM

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Limit (in Engineering Units) - Used to detect and clamp a bad PV value.
Data Type	64-Bit Real Number
Range	Less than or equal to PVEULO
Default	-2.9
Config Load	Yes

Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

PVFL

Specific to Block(s)	Flag, Push
Description	Actual State Flag - Indicates the current state of the Flag function block as a Boolean.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Defined by ACCLOCK
Residence	CEE
Related Parameters	PUSHSP, PV, STATE0, STATE1, STATETEXT[0..1].
Remarks	

Specific to Block(s)	DIC
Description	Process Value Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVFL[0..2]

Specific to Block(s)	DevCtl
Description	Process Variable (PV) State Flags – PVFL(x) is On when PV = StateX.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	GPV, DIPVMAP[0..15], NUMDINPTS, NUMSTATES PUSHSP, PV.
Remarks	Access is illegal if NUMDINPTS = 0. PVFL[2] is illegal if NUMSTATES =2.

PVFL[0..511]

Specific to Block(s)	REQFLAGARRAY, RSPFLAGARRAY
Description	Array of Boolean values to be read from or written to the third-party device. Stores are accepted to this parameter only if the COMMAND indicates that this is a “write” block.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	
Remarks	

PVFL[1..512]

Specific to Block(s)	SIFLAGARRCH
Description	Process Value, from device – Provides Boolean value from the device.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Determined by ACCLOCK
Residence	CEE
Related Parameters	ERRFL, NEXTPHASE, NFLAG.
Remarks	PVFL[i] provides access to the array of data, one element at a time, by all other function blocks of the CEE. Initial values can be configured, but these will be overwritten once good data is imaged from the Serial Interface Module. When ERRFL is On, an error will be returned on attempted Gets and Stores to this parameter, to indicate that there is a problem with the array data.

PVFL[1..1000]

Specific to Block(s)	FLAGARRAY
Description	Flag Data – Provides access to the Boolean values, one element at a time, for all other function blocks of the CEE. Initial values can be configured.
Data Type	Boolean
Range	Off(0) On(1)
Default	Off(0)
Config Load	Yes
Access Lock	Determined by ACCLOCK
Residence	CEE
Related Parameters	NEXTPHASE, NFLAG.
Remarks	

PVFORMAT

Specific to Block(s)	DataAcq, Numeric, PID, PIDFF, PosProp, Auxcalc, Genlin, Totalizer, LeadLag, Deadtime, Pulse Input Totalizer, NUMERICARRAY, AUXSUMMER, FLOWCOMP, SignalSel
Description	Process Variable (PV) Display Format – Defines the decimal format that is to be used to display the PV value. It contains up to eight characters, including the minus sign and decimal point.
Data Type	Enumeration PVFORMAT
Range	D0 (-XXXXXX.) D1 (-XXXXX.X) D2 (-XXXX.XX) D3 (XXX.XXX)
Default	D1 (-XXXXX.X)
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	PUSHSP, PV, SP.

Remarks

PVHHALM.DB

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High High Alarm Deadband
Data Type	64-Bit Real Number
Range	0.0 to 100.0 if alarm deadband units (PVHHALM.DBU) are Percent. PVEULO to PVEUHI if alarm deadband units (PVHHALM.DBU) are Engineering Units.
Default	0.0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	PUSHSP, PV, PVHHALM.DBU, PVHHALM.FL,

	PVHHALM.PR, PVHHALM.SV, PVHHALM.TM, PVHHALM.TP.
Remarks	

PVHHALM.DBU

Specific to Block(s)	DataAcq
Description	PV High High Alarm Deadband Units – Indicates if PVHIALM.DB is in Percent or Engineering Units.
Data Type	Enumeration ALMDBU
Range	Percent (0) EU (1)
Default	Percent (0)
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVHHALM.DB, PVHHALM.FL, PVHHALM.PR, PVHHALM.SV, PVHHALM.TM, PVHHALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,. Alarm processing

PVHHALM.FL

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High High Alarm Flag
Data Type	Boolean
Range	Off (0): PV High High alarm is not active; PV is less than PVHHALM.TP On (1): PV High High alarm is active; PV is greater than or equal to PVHHALM.TP
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHHALM.PR

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High High Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHHALM.SV

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High High Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHHALM.TM

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High High Alarm Filter Time (Seconds) - The purpose of this parameter is to prevent input spikes from causing PV High High alarms. An alarm will only be generated if PV consistently exceeds the High High alarm trip point for more than the configured alarm filter time.
Data Type	32-Bit Unsigned Integer
Range	0 to 60
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVHHALM.DB, PVHHALM.DBU, PVHHALM.FL, PVHHALM.PR, PVHHALM.SV, PVHHALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHHALM.TP

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High High Alarm Trip Point – Defines the trip point for a PV High High alarm.
Data Type	64-Bit Real Number
Range	NaN or PVHIALM.TP to PVEUHI.
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHIALM.DB

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Alarm Deadband
Data Type	64-Bit Real Number
Range	0.0 to 100.0: If alarm deadband units (PVHIALM.DBU) are Percent. PVEULO to PVEUHI, If alarm deadband units (PVHIALM.DBU) are Engineering Units.
Default	0.0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	PUSHSP, PV, PVHIALM.DBU, PVHIALM.FL, PVHIALM.PR, PVHIALM.SV, PVHIALM.TM, PVHIALM.TP.
Remarks	PVHIALM.DB will always set all individual alarm deadbands to their overall value (ALMDB).

PVHIALM.DBU

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Alarm Deadband Units – Indicates if PVHIALM.DB is in Percent or Engineering Units.
Data Type	Enumeration ALMDBU
Range	Percent (0) EU (1)
Default	Percent (0)
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVHIALM.DB, PVHIALM.FL, PVHIALM.PR, PVHIALM.SV, PVHIALM.TM, PVHIALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHIALM.FL

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Alarm Flag – Indicates if a PV High alarm has been issued.
Data Type	Boolean
Range	Off (0): PV High alarm is not active; PV is less than PVHIALM.TP. On (1): PV High alarm present; PV is greater than or equal to PVHIALM.TP for the configured alarm time.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHIALM.PR

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Alarm Priority - Priority of a PV High alarm
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHIALM.SV

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Alarm Severity - Severity of a PV High alarm
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHIALM.TM

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Alarm Filter Time (seconds)
Data Type	32-Bit Unsigned Integer
Range	0 to 60
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVHIALM.DB, PVHIALM.DBU, PVHIALM.FL, PVHIALM.PR, PVHIALM.SV, PVHIALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHIALM.TP

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Alarm Trip Point - Defines the trip point for a PV High alarm.
Data Type	64-Bit Real Number
Range	NaN or PVLOALM.TP to PVHHALM.TP
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHILM

Specific to Block(s)	Numeric
Description	Process Variable (PV) High Limit
Data Type	64-Bit Real Number
Range	Greater than PVLOLM
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PVLOLM, PUSHSP, PV.
Remarks	When NaN, the limit is not checked on stores to PV. When there is some value, stores to PV must be less than PVHILM.

PVHISIGCHG.CT

Specific to Block(s)	DataAcq
Description	Process Variable (PUSHSP PV) High Significant-Change Count - The number of times the PV low alarm has been re-

	annunciated (because PVHIALM.TP has been exceeded).
Data Type	32-Bit Integer
Range	Greater-than or equal-to 0.
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVHISIGCHG.TP
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVHISIGCHG.TP

Specific to Block(s)	DataAcq
Description	Process Variable (PV) High Significant-Change Trip Point - If PV is between the High and High-High alarm limits, the High alarm will be re-annunciated (if PUSHSP PV increases by this amount).
Data Type	64-Bit Real Number
Range	NaN, or greater-than 0.0.
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PVHISIGCHG.CT
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLLALM.DB

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Low Alarm Deadband
Data Type	64-Bit Real Number
Range	0.0 to 100.0: If alarm deadband units (PVLLALM.DBU) are Percent PVEULO to PVEUHI If alarm deadband units (PVLLALM.DBU) are Engineering Units.

Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	PUSHSP, PV, PVLLALM.DBU, PVLLALM.FL, PVLLALM.PR, PVLLALM.SV, PVLLALM.TM, PVLLALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLLALM.DBU

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Low Alarm Deadband Units - Indicates if PVLLALM.DB is in Percent or Engineering Units.
Data Type	Enumeration ALMDBU
Range	Percent (0) EU (1)
Default	Percent (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVLLALM.DB, PVLLALM.FL, PVLLALM.PR, PVLLALM.SV, PVLLALM.TM, PVLLALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLLALM.FL

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Low Alarm Flag – Indicates if a PV Low Low alarm has been issued.
Data Type	Boolean
Range	Off (0): PV Low Low Alarm is not active; PV is less than PVLLALM.TP. On (1): PV Low Low Alarm present; PV is greater than or equal to PVLLALM.TP.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLLALM.PR

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Low Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLLALM.SV

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Low Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLLALM.TM

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Low Alarm Filter Time (Seconds)
Data Type	32-Bit Unsigned Integer
Range	0 to 60
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVLLALM.DB, PVLLALM.DBU, PVLLALM.FL, PVLLALM.PR, PVLLALM.SV, PVLLALM.TP.
Remarks	The purpose of this parameter is to prevent input spikes from causing PV Low Low alarms. An alarm will only be generated if PV is consistently below the Low Low alarm trip point for more than the configured alarm filter time. If PVLLALM.TM = 0, an alarm will be generated as soon as PV exceeds the trip point.

PVLLALM.TP

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Low Alarm Trip Point – Defines the trip point for a PV Low Low alarm.
Data Type	64-Bit Real Number
Range	NaN, PVEULO to PVLOALM.TP
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data

	Acquisition) Block,.Alarm processing.

PVLOALM.DB

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Alarm Deadband
Data Type	64-Bit Real Number
Range	0.0 to 100.0: If alarm deadband units (PVLOALM.DBU) are Percent. PVEULO to PVEUHI: If alarm deadband units (PVLOALM.DBU) are Engineering Units.
Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	PUSHSP, PV, PVLOALM.DBU, PVLOALM.FL, PVLOALM.PR, PVLOALM.SV, PVLOALM.TM, PVLOALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLOALM.DBU

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Alarm Deadband Units – Indicates if PVLOALM.DB is in Percent or Engineering Units.
Data Type	Enumeration ALMDBU
Range	Percent (0) EU (1)
Default	Percent (0)
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP,

	PV, PVLOALM.DB, PVLOALM.FL, PVLOALM.PR, PVLOALM.SV, PVLOALM.TM, PVLOALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLOALM.FL

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Alarm Flag – Indicates if a PV Low alarm has been issued.
Data Type	Boolean
Range	Off (0): PV Low alarm is not active; PV > PVLALM.TP. On (1): PV Low alarm present; PV <= PVLALM.TP for the configured alarm time.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	The flag is set only when PV is below the trip point for the configured alarm time.

PVLOALM.PR

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Alarm Priority - Priority of a PV Low alarm
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLOALM.SV

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLOALM.TM

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Alarm Filter Time (Seconds)

Data Type	32-Bit Unsigned Integer
Range	0 to 60
Default	0.0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVLOALM.DB, PVLOALM.DBU, PVLOALM.FL, PVLOALM.PR, PVLOALM.SV, PVLOALM.TP.
Remarks	The purpose of this parameter is to prevent input spikes from causing PV Low alarms. An alarm will only be generated if PV consistently exceeds the Low alarm trip point for more than the configured alarm filter time. If PVLOALM.TM = 0, an alarm will be generated as soon as PV falls below the trip point.

PVLOALM.TP

Specific to Block(s)	DataAcq
Description	Process Variable (PV) Low Alarm Trip Point - Defines the trip point for a PV Low alarm.
Data Type	64-Bit Real Number
Range	NaN, or PVLLALM.TP to PVHIALM.TP
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

PVLOLM

Specific to Block(s)	Numeric
Description	Process Variable (PV) Low Limit
Data Type	64-Bit Real Number
Range	Real number less than PVHILM
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, PVHILM, PVLOALM.TP.
Remarks	When NaN, the limit is not checked on stores to PV. When there is some value, stores to PV must be greater than PVLOLM.

PVLOSIGCHG.CT

Specific to Block(s)	DataAcq
Description	Process Variable (PUSHSP PV) Low Significant-Change Count - The number of times the PV low alarm has been re-annunciated (because PVLOALM.TP has been exceeded).
Data Type	32-Bit Integer
Range	Greater-than or equal-to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVLOSIGCHG.TP
Remarks	

PVLOSIGCHG.TP

Specific to Block(s)	DataAcq
Description	Process Variable (PUSHSP PV) Low Significant-Change Trip Point - If PV is between its low and low-low alarm limits, the low alarm will be re-annunciated if PV decrease by this amount.
Data Type	64-Bit Real Number
Range	NaN, or greater-than 0.0.
Default	NaN
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	PVLOSIGCHG.CT
Remarks	Re-alarming is disabled if PVLOSIGCHG.TP = NaN.

PVMANOPT

Specific to Block(s)	PID, PIDFF	
Description	Process Variable (PUSHSP PV) Manual Option - Indicates what to do when PVSTS = Manual.	
Data Type	Enumeration BADCTLOPT	
Range	NoShed (0):	Do nothing (i.e., behave the same as if PVSTS = Normal)
	ShedHold (1):	Set MODE to Manual, and MODEATTR to Operator; disable External Mode Switching, and hold OP at the last good value.
	ShedLow (2):	Set MODE to Manual, and MODEATTR to Operator, disable External Mode Switching, and set OP to its extended low limit (OPEXLOLM).
	ShedHigh (3):	Set MODE to Manual, and MODEATTR to Operator, disable External Mode Switching, and set OP to its extended high limit (OPEXHILM).

	ShedSafe (4):	Set MODE to Manual and MODEATTR to Operator, disable External Mode Switching, and set OP to the configured safe value (SAFEOP). If SAFEOP is NaN, OP is held at the last good value.
Default	ShedHold (1)	
Config Load	Yes	
Access Lock	Engineer	
Residence	CEE	
Related Parameters	ESWENB, MODE, MODEATTR, OP, PVSTS.	
Remarks		

Specific to Block(s)	PosProp
Description	Process Variable (PUSHSP PV) Manual Option - Indicates what to do when PVSTS = Manual.
Data Type	Enumeration
Range	NO_SHED – Idle SHEDHIGH – Raise SHEDLOW – Lower SHEDSAFE – Depends on Safe State SHEDHOLD - Idle
Default	ShedHold (1)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	ESWENB, MODE, MODEATTR, OP, PVSTS.
Remarks	

PVNORMAL

Specific to Block(s)	DICHANNEL		
Description	Process Variable (PV) Normal Option. Defines the normal state of the PV using the appropriate State Text (STATETEXT) parameter descriptor. The STATETEXT descriptor describes the normal (desired) state, such as Run, Stop, Open, Closed.		
Data Type	Enum		
Range	0	STATETEXT	Defaulted to Off for PV STATE 0.
	1	STATETEXT	Defaulted to On for PV STATE 1.
		None	No off normal checking.
Default	STATETEXT(0)		
Config Load	Yes		
Access Lock	Engineer		
Residence	IOM		
Related Parameters			
Remarks	This parameter is only exposed when ALMOPT is OFFNORML.		

PVP

Specific to Block(s)	PID, PIDFF, PosProp, DataAcq
Description	Process Variable (PUSHSP PV) Value (in Percent)
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVEUHI, PVEULO.
Remarks	

PVRANGELOW

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Indicates a Low PV range of the associated device.
Data Type	FLOAT64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVRANGEUNITS
Remarks	

PVRANGEHIGH

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Indicates a High PV range of the associated device.
Data Type	FLOAT64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVRANGEUNITS
Remarks	

PVRANGEUNITS

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Indicates a Unit of PV of the associated device.
Data Type	Enumeration of HARTUNITS
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE

Related Parameters	PVRANGELOW, PVRANGEHIGH
Remarks	

PVRATE

Specific to Block(s)	SignalSel
Description	Rate for Bumpless Transfer
Data Type	FLOAT64
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	PV
Remarks	The rate of change per minute to provide bumpless transfer of PV value.

PVRAW

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable (PV) Raw Value. Shows the raw input value of the PV before or after initial processing has been applied, depending on the type of I/O Module that is involved. See the Remarks below for more information.
Data Type	32-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	

Remarks	For analog IOMs, this parameter indicates the raw input value of the PV from the Field Termination Assembly (FTA) before PV characterization is applied. The field sensor type determines the units of value as follows: • 0 – 5V, 0.4 – 2V, 1 – 5V Sensor: Percent (%) • Thermocouple Sensor: Microvolts • RTD Sensor: Milliohms • Slidewire Sensor: Ratio • 0 – 100mV Sensor: Millivolts For smart transmitter interface IOMs, this parameter Indicates the raw input value of the PV in percent of span based on the transmitter PV after PV characterization (PVCHAR) and DAMPING have been applied. The span of the PV is determined by using LRV as a 0%-point and URV as a 100%-point. For HAICHANNEL: See HENABLE for description of PVRAW.

Specific to Block(s)	DICHANNEL (PM I/O) DICHANNEL (Series C I/O)		
Description	Raw Process Variable (PV). Shows the current *raw* state of the field contacts.		
Data Type	Boolean		
Range	0	Off	Open contacts
	1	On	Closed contacts
Default	Off (0)		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks			

PVRAW[0..numChans-1]

Specific to Block(s)	AIM
Description	Process Variable from Analog Input device, indexed by channel number.
Data Type	64-Bit Real Number
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVRAWHI

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable (PV) Raw High Range. Specifies the high end of the normal operating range for the *raw* PV (PVRAW) input value.
Data Type	32-Bit Real Number
Range	For SENSRTYP 0_100_MV: PVRAWLO to 100.0. For SENSRTYP SLIDWIRE: PVRAWLO to 1.0.
Default	1.0 when SENSRTYP is SLIDWIRE 100.0 when SENSRTYP is 0_100_MV
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter is only exposed when SENSRTYP is 0_100_MV or SLIDWIRE. For a slidewire input, the Engineering Units are ratio. For a 0 to 100 millivolt input, the Engineering Units are millivolts. PVEUHI cannot be written with NaN (Not a Number). NaN is the default power up value only.

PVRAWLO

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	Process Variable (PV) Raw Low Range. Specifies the low end of the normal operating range for the raw PV (PVRAW) input value.
Data Type	32-Bit Real Number
Range	0.0 to PVRAWHI For SENSRTYP 0_100_MV: PVRAWLO to 100.0. For SENSRTYP SLIDEWIRE: PVRAWLO to 1.0.
Default	0.0, regardless of SENSRTYP
Config Load	Yes
Access Lock	Engineer
Residence	IOP
Related Parameters	
Remarks	This parameter is only exposed when SENSRTYP is 0_100_MV or SLIDWIRE. For a slidewire input, the Engineering Units are ratio. For a 0 to 100 millivolt input, the Engineering Units are millivolts. PVRAWLO cannot be written with NaN (Not a Number). NaN is the default power up value only.

PVSOURCE

Specific to Block(s)	DataAcq, DevCtl
Description	Process Variable (PUSHSP PV) Source - Identifies the source of the PV input.
Data Type	Enumeration PVSOURCE
Range	Sub (0): PV value is provided by a user program. Man (1): PV value is provided by the operator Auto (2): PV value is fetched from another function block.
Default	Auto (2)
Config Load	Yes
Access Lock	DataAcq: Operator DevCtl: ViewOnly, Operator (see Remarks)

Residence	CEE
Related Parameters	DevCtl only: GPV, GPVAUTO, NUMDINPTS, NUMDOUTS, PUSHSP, PV, PVAUTO, PVSRCOPT.
Remarks	Access illegal if NUMDINPTS = 0. PVSOURCE may not be set = Track if NUMDOUTS = 0. ViewOnly and defaulted to Auto if PVSRCOPT = OnlyAuto. If PVSOURCE is not Man and the function block is InActive, PV is defaulted to Null.

Specific to Block(s)	DICHANNEL (PM I/O) DICHANNEL (Series C I/O)		
Description	Process Variable (PV) Source. Defines the source of the PV input to this data point.		
Data Type	Enum		
Range	0	SUB	Sequence program provides PV.
	1	MAN	Operator or program provides PV
	2	AUTO	Field wiring or memory fetch supplies PV.
Default	AUTO (2)		
Config Load	Yes		
Access Lock	Operator		
Residence	IOM		
Related Parameters			
Remarks	PVSOURCE change by an operator requires PVSRCOPT = All. This parameter is only exposed if PNTFORM = FULL		

Specific to Block(s)	Series C AICHANNEL		
Description	PV Source		
Data Type	ENUM		
Range	0	SUB	PV is supplied by a program

	1	MAN	PV is supplied by the operator
	2	AUTO	PV is supplied by field wiring
Default	Auto		
Config Load	Yes		
Access Lock	Application Developer/Engineer		
Residence	IOM		
Related Parameters	PVSRCOPT		
Remarks			

Specific to Block(s)	Series C DICHANNEL		
Description	PV Source		
Data Type	ENUM		
Range	0	SUB	PV is supplied by a program
	1	MAN	PV is supplied by the operator
	2	AUTO	PV is supplied by field wiring
Default	Auto		
Config Load	Yes		
Access Lock	Operator		
Residence	IOM		
Related Parameters	PVSRCOPT		
Remarks			

PVSRC

Specific to Block(s)	Auxcalc
Description	Process Variable (PUSHSP PV) source: Any of P[1..6], PVSTS, C[1..8] or CSTS[1..8]
Data Type	Enumeration CALCOUTSELECTOR
Range	P1 (0) P2 (1) P3 (2) P4 (3) P5 (4) P6 (5) C1 (6) C2 (7) C3 (8) C4 (9) C5 (10) C6 (11) C7 (12) C8 (13) P1STS (14) P2STS (15) P3STS (16) P4STS (17) P5STS (18) P6STS (19) C1STS (20) C2STS (21) C3STS (22) C4STS (23) C5STS (24) C6STS (25) C7STS (26) C8STS (27)
Default	P1 (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PVSTSSRC
Remarks	

PVSRCOPT

Specific to Block(s)	DevCtl, DataAcq	
Description	Process Variable (PV) Source Option – Identifies the PV source selection options available to this function block.	
Data Type	Enumeration PVSRCOPT	
Range	OnlyAuto (0):	PV may only be fetched from another function block, via an active input connection; PV source selection is not available.
	All (1):	PV may be fetched from another function block, or provided by an operator or a user program, it depends on the PVSOURCE.
Default	OnlyAuto (0)	
Config Load	Yes	
Access Lock	Engineer/Application Developer	
Residence	CEE	
Related Parameters	DevCtl Only: GPV, NUMDINPTS, PUSHSP, PV, PVSOURCE.	
Remarks	DevCtl Only: Access is illegal if NUMDINPUTS = 0. If set to OnlyAuto, and the function block is Inactive, PV is set to Null.	

Specific to Block(s)	DICHANNEL (PM I/O)	
Description	Process Variable (PV) Source Option. Defines the source of the PV to be used for this data point.	
Data Type	Enumeration	
Range	ONLYAUTO (0):	PV source selection is not available and field wiring or memory fetch supplies the PV.

	ALL (1):		PV is provided by operator, a sequence program, or by field wiring.
Default	ONLYAUTO (0)		
Config Load	Yes		
Access Lock	Engineer/Application Developer		
Residence	IOM		
Related Parameters			
Remarks	This parameter is only exposed when the PNTFORM is Full. An operator can change the PVSRCOPT, if the DITYPE configuration is LATCHED.		

Specific to Block(s)	Series C AICHANNEL, DICHANNEL		
Description	PV Source Option		
Data Type	Enumeration		
Range	0	OnlyAuto	PV source selection is not available and field wiring supplies PV. When set to OnlyAuto, users may not change PVSOURCE.
	1	All	PV can be provided by an operator or by a sequence program or by field wiring. When set to All, users may change PVSOURCE.
Default	OnlyAuto		
Config Load	Yes		
Access Lock	Engineer/Application Developer		
Residence	IOM		
Related Parameters	PVSOURCE		
Remarks			

PVSTS

Specific to Block(s)	PID, PIDER, PIDFF, PosProp, DataAcq, RatioCtl, RampSoak, AuxCalc, FlowComp, SignalSel	
Description	Process Variable (PV) Status - Contains the status of the PV value.	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The PV value was bad and replaced with NaN.
	Uncertain (1):	The status of the PV value is uncertain, stored by a program.
	Normal (2):	The PV value is good.
	Manual (3):	The PV value was manually entered.
Default	Bad (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	PUSHSP, PV, PVVALSTS.	
Remarks		

Specific to Block(s)	Deadtime, Genlin, Leadlag, Totalizer
Description	Bad Process Variable (PV) Status Flag - Indicates if the PV status is Bad.
Data Type	Boolean
Range	Off (0): PVSTS is not Bad. On (1): PVSTS is Bad.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVSTS,

	PVSTSFL.BAD, PVSTSFL.MAN, PVSTSFL.NORM, PVSTSFL.UNCER.
Remarks	

Specific to Block(s)	Pulse Input IOC, Pulse Input w/ Fast Cutoff IOC, Pulse Input Totalizer
Description	Process Variable (PV) Status.
Data Type	Enumeration
Range	Bad (0) Uncertn (1) Normal (2) Manual (3)
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV.
Remarks	

Specific to Block(s)	DIC
Description	PV Status
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O), AICHANNEL (Series C I/O) HLAI, HLAIHART, LLAI, LLUMX, RHMUX, and STI
Description	Process Variable (PV) Status. Shows the current status of the PV value.
Data Type	Enum

Range	0	BAD	The input value is bad and replaced with NaN.
	1	UNCERTAIN	The status of the input is uncertain.
	2	NORMAL	The input value is good.
	3	MANUAL	The input value is manually set.

Default	BAD (0)
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	For HAICHANNELs and AICHANNELs (Series C I/O): HPVMISM
Remarks	

PVSTS[0..63]

Specific to Block(s)	REQNUMARRAY, RSPNUMARRAY
Description	Array of Status Values. These values are obtained from the Status of the last request.
Data Type	Enumeration
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVSTS[0..numChans-1]

Specific to Block(s)	DIM, DOM (not exposed on the DOM)
Description	DIM: PV Status DOM: Echoback Status
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	AICHANNEL (PM I/O)	
Description	Process Variable (PV) Status. Shows the current status of the PV value.	
Data Type	Enum	
Range	BAD (0):	The input value is bad and replaced with NaN.
	UNCERTAIN (1):	The status of the input is uncertain.
	NORMAL (2):	The input value is good.
	MANUAL (3):	The input value is manually set.
Default	BAD (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOP	
Related Parameters	ERRFL, PV[1..64].	
Remarks		

PVSTS[1..64]

Specific to Block(s)	SINUMARRCH
Description	Process Value Status – Indicates the status of the corresponding Numeric value.
Data Type	Enumeration
Range	Bad (0) Uncertain (1) Normal (2) Manual (3)
Default	Normal (2)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	ERRFL, PV[1..64].
Remarks	

PVSTSFL.ALL

Specific to Block(s)	Auxiliary Function Blocks
Description	PV Status Flag
Data Type	STRUCTDATA
Range	N/A
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	PVSTS, PVSTSFL.BAD, PVSTSFL.MAN, PVSTSFL.NORM, PVSTSFL.UNCER
Remarks	

PVSTSFL.BAD

Specific to Block(s)	PID, PIDFF, PosProp, DataAcq, Deadtime, Leadlag, Auxcalc, Genlin, Totalizer, Pulse Input Totalizer, FlowComp, SignalSel
Description	Bad Process Variable (PV) Status Flag - Indicates if the PV status is Bad.
Data Type	Boolean
Range	Off (0): PVSTS is not Bad. On (1): PVSTS is Bad.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PVPVSTSPVSTSFL.MANPVSTSFL.NORM.PVSTSFL.UNCERPVVALSTS
Remarks	

PVSTSFL.MAN

Specific to Block(s)	PID, PIDFF, PosProp, RampSoak, DataAcq, Leadlag, Auxcalc, Genlin, Totalizer, Pulse Input Totalizer, FlowComp, SignalSel.
Description	Manual Process Variable (PV) Status Flag - Indicates that the PVSTS is Manual.
Data Type	Boolean
Range	Off (0): PVSTS is not Manual. On (1): PVSTS is Manual.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PVPVSTSPVSTSFL.BADPVSTSFL.NORM.PVSTSFL.UNCERPVVALSTS.
Remarks	

PVSTSFL.NORM

Specific to Block(s)	PID, PIDFF, PosProp, RampSoak, DataAcq, Leadlag, Deadtime, Auxcalc, Genlin, Totalizer, Pulse Input Totalizer, FlowComp, SignalSel
Description	Normal Process Variable (PV) Status Flag - Indicates that the PVSTS is Normal.
Data Type	Boolean
Range	Off (0): PVSTS is not Normal. On (1): PVSTS is Normal.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVSTSPVSTSFL.BAD, PVSTSFL.MANPVSTSFL.UNCER, PVVALSTS
Remarks	

PVSTSFL.UNCER

Specific to Block(s)	PID, PIDFF, PosProp, RampSoak, DataAcq, Leadlag, Deadtime, Auxcalc, Genlin, Totalizer, Pulse Input Totalizer, FlowComp, SignalSel
Description	Uncertain Process Variable (PV) Status Flag - Indicates whether the Process Variable (PV) status is Uncertain.
Data Type	Boolean
Range	Off (0): PVSTS is not Uncertain. On (1): PVSTS is Uncertain.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVSTSPVSTSFL.BAD, PVSTSFL.MANPVSTSFL.NORM,

PVVALSTS.

Remarks

PVSTSSRC

Specific to Block(s)	Auxcalc
Description	PVSTS source: Any of C[1..8], CSTS[1..8], P[1..6], or PVSTS.
Data Type	Enumeration CALCOUTSELECTOR
Range	P1 (0) P2 (1) P3 (2) P4 (3) P5 (4) P6 (5) C1 (6) C2 (7) C3 (8) C4 (9) C5 (10) C6 (11) C7 (12) C8 (13) P1STS (14) P2STS (15) P3STS (16) P4STS (17) P5STS (18) P6STS (19) C1STS (20) C2STS (21) C3STS (22) C4STS (23) C5STS (24) C6STS (25) C7STS (26) C8STS (27)
Default	P1STS (14)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PVSRC
Remarks	

PVTEMP

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)		
Description	Process Variable (PV) Temperature Scale. Defines the temperature scale used to characterize the PV input.		
Data Type	Enumeration		
Range	0	Degrees_C	Celsius
	1	Degrees_F	Fahrenheit
	2	Degrees_R	Rankin
	3	Degrees_K	Kelvin
Default	Degrees_C (0)		
Config Load	Yes		
Access Lock	Engineer		
Residence	IOM		
Related Parameters			
Remarks	PVTEMP configuration applies only if SENSRTYP = Thermcpl or RTD.		

PVTRAKOPT

Specific to Block(s)	PID, PIDFF, PosProp, PID-PL	
Description	Process Variable (PUSHSP) PV Tracking Option - Indicates whether the Set Point (SP) is to track PV when the function block is either in Manual mode or being initialized.	
Data Type	Enumeration TRACKING	
Range	NoTrack (0):	SP is never set equal to PV.
	Track (1):	Manual mode or initialization causes SP to track PV.
Default	NoTrack (0)	
Config Load	Yes	
Access Lock	Operator	
Residence	CEE	
Related Parameters		
Remarks	SP is set equal to PV if PVTRAKOPT = Track and the function block is:	

- in manual mode.
- being initialized from a secondary.
- undergoing a 1-shot initialization.

PVTRAKOPTAI

Specific to Block(s)	PID, PIDFF, PosProp, PID-PL	
Description	Process Variable (PUSHSP PV) Tracking Option Auto/Intialization - Provides a PV Tracking option for the specific case when the block is in Auto mode and the block is undergoing initialization (INITMAN is On).	
Data Type	Enumeration	
Range	NoTrack (0):	SP is not set equal to PV in Auto/Init.
	Track (1):	SP is set equal to PV in Auto/Init.
Default	NoTrack (0)	
Config Load	Yes	
Access Lock	Operator	
Residence	CEE	
Related Parameters	PVTRAKOPT	
Remarks	The PVTRAKOPT PV Tracking option parameter does not include the Auto/Init case, but does cover several other situations.	

PVVAL

Specific to Block(s)	DIC
Description	Process Value.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVVAL[0..numChans-1]

Specific to Block(s)s	DIM, DOM (not exposed on the DOM)
Description	DIM: Process Value. DOM: Echoback Value.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVVALSTS

Specific to Block(s)	PID, PIDFF, PosProp
Description	Process Variable (PV) Value and Status – Structure containing the current PV value plus the status (PVSTS).
Data Type	Structure
Range	N/A
Default	N/A

Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVSTS.
Remarks	Use this parameter to pass the status of the PV along with the PV value in all input connections. The status of the PV is monitored automatically by the PID block, and if PVSTS is MANUAL, you may choose to configure the SHED response of the PID block.

Specific to Block(s)	AIC, DIC, DataAcq, Auxcalc, Genlin, Totalizer, Deadtime, Leadlag, Pulse Input Totalizer, SignalSel
Description	Process Variable (PV) Value and Status - Structure containing the current PV Value and Status (PVSTS).
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVSTS.
Remarks	For AIC: Use this parameter to pass the status of PV along with the PV value in all input connections. The status of the PV is monitored automatically by the PID block and if PVSTS is MANUAL you may choose to configure the SHED response of the PID block.

PVVALSTS[0..63]

Specific to Block(s)	REQNUMARRAY, RSPNUMARRAY
Description	Array of (Real Value, Status) pairs. These values are obtained from the Status of the last request.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PVVALSTS[1..64]

Specific to Block(s)	SINUMARRCH
Description	PV Value and Status – Provides Numeric value from the device, along with a Status field.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	ERRFL, PVFL[1..512].
Remarks	This structure is automatically used when the block fetching PVFL[i] is capable of interpreting the ValueStatus structure.

PVVALSTS[0..511]

Specific to Block(s)	SIFLAGARRCH
Description	PV Value and Status – Provides Boolean value from the device, along with a Status field.
Data Type	Structure
Range	N/A
Default	N/A

Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	ERRFL, PVFL[1..512].
Remarks	This structure is automatically used when the block fetching PVFL[i] is capable of interpreting the ValueStatus structure.

Specific to Block(s)	RSPFLAGARRAY
Description	An array of (Boolean Value, Status) pairs. These values are obtained from the value of the corresponding PVFL and the Status of the last response.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

PWMPERIOD

Specific to Block(s)	PWM Channel
Description	PWM Period in Seconds
Data Type	64-Bit Real Number
Range	N/A
Default	10
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	PWMPERIOD is configured on the PWM Channel block.

PWMPERIOD[0..numChans-1]

Specific to Block(s)	DOM
Description	PWM Period in Seconds
Data Type	64-Bit Real Number
Range	N/A
Default	10
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	PWMPERIOD is not configured on the DOM.

PX[1..10]

Specific to Block(s)	ENHREGCALC
Description	PX Input – Shows the scaled input value for corresponding X input.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Q*xxxx* Parameters

Q

Specific to Block(s)	SR, RS
Description	The Q output value.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	FLOWCOMP
Description	Steam Quality Factor Input - Shows value of the steam quality factor
Data Type	Real
Range	NaN or Greater that or equal to 0.0
Default	0
Config Load	No
Access Lock	Other Function Block
Residence	ACE/C200
Related Parameters	
Remarks	

QIMPACTMAC

Specific to Block(s)	QIPACCHAN
Description	QiMPACT CNET MAC Address
Data Type	UINT32
Range	
Default	0
Config Load	NO
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

QUALPROGA

Specific to Block(s)	RM
Description	Qualification progress indication for each module in the host chassis
Data Type	8-Bit Unsigned Integer [20]
Range	0 to 255
Default	0
Config Load	No
Access Lock	ViewOnly Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	
Related Parameters	
Remarks	

QUALSTATE

Specific to Block(s)	All Tagged Blocks
Description	Qualification State - Relates to the qualification state defined in the licensed Qualification and Version Control System Manager.
Data Type	String
Range	Length: 100 characters
Default	Null
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

QSTS

Specific to Block(s)	FLOWCOMP	
Description	Steam Quality Factor Input - Shows value of the steam quality factor	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The PV value was bad and replaced with NaN.
	Uncertain (1):	The status of the PV value is uncertain, stored by a program.
	Normal (2):	The PV value is good.
	Manual (3):	The PV value was manually entered.
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	ACE/C200	
Related Parameters		
Remarks		

R*xxxx* Parameters

R

Specific to Block(s)	SR, RS
Description	The R input value.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

RACYCIMRAVAIL

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic IMR Available – The current number of available acyclic IMRs
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RACYCIMRAVAILDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic IMR Available Display - The number of available display acyclic IMRs.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RACYCIMRAVAILPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic IMRs Available Peer - The current number of available peer acyclic IMRs.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RACYCIMRMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic IMR Maximum - The maximum number of acyclic IMRs supported in this version of firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RACYCIMRUSED

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic IMR Used - The number of acyclic lists in use.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RACYCIMRUSEDDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic IMR Used Display - The current number of display acyclic IMRs used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RACYCIMRUSEDPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic IMR Used Peer - The current number of peer acyclic IMRs used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RACYCLGREQAVAIL

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic Large Requests Available
Data Type	32-Bit Integer

Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RACYCLRQAVAILDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic Large Requests Available Display - The current number of available display acyclic large requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RACYCLRQAVAILPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic Large Requests Available Peer - The current number of available peer acyclic large requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RACYCLGREQMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic Large Requests Maximum - The maximum number of acyclic large requests supported in this version of firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RACYCLGREQUSED

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic Large Requests Used - The current number of acyclic large requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RACYCLRQUSEDDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic Large Requests Used Display - The current number of display acyclic large requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No

Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RACYCLRQUSEDPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic Large Requests Used Peer - The current number of peer acyclic large requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RACYCSMREQAVAIL

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic Small Requests Available
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RACYCSRQAVAILDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic Small Requests Available Display - The current number of available display acyclic small requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RACYCSRQAVAILPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic Small Requests Available Peer - The current number of available peer acyclic small requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RACYCSMREQMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic Small Requests Maximum - The maximum number of acyclic small requests supported in this version of firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No

Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RACYCSMREQUSED

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Acyclic Small Requests Used - The current number of acyclic small requests in use.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RACYCSRQUSEDDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder C Acyclic Small Requests Used Display - The current number of display acyclic small requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RACYCSRQUSEDPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Acyclic Small Requests Used Peer - The current number of peer acyclic small requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RAISEDEADTM

Specific to Block(s)	PosProp, PidPosProp
Description	Raise Dead Time (in seconds).
Data Type	Real
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

RAISEDESC

Specific to Block(s)	PosProp, PidPosProp
Description	Raise Output Descriptor.
Data Type	String
Range	
Default	“Raise”
Config Load	Yes
Access Lock	Engineer
Residence	SR

Related Parameters	
Remarks	

RAISELMFL

Specific to Block(s)	PosProp, PidPosProp
Description	Raise Pulse Limit Flag – Used to inhibit Raise pulses by the PosProp function block and is pulled from another function block.
Data Type	Boolean
Range	Off (0): Allow raise pulse output. On (1): Inhibit raise pulse output.
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	
Remarks	

RAISERATE

Specific to Block(s)	PosProp, PidPosProp
Description	Raise Output Pulse Rate – The raise stroke rate (in percent per second).
Data Type	Real
Range	0.0 to 100.0
Default	100%/sec.
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	
Remarks	

RAISETIME

Specific to Block(s)	PosProp, PidPosProp
Description	Raise Output Pulse Time (in seconds).
Data Type	Real
Range	MINPULSER, Lesser of MAXPULSER and CYCLETIME.
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	MINPULSER
Remarks	If RAISETIME < MINPULSER, no raise pulse is issued.

RAMPRATE[1..NUMPROFILES][1..NUMRAMPSOAK]

Specific to Block(s)	RampSoak
Description	Ramp Rate (in EUs per minute) - The target ramp rates, specified by the user. There is one ramp rate per Ramp/Soak pair in a profile.
Data Type	Real
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	NUMPROFILES, NUMRAMPSOAK[1..NUMPROFILES], SOAKTIME[1..NUMPROFILES][1..NUMRAMPSOAK], SOAKVAL[1..NUMPROFILES][1..NUMRAMPSOAK], STARTOPT, STARTSEG[1..NUMPROFILES].
Remarks	Negative values are accepted to allow ramping down.

RAMSCRUBERRS

Specific to Block(s)	Primary/Secondary C200, C300 and FIM4
Description	Corrected RAM Sweep - Indicates status of detected RAM errors.
Data Type	Boolean
Range	Off (0) No RAM errors detected. On (1) RAM errors detected and corrected.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	C200(CPM), C300, FIM4
Related Parameters	RAMSWEEPERR
Remarks	Errors detected within DRAM are corrected through a scrub operation. Detected error count should remain low. However, if it gets above a certain threshold, this parameter is set to On. When RAMSCRUBERRS goes On, the module function block issues a diagnostic alarm.

RAMSWEEPERR

Specific to Block(s)	Primary/Secondary C200, C300 and FIM4
Description	Uncorrectable RAM Sweep - Indicates status of detected RAM errors.
Data Type	Boolean
Range	Off (0) No RAM errors detected. On (1) RAM errors detected but unable to correct.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	C200(CPM), C300, FIM4
Related Parameters	RAMSCRUBERRS
Remarks	When On, indicates the presence of one or more single bit memory faults which could not be corrected by the DRAM scrub process. When RAMSWEEPERR goes On, the module function block issues a diagnostic alarm.

RATE

Specific to Block(s)	Pulse Input Totalizer
Description	PI Input Flow Rate in Engineering Units. This value is used in Analog Operation algorithm, when P1 input goes Bad.
Data Type	Real
Range	NAN, or greater-than or equal-to zero.
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	RATE = C1/C2 * TIMEBASE * Pulses / (integration time in sec).

RATEALARM[1..24]

Specific to Block	QIPACTERM	
Description	Fast Feed Rate Alarm	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Alarm
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 11 of the Status 2 word in the input assembly for the designated position [1-24].	

RATEALARM[1..200]

Specific to Block	QIPACCHAN	
Description	Fast Feed Rate Alarm	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Alarm

Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value of bit 11 of the Status 2 word in the input assembly for the designated channel [1-200] in the QiMPACT cluster.

RATE[1..24]

Specific to Block	QIPACTERM
Description	Rate of Change of Weight
Data Type	FLOAT64
Range	N/A
Default	NAN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value in the input assembly for the designated position [1-24].

RATE[1..200]

Specific to Block	QIPACCHAN
Description	Rate of Change of Weight
Data Type	FLOAT64
Range	N/A
Default	NAN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value in the input assembly for the designated channel [1-200] in the QiMPACT cluster.

RBOPTION

Specific to Block	RATIOBIAS	
Description	Ratio Bias Option - Select desired ratio/bias operation.	
Data Type	Enumeration	
Range	FixedRatioBias	During initialization, it is back calculated as follows, INITVAL (X1) = (OP - OPBIAS.FIX) / RT INITVAL (RT) = (OP - OPBIAS.FIX) / X1 In Auto mode, the RT and BIAS values are set by the operator or a user program. In Cascade mode, the RT value is fetched from the upstream function block only. The BIAS is set by the operator or a user program.
	AutoRatio	During initialization, the RT value is not fetched or settable. It is back calculated as follows: RT = (OP - OPBIAS.FIX) / X1. If X1 is zero in Auto mode, RT = INITVAL(RT). Clamp RT within RT limits. The BIAS can be set by the operator or a user program. INITVAL (X1) = (OP - OPBIAS.FIX) / RT INITVAL (RT) = (OP - OPBIAS.FIX) / X1
	AutoBias	During initialization, BIAS is not fetched or settable. It is back calculated as follows: BIAS = OP - (RT * X1) Clamp BIAS within BIAS limits. INITVAL (X1)= (OP - OPBIAS.FIX) / RT INITVAL (RT) = (OP - OPBIAS.FIX) / X1 In Auto mode, the RT value is set by

	the operator or a user program only. In Cascade mode, the RT value is fetched from the upstream function block only.
Default	FixedRatioBias
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	
Remarks	In normal Auto mode operation, the RT and BIAS values are set by the operator or a user program regardless of the RBOPTION selection. In normal Cascade mode operation, the RT value is fetched from the upstream function block and the BIAS value is set by the operator or a user program regardless of the RBOPTION selection.

RCYCIMRAVAIL

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic IMR Available – The current number of available cyclic IMRs
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network

RCYCIMRAVAILDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic IMR Available Display - The number of available display cyclic IMRs.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RCYCIMRAVAILPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic IMRs Available Peer - The current number of available peer cyclic IMRs.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RCYCIMRMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic IMR Maximum - The maximum number of cyclic IMRs supported in this version of the firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RCYCIMRUSED

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic IMRs Used - The current number of cyclic IMRs used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RCYCIMRUSEDDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic IMR Used Display - The current number of display cyclic IMRs used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RCYCIMRUSEDPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cylic IMR Used Peer - The current number of peer cyclic IMRs used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	The Interprocess Message Structure (IMR) is used to pass information between the control object adapter and the control kernel object manager for communications across the network.

RCYCLGREQAVAIL

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic Large Requests Available
Data Type	32-Bit Integer

Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RCYCLRQAVAILDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Large Requests Available Display - The current number of available display cyclic large requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RCYCLRQAVAILPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Large Requests Available Peer - The current number of available peer cyclic large requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RCYCLGREQMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic Large Requests Maximum - The maximum number of cyclic large requests supported in this version of firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RCYCLGREQUSED

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic Large Requests Used - The current number of cyclic large requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RCYCLRQUSEDDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Large Requests Used Display - The current number of display cyclic large requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No

Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RCYCLRQUSEDPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Large Requests Used Peer - The current number of peer cyclic large requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RCYCSMREQAVAIL

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic Small Requests Available
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RCYCSRQAVAILDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Small Requests Available Display - The current number of available display cyclic small requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RCYCSRQAVAILPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Small Requests Available Peer - The current number of available peer cyclic small requests.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RCYCSMREQMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Cyclic Small Requests Maximum - The maximum number of cyclic small requests supported in this version of firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No

Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RCYCSMREQUSED

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300, CEEACE, CEESIMC200,OPC, ICG, GEE FB
Description	Responder Cyclic Small Requests Used - The current number of cyclic small requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

RCYCSRQUSEDDISP

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Small Requests Used Display - The current number of display cyclic small requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RCYCSRQUSEDPEER

Specific to Block(s)	CEE, IOLIM, FIM
Description	Responder Cyclic Small Requests Used Peer - The current number of peer cyclic small requests used.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RDEGRADALM

Specific to Block(s)	CEEC300, CEE, IOLIM, FIM, IOLINKC300	
Description	Request-Response Degradation Alarm - The Control Data Access Server has degraded to request-reponse on at least one connection in the last eight seconds.	
Data Type	Boolean	
Range	Off (0)	Block is not in alarm.
	On (1)	Block is in alarm.
Default	Off (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM	
Related Parameters		
Remarks		

RDERRALM.PR

Specific to Block(s)	CAB types
Description	Read Error Alarm.Priority. Sets the priority of the alarm notification if a read error alarm is reported. Engineer can change this value at run time.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	Enumeration ALPRIOR

Range	NONE, JOURNAL, LOW, HIGH, URGENT
Default	JOURNAL
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	READSTATUS, READERROPT
Remarks	

RDERRALM.SV

Specific to Block(s)	CAB types
Description	Read Error Alarm.Severity. Sets the severity of the alarm notification if a read error alarm is reported. Engineer can change this value at run time.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	16-Bit Integer
Range	0-15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	READSTATUS, READERROPT
Remarks	

RDISPAVGLPS [1..RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Average IMRs Per Second - The average number of display peer messages per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPAVGLPSCONN [1...RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Average IMRs Per Connection - The average number of display peer messages per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPAVGPPS [1..RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Average Parameters Per Second - The average number of display parameters per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0

Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPAVGPPSCONN [1...RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Average Parameters Per Connection - The average number of display parameters per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPCONN

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Display Connections - The number of current display connections.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPCONNMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Display Connections Maximum - The maximum number of display connections supported in this version of firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPDEGIMRCONN [1..RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, ICG
Description	Number of Display IMRs Degraded to Request-Response - Indicates the count of display IMRs (Interprocess Message Structure) that have degraded to Request-Response on each connection.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM, ICG
Related Parameters	
Remarks	

RDISPDEGRADIMR[1..RPEERCONNMAX]

Specific to Block(s)	CEE, IOLIM, FIM
Description	Request-Response Display Degradation IMRs - The number of display IMRs that have degraded to Request - Response on each connection.
Data Type	32-Bit Integer

Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RDISPMAXLPS [1..RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Maximum IMRs Per Second - The maximum number of display peer messages per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPMAXLPSCONN [1...RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Maximum IMRs Per Connection - The maximum number of display peer messages per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPMAXPPS [1..RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Maximum Parameters Per Second - The maximum number of display parameters per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPMAXPPSCONN [1...RDISPCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Display Maximum Parameters Per Connection - The maximum number of display parameters per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RDISPHOST[1..RPEERCONNMAX]

Specific to Block(s)	CEE, IOLIM, FIM
Description	Originator's Display Host - Shows the name of the originator's host.
Data Type	EntityID
Range	16 characters
Default	Null

Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RDNAUTOSYNC

Specific to Block(s)	Primary/Secondary Platform Blocks C300 and FIM4 AI-HART, AI-LLMUX, AO-HART, DI-HV, DI-24, DO-24B		
Description	Auto Synchronization State		
Data Type	Enumeration		
Range	0	DISABLED	Auto synchronization disabled either due to Disable Synchronization command or due to persistent synchronization fault.
	1	ENABLED	Auto synchronization enabled by the Enable Synchronization command.
	2	– – –	N/A because module configured as non-redundant.
Default	DISABLED		
Config Load	No		
Access Lock	View Only		
Residence	Controller		
Related Parameters	ALTSYNCCMD, DSBLSYNCCMD, ENBLSYNCCMD		
Remarks	Indicates whether auto synchronization is enabled or disabled in the controller. Auto synchronization is enabled upon receipt of the Enable Synchronization command (ENBLSYNCCMD). When enabled, a Primary Module automatically attempts to synchronize the Secondary, upon receipt of any Auto-Synchronization trigger (in addition to the Enable Synchronization command). Auto synchronization is disabled either upon receipt of the Disable Synchronization command (DSBLSYNCCMD) or detection of a persistent synchronization fault condition (For example, end-to-end checksum failure, synchronization hardware failure, etc.). When disabled, the user must explicitly issue the Enable Synchronization command to reset any persistent fault condition and re-attempt initial-sync.		

RDNCAPABILITY

Specific to Block(s)	Primary/Secondary Platform Blocks for C200, C300, FTEB, FIM, FIM4, IOLIM, LIOM
Description	Redundancy Capable Hardware Indicator - Indicates whether the module hardware and/or firmware is capable of supporting redundancy.
Data Type	Boolean
Range	Off (0) On (1)
Default	On
Config Load	No
Access Lock	ViewOnly
Residence	Controller
Related Parameters	RDNCHASSISID
Remarks	

RDNCHASSISID

Specific to Block(s)	IOLIM, FIM, CPM, FTEB
Description	Redundancy Physical Chassis ID - Identifies a specific physical chassis in a redundant chassis pair without regard to chassis redundancy state.
Data Type	Enumeration RDNCHASSISID
Range	ChassisUndef (0) ChassisA (1) ChassisB (2)
Default	ChassisUndef (0)
Config Load	No
Access Lock	ViewOnly
Residence	IOLIM, FIM, CEE
Related Parameters	
Remarks	This is a user-configurable attribute of the Redundancy Module (RM) which the RM distributes to all chassis resident redundancy compliant modules.

RDNCMPT

Specific to Block(s)	Primary/Secondary Platform Blocks for C200, C300, FTEB, FIM, FIM4, IOLIM, LIOM	
Description	Redundancy Partner Compatibility - Indicates whether redundant partner modules are compatible (from a controller redundancy perspective) and if not compatible, provides a reason why.	
Data Type	Enumeration	
Range	NoPartner (0)	Not Applicable – Initial/default state when no partner is responding to the partner compatibility query.
	QueryInProg (1)	Not Applicable – Transient state indicating that the redundancy partners are negotiating their compatibility.
	Compatible (2)	Compatible – Compatible indication for those platforms not sensitive to difference in firmware versions. This includes FIM, FIM4, FTEB, and IOLIM.
	DirectCmpt (3)	Compatible – Compatible indication for those platforms sensitive to difference in firmware versions (i.e. C200/C300) when firmware versions are identical.
	IndirectCmpt (4)	Compatible – Compatible indication for those platforms sensitive to difference in firmware versions (i.e. C200/C300) when firmware versions differ. This implies that the Controller Migration Wizard must be invoked to coordinate OPM initial synchronization and switchover to the different firmware version.
	MessageSize (5)	I Incompatible – The size of the partner's compatibility message is unexpected. [1]
	Vendorid (6)	Incompatible – The partner's Vendor ID does not match. [1]
	ProductType (7)	Incompatible – The partner's Product Type does not match [1]

ProductCode (8)	Incompatible – The partner's Product Code does not match.[1]
MajRevision (9)	Incompatible – The partner's Major revision is not supported. [1]
MinRevision (10)	Incompatible – The partner's Minor revision is not supported. [1]
Platform (11)	Incompatible – Mismatched compatibility types (i.e. different platform firmware). [1]
OPMNotImpl (12)	Incompatible – Incompatible indication for those platforms sensitive to difference in firmware versions when firmware versions differ and the platform does not support OPM (there are no known examples of this platform type).
OPMSequence (13)	Incompatible – Attempting to migrate across more than one major release For example, migration between R101 and R300 is not allowed.
NodeNumber (14)	Incompatible – Device Indexes of potential redundant partner modules are not properly configured as consecutive odd/even pair.
– – – (15)	Not Applicable – Module is configured as non-redundant.
ModuleType (16)	Incompatible – Mismatched compatibility types (i.e. different platform firmware).
MessageFmt (17)	Incompatible – Mismatched compatibility types (i.e. different platform firmware).
MessageFmt (18)	Incompatible – The partner compatibility message format is undefined or not supported.
PartnBootFmw (19)	Incompatible – The partner module is executing from boot firmware (e.g. partner is in the Alive, Ready, or Fail State). To be compatible, both partners must be executing from application firmware.

Default	NoPartner (0)
Config Load	No
Access Lock	ViewOnly
Residence	C200, FIM, IOLIM, C300, FTEB, FIM4, LIOM and FIM4
Related Parameters	
Remarks	[1] These reasons only apply to the C200/FIM/IOLIM/FTEB module types.

RDNCTLABILITY

Specific to Block(s)	Primary/Secondary Platform Blocks for C200, C300, FTEB, FIM, FIM4, IOLIM, LIOM		
Description	Redundancy Partner Contollability – Describes the module's ability to control relative to its redundant partner.		
Data Type	Enumeration		
Range	- - -	(0)	Not Applicable – Initial/default state when not communicating with a partner module
	Evaluating	(1)	Transient state while determining controllability.
	Better	(2)	This module is better able to control. For example, when this module has view to FTE but partner does not.
	Equal	(3)	Both modules of a redundant pair are equally able to control.
	Worse	(4)	This module is worse able to control. For example, when this module does not have view to FTE but partner does.
Default	- - -		
Config Load	No		
Access Lock	ViewOnly		
Residence	Controller		
Related Parameters			
Remarks			

RDNDELAYAVG

Specific to Block(s)	Primary/Secondary Platform Blocks for C200, C300, FTEB, FIM, FIM4, IOLIM, LIOM
Description	Redundancy Delay Average – The average redundancy delay of the CPU, in percent. The redundancy delay takes processing capacity away from all currently active tasks, causing a delay until redundancy resources are freed. Triggering the STATRESET parameter restarts averaging.
Data Type	64-Bit Real Number
Range	0.0 to 100.0
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	Controller
Related Parameters	RDNDELAYMAX, STATSRESET.
Remarks	The average is computed by a one minute, first order lag filter.

RDNDELAYMAX

Specific to Block(s)	Primary/Secondary Platform Blocks for C200, C300, FTEB, FIM, FIM4, IOLIM, LIOM
Description	Redundancy Delay Maximum in percent – Historical maximum redundancy delay CPU value observed since last store to STATRESET.
Data Type	64-Bit Real Number
Range	0.0 to 100.0
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	C200, FIM, IOLIM, C300, FTEB, FIM4
Related Parameters	RDNDELAYAVG, STATRESET.
Remarks	

RDNDEVICEIDX

Specific to Block(s)	Primary/Secondary Platform Blocks for C300 and FIM4
Description	Device Index - Serves as a unique identifier that does not follow the redundancy role. This parameter shows the Device Index specified on the hardware's rotary dial on the Platform Block's **Redundancy** tab.
Data Type	INT32
Range	1 to 511
Default	0
Config Load	No
Access Lock	View Only
Residence	Controller
Related Parameters	DEVICEIDX
Remarks	

RDNHISTREASON [1...15]

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs		
Description	Redundancy History Reason – Provide rational for the occurrence of a redundancy history state. Includes rational for loss-of-sync (LOS), redundancy role change (ROLE), commencing initial sync (IS), and partner compatibility (CMPT). Note: IR : Initial Redundancy Role Determination CMPT : Partner Compatibility ROLE : Redundancy Role Change SYNC : Loss-of-Sync & Commencing Initial Sync		
Data Type	ENUM		
Range	– – –	(0)	N/A because History State does not require rational.
	PreviouslyPrimary	(1)	IR: Initial redundancy role of Primary was choosen because previously retained primary role.
	PreviouslySynchronizedSecondary	(2)	IR: Initial redundancy role of Primary was choosen because previously retained synchronized secondary role.
	PreviouslyStandbySecondary	(3)	IR: Initial redundancy role of Primary was choosen because previously retained standby secondary role.
	PreviouslyUnsynchronizedSecondary	(4)	IR: Initial redundancy role of Secondary was choosen because previously retained not-synchronized secondary

		role.
PreviouslyNonRedundant	(5)	IR: Initial redundancy role of Non-Redundant was choosen because previously retained non-redundant role.
PrimaryIpOccupied	(6)	IR: Initial redundancy role of Secondary was choosen because primary IP address occupied.
SecondaryIpOccupied	(7)	IR: Initial redundancy role of Primary was choosen because secondary IP address occupied.
HardwareLimitation	(8)	IR: Initial redundancy role was chosen because of hardware restriction.
OddDeviceIndex	(9)	IR: : Initial redundancy role of Primary was choosen because module is configured with odd device index.
EvenDeviceIndex	(10)	IR: Initial redundancy role of Secondary was choosen because module is configured with even device index.
PartnerIsPrimary	(11)	IR: Initial redundancy role of Secondary was choosen because partner already in primary role.
PartnerIsSecondary	(12)	IR: Initial redundancy role of Primary was choosen because partner already in secondary role.
PartnerIsNonRedundant	(13)	IR: Initial redundancy role of Secondary was choosen because partner already in non-redundant role.
PartnerIsNoDb	(14)	IR: Initial redundancy role of Primary was choosen because partner has no loaded strategy. Note that as a consequence, the partner in NODB State is rebooted into the secondary role.
PartnerRunningInBootFirmware	(15)	IR: Initial redundancy role of Primary was choosen because partner running in boot firmware. Note that if the partner was in the primary role, it transitions into the secondary role.
LaterWallClockTime	(16)	IR: Initial redundancy role of Primary was choosen because simultaneous conflict resolved by more recent wall-clock time.
Compatible	(17)	CMPT: Partner module is present and compatible. Compatible indication for those platforms not sensitive to difference in firmware versions. This includes FIM, FIM4, FTEB, and IOLIM.
DirectCompatible	(18)	CMPT: Partner module is present, compatible, and has identical firmware version. Compatible indication for those platforms sensitive to difference in firmware versions (i.e. C200/C300) when firmware versions are identical.
MigrateCompatible	(19)	CMPT: Partner module is present, compatible, but only supports On Process Migration due to different firmware versions. Compatible indication for those

		platforms sensitive to difference in firmware versions (i.e. C200/C300) when firmware versions differ. This implies that the Controller Migration Wizard must be invoked to coordinate OPM initial synchronization and switchover to the different firmware version.
HardwareType	(20)	CMPT: Incompatible - Different Hardware Types. Check for a Factory Information mismatch between the redundant pair.
FirmwareType	(21)	CMPT: Incompatible - Different Firmware Types.
DeviceIndex	(22)	CMPT: Incompatible - Incorrect Device Index. Redundant pair requires consecutive Device index pair.
OpmNotImplemented	(23)	CMPT: Incompatible - On Process Migration not implemented.
OpmSequence	(24)	CMPT: Incompatible - On Process Migration not supported across specified releases. Attempting to migrate across more than one major release For example, migration between R101 and R300 is not allowed.
InitiateSwitchoverCommand	(25)	ROLE: User issued switchover command.
InitiateSwapCommand	(26)	ROLE: User issued swap command.
PrimaryLonelyOnFte	(27)	ROLE: Original primary module became lonely on FTE.
Migration	(28)	ROLE: Automatic redundancy role change due to on-process migration.
AlternateSync	(29)	ROLE: Automatic redundancy role change due to Alternate Sync command (i.e. one time initial sync across FTE instead of private path).
DiagnosticFailure	(30)	ROLE: Switchover triggered due to diagnostic failure.
FatalError	(31)	ROLE: Switchover triggered due to fatal error.
FteDeafMute	(32)	ROLE: Switchover triggered due to FTE becomming deaf & mute even though link integrity signal is still being sensed.
Link1IolLoopbackError	(33)	ROLE: Link 1 IOL Loopback Error. The IOL processor has detected that it cannot see what it has transmitted onto the wire. This is a switchover trigger because it may represent a fault in the IOL communication electronics. Bad IOL wiring and/or rogue IOL device communications also could cause Loopback Error.
PartnerRequest	(34)	ROLE/SYNC: Partner Requested operation. The redundant partner has either requested initial-sync to be inhibited/aborted or for role change.

		Refer to the partner's redundancy history parameter for the actual reason.
PartnerBetterPrimary	(35)	ROLE: Force role change because partner is better primary candidate.
DisableSyncCommand	(36)	SYNC: User issued disable sync command.
PartnerAbsent	(37)	SYNC: Partner module absent. Initial-sync is not applicable without a redundant partner.
PartnerNotCompatible	(38)	SYNC: Partner module not compatible. Initial-sync is not applicable with an incompatible redundant partner.
PartnerPrivatePathDisconnected	(39)	SYNC: Redundancy private path cable disconnected.
RedundancyCommOutOfSequenceError	(40)	SYNC: Redundancy communication out-of-sequence error. Redundancy communication buffers have been lost resulting in the receipt of an unexpected sequence number. This could be a fault in the redundancy communication private path or in the redundancy communication electronics.
DataFormatError	(41)	SYNC: Redundancy communication format error. Receipt of a redundancy communication buffer that has an unknown fomat ID indicates corrupted data. This could be a fault in the redundancy communication private path or in the redundancy communication electronics.
DataChecksumError	(42)	SYNC: Database synchronization checksum error. A background diagnostic continuously checks that the primary and secondary syncd memory remains aligned. Failure of this diagnostic indicates data corruption due to marginal secondary memory, fault in the redundancy communication private path, or fault in the redundancy communication electronics. Loss-of-sync due to database sync checksum error disables Auto-Sync. Use the Enable Synchronization command to return to trigger initial-sync.
SyncHardwareError	(43)	SYNC: Synchronization hardware error. Loss-of-sync due to sync hardware error disables Auto-Sync. Use the Enable Synchronization command to return to trigger initial-sync.
CleanPointTimeout	(44)	SYNC: Encountered a timeout condition while performing clean-point processing.
PrimaryUnknownErr	(45)	SYNC: Unknown cause on primary module.
SecondaryUnknown Error	(46)	SYNC: Unknown cause on secondary module.
AlternateSyncComm	(47)	SYNC: User commanded Alternate

and		Synchronization.
EnableSyncCommand	(48)	SYNC: User commanded Enable Synchronization.
MigrationCommand	(49)	SYNC: Controller on-process migration.
PartnerReady	(50)	SYNC: Compatible partner completed startup initialization.
PartnerPrivatePathConnected	(51)	SYNC: Redundancy private path cable reconnected.
PartnerPrivatePathCommunicationError	(52)	SYNC: Redundancy private path communication error
DataMessageSizeError	(53)	SYNC: Redundancy unexpected message size error.
AutoSyncState	(54)	SYNC: Auto Sync state is disabled. Initial sync is inhibited while the Auto Sync State is set to disabled. This is a persistent inhibit sync reason that is canceled via the Enable Sync command.
NoFbStart	(55)	SYNC: Missing FB_START indication.
SyncDataReceiveError	(56)	SYNC: Error occurred on secondary receive of parameterized sync data..
OutOfSyncBuffers	(57)	SYNC: Sync data and tag buffers not allocated.
OutOfIMRs	(58)	SYNC: Unable to acqire IMR for receipt of sync data.
LiveListMismatch	(59)	SYNC: Mismatch between primary & secondary live list.
LinkStatus	(60)	SYNC: Link status.
RtpAttendance	(61)	SYNC: RTP attendance.
FteCableStatus	(62)	SYNC: FTE cable status. Indicates that either both FTE cables have been disconnected (i.e. FTE lonely) or at least one FTE cable has been reconnected. The primary triggers switchover due to dual-FTE-cable disconnect. The secondary inhibits sync due to dual-FTE-cable disconnect. This persistent inhibit sync reason can only be canceled by restoring FTE communications with the secondary.
Link1NvsCommands	(63)	SYNC: Link 1 Flash operations. Synchronization is aborted and/or initial-sync is inhibited during the database initialization that occurs upon I/O Link FB commanded NVS compaction.
OpmRequired	(64)	SYNC: Controller OPM required but not yet enabled. Initial-sync is not allowed when the application firmware versions for the primary and secondary controllers are different (for those platforms sensitive to difference in firmware versions i.e. C200/C300). The Controller Migration Wizard must be used to perform On-Process Migration.
OpmWaitRestore	(65)	SYNC: Controller OPM waiting for

		Secondary Checkpoint Restore
OpmWaitSyncCommand	(66)	SYNC: Controller OPM waiting for sync/switch command from the Controller Migration Wizard.
OpmAbortCommand	(67)	SYNC: Control Migration Wizard commanded migration abort.
OpmRestoreTimeout	(68)	SYNC: Controller OPM Secondary Checkpoint Restore timed out; this occurs if the flow of checkpoint data is stalled for longer than 2 minutes. This represents abnormal OPM session termination.
OpmTimeout	(69)	SYNC: The redundancy subsystem aborts controller OPM if control is frozen (during the one-time OPM initial-sync transfer of Dynamic Data) longer than the maximum specified time (i.e. 10 seconds for C200 and 20 seconds for C300). This represents abnormal OPM session termination.
OpmInitialSyncTimeout	(70)	SYNC: Controller OPM commence initial sync timed out. Initial sync failed to commence within two minutes following the receipt of the Migration Wizard command to commence initial-sync as part of an OPM session. This represents abnormal OPM session termination.
OpmIoConnectionsTimeout	(71)	SYNC: Controller OPM I/O connection timeout. Loss-of-sync occurred while waiting for the Secondary controller to form at least the same number of I/O Connections as the primary controller (as part of initial-sync during an OPM session). The Secondary Platform FB's LASTOPMNAME parameter is blank in this case. This represents abnormal OPM session termination. This only applies to the C200 because it forms connections directly with the Series A I/O. In the case of the C300, connections are formed between the FTEB and Series A I/O.
OpmIoDataFailure	(72)	SYNC: Controller OPM I/O Data failure. Loss-of-sync occurred while transferring I/O Connection Data (as part of initial-sync during an OPM session). Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is the inability of the secondary controller to interpret the I/O Connection Data format. The Secondary Platform FB's LASTOPMNAME parameter is blank in this case. This represents abnormal OPM session termination. This applies equally to the C200 and C300 because they both transfer Series A I/O Connection data during OPM initial-sync.

OpmPeerReferences Mismatch	(73)	SYNC: Controller OPM peer reference mismatch. Loss-of-sync occurred while transferring Peer Cross-Reference ID data (as part of initial-sync during an OPM session). Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is the presence of a ghost peer connection reference. A ghost peer connection reference exists if the primary controller has knowledge of a peer connection ID that was not instantiated in the Secondary controller during OPM Secondary Checkpoint Restore. The Secondary Platform FB's LASTOPMNAME parameter is blank in this case. This represents abnormal OPM session termination.
OpmPeerReferences Failure	(74)	SYNC: Controller OPM peer reference data fail. The one-time OPM initial-sync transfer of Dynamic Data that occurs with control frozen contains two components of Peer Dynamic Data and Block Dynamic Data with the latter typically being the larger of the two. Loss-of-sync occurred while transferring Peer Dynamic Data. Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is the inability of the secondary controller to interpret the Peer Dynamic Data format. The Secondary Platform FB's LASTOPMNAME parameter is blank in this case. This represents abnormal OPM session termination.
OpmBlockDataTimeout	(75)	SYNC: Controller OPM block data transfer timeout. The redundancy subsystem aborts controller OPM if control is frozen (during the one-time OPM initial-sync transfer of Dynamic Data) longer than the maximum specified time (i.e. 10 seconds for C200 and 20 seconds for C300). This represents abnormal OPM session termination.
OpmBlockDataFailure	(76)	SYNC: Controller OPM block data fail. The one-time OPM initial-sync transfer of Dynamic Data that occurs with control frozen contains two components of Peer Dynamic Data and Block Dynamic Data with the latter typically being the larger of the two. Loss-of-sync occurred while transferring Block Dynamic Data. This represents abnormal OPM session termination. Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is either the inability of the secondary controller to interpret the Block Dynamic Data format or the secondary

			controller has no destination block to receive the Dynamic Data. The latter is possible in the presence of a ghost block; a ghost block exists if the primary controller has knowledge of a block that was not instantiated in the Secondary controller during OPM Secondary Checkpoint Restore. The Secondary Platform FB's LASTOPMNAME parameter indicates the name of the last block to be (on-process) migrated; the LASTOPMNAME is used to isolate the name of the first CEE subordinate block that has detected a dynamic state data error. In the special case of a ghost block, the LASTOPMNAME is either blank (because the ghost block name no longer exists in the ERDB) or indicates the name of a block that is not loaded to the controller (i.e. only exists on the Control Builder project tree).
	OpmFormatError	(77)	SYNC: Receive of Controller OPM data failed.
	StartupInProgress	(78)	SYNC: Platform startup in progress. Initial sync is not allowed until after the C300/FIM4 has completed system startup. This is a transient inhibit sync reason that is usually not seen.
	PlatformFunctionBlockLoadState	(79)	SYNC: Platform FB load state. Initial-sync is not allowed until after the Platform FB has been loaded to the controller.
	RedundancyConfigurationState	(80)	SYNC: Platform configured as non-redundant. Initial-sync is not allowed when explicitly configured as non-redundant. This persistent inhibit sync reason can only be canceled by reconfiguring the non-redundant C300/FIM4 FB as redundant.
	Link1PartnerTimeout	(81)	SYNC: Link 1 partner startup timeout. When an I/O Link Fb is configured for PMIO or Series C I/O, initial-sync requires explicit communication with the partner I/O Link interface across the I/O Link network. This reason indicates that a timeout occurred while waiting for the partner interface to commence communication on the I/O Link network. Make sure that the primary and secondary are connected to the same I/O Link Network.
	Link2PartnerTimeout	(82)	SYNC: Link 2 partner startup timeout. When an I/O Link Fb is configured for PMIO or Series C I/O, initial-sync requires explicit communication with the partner I/O Link interface across the I/O Link network. This reason indicates that a timeout occurred while waiting for the

		partner interface to commence communication on the I/O Link network. Make sure that the primary and secondary are connected to the same I/O Link Network.
Link1PartnerNotVisible	(83)	SYNC: Link 1 Partner Not Visible. Once the I/O Link (configured for PMIO or Series C I/O) has completed initial-sync, the primary controller monitors the presence of the partner interface across the IOL communication network. Loss-of-view of the partner I/O Link interface results in loss-of-sync with this reason.
Link2PartnerNotVisible	(84)	SYNC: Link 2 Partner Not Visible. Once the I/O Link (configured for PMIO or Series C I/O) has completed initial-sync, the primary controller monitors the presence of the partner interface across the IOL communication network. Loss-of-view of the partner I/O Link interface results in loss-of-sync with this reason.
Link1PartnerMismatch	(85)	SYNC: Link 1 Partner Mismatch. When an I/O Link Fb is configured for PMIO or Series C I/O, initial-sync requires explicit communication with the partner I/O Link interface across the I/O Link network. This reason indicates that the primary established communication with the wrong partner interface across the IOL. More specifically, the partner interface is the wrong link number (e.g. primary Link 1 connected to secondary Link 2) and/or the partner interface on the IOL communication network belongs to a controller other than the secondary controller in this redundant pair. Make sure that the primary and secondary are connected to the same I/O Link Network.
Link2PartnerMismatch	(86)	SYNC: Link 2 Partner Mismatch. When an I/O Link Fb is configured for PMIO or Series C I/O, initial-sync requires explicit communication with the partner I/O Link interface across the I/O Link network. This reason indicates that the primary established communication with the wrong partner interface across the IOL. More specifically, the partner interface is the wrong link number (e.g. primary Link 2 connected to secondary Link 1) and/or the partner interface on the IOL communication network belongs to a controller other than the secondary controller in this redundant pair. Make sure that the primary and secondary are connected to the same I/O Link Network.
StateUnexpected	(87)	SYNC: Unexpected State in State Machine. Loss-of-sync occurred due to internal redundancy state machine unexpected transition.

InitialSyncDelay	(88)	SYNC: Anti thrash delay in between initial sync attempts. There is a guaranteed 30 second delay in between initial-sync attempts. More specifically, for 30 seconds after a compatible partner is identified, initial-sync is inhibited with this transient reason.
InitialSyncFail	(89)	SYNC: Multiple consequtive initial sync failures After 3 failed attempts to perform initial-sync, the Auto Sync State is automatically set to disabled and the inhibit sync reason is set to this persistent value. Refer to the redundancy history for the reasons why initial-sync failed, and issue the Enable Sync command to attempt initial-sync again after correcting the abort-sync reason.
DroppingSync	(90)	SYNC: Drop-synchronization in progress. Initial-sync cannot commence until the previous abort sync operation has been completed. This is a transient inhibit sync reason that is usually not seen.
CclBinaryLoad	(91)	SYNC: Synchronization cannot be maintained during CCL Binary load.
CeeLoadOrDelete	(92)	SYNC: Synchronization cannot be maintained during the database initialization that occurs upon CEE FB load or delete.
UnsupportedHardwareVersion	(93)	SYNC: Unsupported controller HW version. Initial-sync is inhibited for controller hardware version that does not support controller redundancy.
BothRunningInBootFirmware	(94)	CMPT: Both running in boot firmware. Initial-sync is only possible when both partners of a redundant pair are running in application firmware.
ThisRunningInBootFirmware	(95)	CMPT: This module running in boot firmware. Initial-sync is only possible when both partners of a redundant pair are running in application firmware.
RedundancyCommOutOfBuffersError	(96)	SYNC: Redundancy communication out-of-buffers error
RedundancyCommTransmitError	(97)	SYNC: Redundancy communication transmit error.
RedundancyCommReceiveError	(98)	SYNC: Redundancy communication receive error.
RedundancyCommDeviceReset	(99)	SYNC: Redundancy communication device reset.
RedundancyCommBadBufferIndex	(100)	SYNC: Redundancy communication bad buffer index.
BecomePrimaryCommand	(101)	ROLE: Become Primary command.
LowerSerialNumber	(102)	ROLE: The redundancy subsystem performs dual role correction upon re-establishing partner communication after both modules have committed to an

		initial-role-determination result. This reason indicates that the Device index pair is not well formed and the Become Primary decision was won due to lower serial number.
HigherSerialNumber	(103)	ROLE: The redundancy subsystem performs dual role correction upon re-establishing partner communication after both modules have committed to an initial-role-determination result. This reason indicates that the Device index pair is not well formed and the Become Secondary decision was won due to higher serial number.
BetterControlAbility	(104)	ROLE: The redundancy subsystem performs dual role correction upon re-establishing partner communication after both modules have committed to an initial-role-determination result. This reason indicates that the Become Primary decision was won due to better control ability.
WorseControlAbility	(105)	ROLE: The redundancy subsystem performs dual role correction upon re-establishing partner communication after both modules have committed to an initial-role-determination result. This reason indicates that the Become Secondary decision was won due to worse control ability.
PartnerFaultDetected	(106)	SYNC: Partner Fault Detected. The partner module was rebooted and/or powered off.
Link1LoadState	(107)	SYNC: Link 1 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link2LoadState	(108)	SYNC: Link 2 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link3LoadState	(109)	SYNC: Link 3 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link4LoadState	(110)	SYNC: Link 4 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This

		persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link5LoadState	(111)	SYNC: Link 5 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link6LoadState	(112)	SYNC: Link 6 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link7LoadState	(113)	SYNC: Link 7 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link8LoadState	(114)	SYNC: Link 8 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
UnexpectedPdTagSetOnLink	(115)	SYNC: Unexpected set PD_TAG on link.
UnexpectedPdTagClearOnLink	(116)	SYNC: Unexpected clear PD_TAG on link.
UnexpectedNodeAddrSetOnLink	(117)	SYNC: Unexpected set node address on link.
UnexpectedNodeAddrClearOnLink	(118)	SYNC: Unexpected clear node address on link.
DupeNodeAddrDetectedOnLink	(119)	SYNC: Duplicate node address detected on link.
UnknownSmEventIndicationOnLink	(120)	SYNC: Unknown SM event indication on link.
OnProcessMigrationDSDThrottling	(121)	SYNC: Secondary cannot commit DSD fast enough
RedundancyCommBufferOverflow	(122)	SYNC: Communication buffer overflow
RedundancyDataOverrun	(123)	SYNC: Redundancy data overrun
RedundancyResourceLocked	(124)	SYNC: Resource Locked
OpenIoConnectionsTimeout	(125)	SYNC: I/O connections open timeout
RedundancyModuleRemoval	(126)	SYNC: RM connection timed-out as if removed

OpenSyncDataConnectionError	(127)	SYNC: Sync connection open error
OpenTrackDataConnectionError	(128)	SYNC: Track connection open error
InitialSyncTimeout	(129)	SYNC: Initial-sync timed out
EnableStandbyCommand	(130)	SYNC: User commanded Enable Standby.
BadAddressOnLink1	(131)	SYNC: Incorrect address on link 1.
BadAddressOnLink2	(132)	SYNC: Incorrect address on link 2.
BadAddressOnLink3	(133)	SYNC: Incorrect address on link 3.
BadAddressOnLink4	(134)	SYNC: Incorrect address on link 4.
BadAddressOnLink5	(135)	SYNC: Incorrect address on link 5.
BadAddressOnLink6	(136)	SYNC: Incorrect address on link 6.
BadAddressOnLink7	(137)	SYNC: Incorrect address on link 7.
BadAddressOnLink8	(138)	SYNC: Incorrect address on link 8.
FTEB_IoManager	(139)	SYNC: FTEB IO Manager.
Link1PartnerNotLoaded	(140)	SYNC: Link 1 Partner Not Loaded.
Link2PartnerNotLoaded	(141)	SYNC: Link 2 Partner Not Loaded.
Link1IoLinkLonely	(142)	ROLE: Link 1 IOLINK Lonely. The primary C300/IOLIM triggers switchover when the IOLINK Type for this I/O Link has a value other than NONE, there was at least one configured IOM previously communicating on the I/O Link, and there is no response from any configured IOM nor the partner's IOL interface. This switchover trigger is a dual fault that cannot be detected until after some control has been back-initialized with failsafe data. Although this dual fault affects control, switchover provides automatic recovery that doesn't require the operator to diagnose how to deal with a primary that has complete loss of IOM view.
Link2IoLinkLonely	(143)	ROLE: Link 2 IOLINK Lonely. The primary C300 triggers switchover when the IOLINK Type for this I/O Link has a value other than NONE, there was at least one configured IOM previously communicating on the I/O Link, and there is no response from any configured IOM nor the partner's IOL interface. This switchover trigger is a dual fault that

			cannot be detected until after some control has been back-initialized with failsafe data. Although this dual fault affects control, switchover provides automatic recovery that doesn't require the operator to diagnose how to deal with a primary that has complete loss of IOM view.
	Link2IolLoopbackError	(144)	ROLE: Link 2 IOL Loopback Error. The IOL processor has detected that it cannot see what it has transmitted onto the wire. This is a switchover trigger because it may represent a fault in the IOL communication electronics. Bad IOL wiring and/or rogue IOL device communications also could cause Loopback Error.
	Link2NvsCommands	(145)	SYNC: Link 2 Flash operations. Synchronization is aborted and/or initial-sync is inhibited during the database initialization that occurs upon I/O Link FB commanded NVS compaction.

Default – – –

Config Load No

Access Lock View Only

Residence C300, FIM4

Related Parameters RDNHISTSTATE [1...15], RDNHISTTIME [1...15], RDNINHIBITSYNC

Remarks

RDNHISTSTATE [1...15]

Specific to Block(s) Primary/Secondary C300 and FIM4 FBs

Description Redundancy History State - Indicates the last 16 milestones within redundancy related activities.

Refer to the corresponding RDNHISTREASON entry for additional information (when applicable).

Data Type Enumeration

Range

– – –	(0)	N/A history state null entry.
Startup	(1)	Module released from reset.
NonRedun	(2)	Module configured as non-redundant.
Primary	(3)	Module transitioned into the Primary redundancy role. Refer to the associated RDNHISTREASON for the reason why.
Secondary	(4)	Module transitioned into the

		Secondary redundancy role. Refer to the associated RDNHISTREASON for the reason why.
NoPartner	(5)	Partner absent synchronization state. This module is not communicating with a redundant partner This could be due to a fault in the redundancy private path, a fault in the redundancy communication electronics, or simply because the partner is powered off.
Incompatible	(6)	Incompatible synchronization state. This module is communicating with a partner across the redundancy private path, but that partner is incompatible. Refer to the associated RDNHISTREASON for the reason why.
PartnerVisble	(7)	Partner visible synchronization state. This module is communicating with a compatible redundancy partner.
SyncInProgress	(8)	Synchronization in progress synchronization state. This module is performing initial transfer of redundancy data from the primary to the secondary. Redundancy role change is not possible in this state.c Initial synchronization takes on the order of 90 seconds for the C200, 180 seconds for the C300, and less than a minut for other redundant controller types.
SyncMaintenance	(9)	Synchronized synchronization state. This redundant pair has completed initial synchronization and is performing continuous synchronization maintenance. Redundancy role change is allowed in this state.
Standby	(10)	Standby synchronization state. The purpose of the Standby mode of operation is to improve the software upgrade scenario by providing the user with a convenient means to fallback to a previous software and database, if problems are encountered during upgrade. While in the Standby State, the secondary controller has a database that was previously synchronized with the primary controller but the secondary is no longer receiving synchronization-data updates from the primary controller. Moreover, a Standby Secondary controller is able to switchover into the primary

		role with this stale database. There is no time limit to the time duration of the Standby mode of operation, and as a consequence of the secondary not being synchronized, switchover to the secondary may cause a bump in outputs. To ensure operator intervention, the C300 CEE execution state is forced to Idle on switchover out of the Standby State.
AutoSyncDsbled	(11)	Auto synchronization disabled. Refer to the associated RDNHISTREASON for the reason why.
AutoSyncEnbled	(12)	Auto synchronization enabled. This transition only occurs on the receipt of the Enable Sycnhronization command.
AlternateSyncCommand	(13)	Module received the Alternate Synchronization Command. When the primary redundancy electronics are faulted, this is used to perform one-time initial-sync over FTE (instead of the redundancy private path) followed by immediate switchover.
BecomePrimaryCommand	(14)	Module received the Become Primary command. This commands an unsynchronized secondary module to transition into the primary role in the absence of a partner module. More specifically, this command is only applicable if the unsynchronized secondary has no view to a partner module across the redundancy cable and the primary IP address is not occupied.
DisableSyncCommand	(15)	Module received the Disable Sync Command. This is used to drop synchronization for a module in the syncing/syncd/standby state and prevent future initial-sync attempts by disabiling Auto-Sync.
EnableSyncCommand	(16)	Module received the Enable Sync Command. This transitions the Auto-Sync state to Enabled, resets the initial-sync failure count (to allow maximum of 3 trys), and triggers initial-sync.
EnableStandbyCommand	(17)	Module received the Enable Standby Command. This commands a redundant controller pair in the Synchronization Maintenance State to switchover into the Standby State. While in the Standby State, the secondary controller has a database that was

			previously synchronized with the primary controller but the secondary is no longer receiving synchronization-data updates from the primary controller. This command is useful for testing the expected behavior of a configured control strategy if the redundant controller pair ever had to invoke the Go-Back option during a controller On-Process Migration. More specifically, after entering the Standby State, issue the switchover command, and the controller with the stale database switches into the primary role with the CEE execution state set to Idle. The Disable Synchronization command exits the Standby State.
		SyncAbort	(18)	Encountered loss-of-sync condition. Refer to the associated RDNHISTREASON for the reason why.
		RoleChange	(19)	Redundancy Role Change occurred. Refer to the associated RDNHISTREASON for the reason why.
		InitialSyncFail	(20)	Once the Auto Sync State is enabled, loss of synchronization is automatically followed by an automatic attempt to re-synchronize the redundant controller pair. However, after a maximum of 3 initial-sync failures, the Auto Sync State is disabled with an inhibit sync reason of Initial Sync Fail. Once initial-sync is inhibited due to “Initial Sync fail”, the Enable Synchronization command must be used to retry initial-sync (after the problem preventing initial-sync has been resolved).
		AbortSync	(21)	Encountered loss-of-sync condition. Refer to the associated RDNHISTREASON for the reason why.
		AllowSync	(22)	Indicates negation of an inhibit sync reason. Refer to the associated RDNHISTREASON for the specific inhibit sync reason.
		InhibitSync	(23)	Indicates assertion of an inhibit sync reason. Refer to the associated RDNHISTREASON for the specific inhibit sync reason.
		ControllabilityBetter	(24)	This module is better able to control. Refer to the associated RDNHISTREASON for the reason why. For example, when this

		module has view to FTE but partner does not.
ControllabilityEqual	(25)	Both modules of a redundant pair are equally able to control.
ControllabilityWorse	(26)	This module is worse able to control. Refer to the associated RDNHISTREASON for the reason why. For example, when this module does not have view to FTE but partner does.
OpmSessionEnabled	(27)	The Controller Migration Wizard has commenced a controller On-Process Migration session.
OpmBlocksCreated	(28)	As part of an OPM session, the Migration Wizard completed Secondary Checkpoint Restore to instantiate the control strategy on the secondary controller.
OpmInitialSync	(29)	Controller Migration Wizard commanded the controller to commence initial-sync as part of an OPM session.
OpmOpenIoConnections	(30)	The primary controller has commenced transfer of I/O connection related data as part of initial-sync during an OPM session.
OpmMatchPeerReferences	(31)	The primary controller has commenced transfer of CDA Peer Cross-Reference ID data as part of initial-sync during an OPM session.
OpmTransferData	(32)	The primary controller has commenced transfer of Block Dynamic Data as part of initial-sync during an OPM session. From this point forward, control is frozen on the primary controller for up to 10/20 seconds on the C200/C300 platform (depending on the size of the control strategy). Control is resumed either following the switchover (upon completing OPM initial-sync) or on abnormal termination of the OPM session.
OpmSessionSuccess	(33)	Upon the successful completion of OPM initial-sync, switchover follows shortly after (e.g. <100 ms). This represents successful completion of the controller OPM session.
OpmSessionFailure	(34)	OPM session terminated due to failure. Refer to the associated RDNHISTREASON for the reason why.
RedundancyCommunicationError	(35)	Redundancy Communication Error. Refer to the associated RDNHISTREASON for the reason why.

	BecomePrimaryDecision	(36)	When redundancy communication is established after both modules are committed to the same redundancy role, the redundancy subsystem trys to correct dual-role situations. This module has won primaryship in a dual primary situation. Refer to the associated RDNHISTREASON for the reason why.
	BecomeSecondaryDecision	(37)	When redundancy communication is established after both modules are committed to the same redundancy role, the redundancy subsystem trys to correct dual-role situations. This module has won secondaryship in a dual secondary situation. Refer to the associated RDNHISTREASON for the reason why.
	SwitchoverTrigger	(38)	Redundancy role change has been requested. Refer to the associated RDNHISTREASON for the reason why.
	OpmPartialColdInit	(39)	In the event that one or more blocks have not yet implemented OPM support, the default behavior is to cold initialize that block. This indicates that one or more blocks have been cold initialized. This represents successful completion of the controller OPM session.
Default	– – – (0)		
Config Load	No		
Access Lock	View Only		
Residence	Controller		
Related Parameters	RDNDEVICEIDX RDNHISTREASON [1...15] RDNHISTTIME [1...15]		
Remarks			

RDNINHIBITSYNC

Specific to Block(s) Primary/Secondary Platform Blocks for C200, C300, FTEB, FIM, FIM4, IOLIM, LIOM

Description Redundancy Inhibit Synchronization - Indicates the current reason why initial sync is inhibited. In the case of the C300/FIM4, this parameter is non-null when the redundant controller pair are not synchronizing/synchronized/standby. For the other controller types (C200, FIM, FTEB, IOLIM, and LIOM), this parameter is only non-null when any one of the modules has explicit reason to inhibit sync.

Data Type Enumeration

Range

– – –	(0)	N/A because controller is synchronizing or synchronized.
PartnerRequest	(34)	ROLE/SYNC: Partner Requested operation. The redundant partner has either requested initial-sync to be inhibited/aborted or for role change. Refer to the partner's redundancy history parameter for the actual reason.
PartnerAbsent	(37)	SYNC: Partner module absent. Initial-sync is not applicable without a redundant partner.
PartnerNotCompatible	(38)	SYNC: Partner module not compatible. Initial-sync is not applicable with an incompatible redundant partner.
AutoSyncState	(54)	SYNC: Auto Sync state is disabled. Initial sync is inhibited while the Auto Sync State is set to disabled. This is a persistent inhibit sync reason that is canceled via the Enable Sync command.
FteCableStatus	(62)	SYNC: FTE cable status. Indicates that either both FTE cables have been disconnected (i.e. FTE lonely) or at least one FTE cable has been reconnected. The primary triggers switchover due to dual-FTE-cable disconnect. The secondary inhibits sync due to dual-FTE-cable disconnect. This persistent inhibit sync reason can only be canceled by restoring FTE communications with the secondary.
Link1NvsCommands	(63)	SYNC: Link 1 Flash operations. Synchronization is aborted and/or initial-sync is inhibited during the database initialization that occurs upon I/O Link FB commanded NVS compaction.
OpmRequired	(64)	SYNC: Controller OPM required but not yet enabled. Initial-sync is not allowed when the application firmware versions for the primary and secondary controllers are different (for those

		platforms sensitive to difference in firmware versions i.e. C200/C300). The Controller Migration Wizard must be used to perform On-Process Migration.
StartupInProgress	(78)	SYNC: Platform startup in progress. Initial sync is not allowed until after the C300/FIM4 has completed system startup. This is a transient inhibit sync reason that is usually not seen.
PlatformFunctionBlockLoadState	(79)	SYNC: Platform FB load state. Initial-sync is not allowed until after the Platform FB has been loaded to the controller.
RedundancyConfigurationState	(80)	SYNC: Platform configured as non-redundant. Initial-sync is not allowed when explicitly configured as non-redundant. This persistent inhibit sync reason can only be canceled by reconfiguring the non-redundant C300/FIM4 FB as redundant.
InitialSyncDelay	(88)	SYNC: Anti thrash delay in between initial sync attempts. There is a guaranteed 30 second delay in between initial-sync attempts. More specifically, for 30 seconds after a compatible partner is identified, initial-sync is inhibited with this transient reason.
InitialSyncFail	(89)	SYNC: Multiple consequtive initial sync failures After 3 failed attempts to perform initial-sync, the Auto Sync State is automatically set to disabled and the inhibit sync reason is set to this persistent value. Refer to the redundancy history for the reasons why initial-sync failed, and issue the Enable Sync command to attempt initial-sync again after correcting the abort-sync reason.
DroppingSync	(90)	SYNC: Drop-synchronization in progress. Initial-sync cannot commence until the previous abort sync operation has been completed. This is a transient inhibit sync reason that is usually not seen.
CeeLoadOrDelete	(92)	SYNC: Synchronization cannot be maintained during the database initialization that occurs upon CEE FB load or delete. This is a transient inhibit sync reason that is usually not seen.
UnsupportedHardwareVersion	(93)	SYNC: Unsupported controller HW version. Initial-sync is inhibited for controller hardware version that does not support controller redundancy.
Link1LoadState	(107)	SYNC: Link 1 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This

		persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link2LoadState	(108)	SYNC: Link 2 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link3LoadState	(109)	SYNC: Link 3 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link4LoadState	(110)	SYNC: Link 4 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link5LoadState	(111)	SYNC: Link 5 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link6LoadState	(112)	SYNC: Link 6 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link7LoadState	(113)	SYNC: Link 7 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link8LoadState	(114)	SYNC: Link 8 load has not completed/occured. Initial-sync is not allowed to commence until after all link function blocks have been loaded. This persistent inhibit sync reason is negated upon load of the link function block to the controller.
Link2NvsCommands	(145)	SYNC: Link 2 Flash operations. Synchronization is aborted and/or initial-sync is inhibited during the database initialization that occurs upon I/O Link FB commanded NVS compaction.

Default	_ _ _
Config Load	No
Access Lock	View Only
Residence	Controller
Related Parameters	ALTSYNCCMD, DSBLSYNCCMD, ENBLSYNCCMD
Remarks	

RDNHISTTIME [1...15]

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Time – Indicates wall clock time of redundancy history state change.
Data Type	TIME
Range	N/A
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	RDNDEVICEIDX RDNHISTREASON [1...15], RDNHISTSTATE [1...15]
Remarks	

RDNISTIMEMAX

Specific to Block(s)	Primary/Secondary Platform Blocks for C200, C300, FTEB, FIM, FIM4, IOLIM, LIOM
Description	Max Initial Sync Time - Indicates the maximum initial synchronization time in seconds. This is a high-water mark for all the previous successfully completed initial-sync attempts.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	Controller
Related Parameters	STATSRESET
Remarks	This parameter is reset upon issuing the platform block's

	Stats Reset command.

RDNLINKFAILED

Specific to Block(s)	Primary/Secondary Platform Blocks for C300 and FIM4		
Description	Redundancy Link Failed – Indicates the status of the redundancy private path between redundant partners.		
Data Type	Boolean		
Range	Off	0	Either {1} the redundancy private path is connected to a powered partner module or {2} this module is configured as non-redundant.
	On	1	This module is configured as redundant, and either its redundancy private path is broken (e.g. cable disconnect) or the partner module is not able to respond.
Default	Off (0)		
Config Load	No		
Access Lock	View Only		
Residence	Controller		
Related Parameters			
Remarks	The RDNLINKFAILED parameter is set ON when the redundancy private path is disconnected and/or partner is not running. Once the redundancy private path cable is reconnected to a running partner, the RDNLINKFAILED parameter is set OFF. Note that this parameter reflects the physical status of the cable (i.e. connected versus disconnected) and in no way indicates if the redundancy private path cable is connected to a compatible partner. The “Redundancy Link Inactive” and “Redundancy Link Active” notifications are generated when the RDNLINKFAILED parameter is set ON and OFF, respectively.		

RDNLOS

Specific to Block(s)	IOLIM, FIM, CPM, FTEB	
Description	Redundancy Loss of Synchronization	
Data Type	Enumeration	
Range	None (0)	No loss-of-sync condition asserted.

ClnPointBuff (1)	Encountered a communication buffer overflow condition while performing clean-point processing. Logged as LOS_CLNPT_BUFF_OVERFLOW within the RM event log.
ClnPointFifo (2)	Encountered a tracker FIFO overflow condition while performing clean-point processing. Logged as LOS_CLNPT_FIFO_OVERFLOW within the RM event log.
ClnPointTmo (3)	Encountered a timeout condition while performing clean-point processing. Logged as LOS_CLNPT_IDLE_TIMEOUT within the RM event log.
ClnPointRx (4)	Encountered a track-data connection receipt error while performing clean-point processing. Logged as LOS_CLNPT_RX_FAILURE within the RM event log.
ClnPointTx (5)	Encountered a track-data connection transmission error while performing clean-point processing. Logged as LOS_CLNPT_TX_FAILURE within the RM event log.
ConfigLdBusy (6)	Temporary loss-of-sync occurrence due to either {1} Primary CPM FB create and/or delete or {2} first time CCL load. Logged as LOS_CPM_CONFIG_LOAD within the RM event log.
ConfigLdDone (7)	Not a loss-of-sync condition; this event used to trigger initial sync upon completion of the action that incurred the ConfigLdBusy RDNLOS State. Logged as SYN_CPM_CONFIG_LOAD within the RM event log.
CrossLoadErr (8)	Logged as LOS_CROSSLOAD_ERROR within the RM event log.
ResrcLocked (9)	Logged as LOS_EDIT_RESOURCE_LOCKED within the RM event log.

ExecSyncTmo (10)	Logged as LOS_EXEC_SYNC_TIMEOUT within the RM event log.
IoPurgeBusy (11)	Logged as LOS_IOMGR_PURGE within the RM event log.
MemIsrBuff (12)	Encountered a communication buffer overflow condition while servicing a memory-board interrupt. Logged as LOS_ISR_BUFF_OVERFLOW within the RM event log.
MemIsrFifo (13)	Encountered a tracker FIFO overflow condition while servicing a memory-board interrupt. Logged as LOS_ISR_FIFO_OVERFLOW within the RM event log.
MemIsrRx (14)	Encountered a track-data connection receipt error while servicing a memory-board interrupt. Logged as LOS_ISR_RX_FAILURE within the RM event log.
MemIsrTx (15)	Encountered a track-data connection transmission error while servicing a memory-board interrupt. Logged as LOS_ISR_TX_FAILURE within the RM event log.
KeepAlvBuff (16)	Encountered a communication buffer overflow condition while performing a Keep Alive transmission. Logged as LOS_KPALV_BUFF_OVERFLOW within the RM event log.
KeepAlvFifo (17)	Encountered a tracker FIFO overflow condition while performing a Keep Alive transmission. Logged as LOS_KPALV_FIFO_OVERFLOW within the RM event log.

KeepAlvRx (18)	Encountered a track-data connection receipt error while performing a Keep Alive transmission. Logged as LOS_KPALV_RX_FAILURE within the RM event log.
KeepAlvTx (19)	Encountered a track-data connection transmission error while performing a Keep Alive transmission. Logged as LOS_KPALV_TX_FAILURE within the RM event log.
PartnAbsent (20)	Logged as LOS_PARTNER_ABSENT within the RM event log.
PartnNotCmpt (21)	Logged as LOS_PARTNER_INCOMPATIBLE within the RM event log.
PartnStartup (22)	Logged as LOS_PARTNER_STARTUP within the RM event log.
BlkMoveBuff (23)	Encountered a communication buffer overflow condition while packaging Redundancy Data for transfer to the secondary. Logged as LOS_MOVE_BUFF_OVERFLOW within the RM event log.
BlkMoveFifo (24)	Encountered a tracker FIFO overflow condition while packaging Redundancy Data for transfer to the secondary. Logged as LOS_MOVE_FIFO_OVERFLOW within the RM event log.
BlkMoveRx (25)	Encountered a track-data connection receipt error while packaging Redundancy Data for transfer to the secondary. Logged as LOS_MOVE_RX_FAILURE within the RM event log.

BlkMoveTx (26)	Encountered a track-data connection transmission error while packaging Redundancy Data for transfer to the secondary. Logged as LOS_MOVE_TX_FAILURE within the RM event log.
RmConnTmo (27)	Logged as LOS_RM_CONNECTION_TIMEOUT within the RM event log.
SyncIdleTmo (28)	Logged as LOS_SD_IDLE_TIMEOUT within the RM event log.
ClnPointSeq (29)	Logged as LOS_SEC_CLNPT_SEQ_ERROR within the RM event log.
SyncSeqError (30)	Logged as LOS_SEC_SD_SEQ_ERROR within the RM event log.
AccFormat (31)	Logged as LOS_SEC_TD_ACC_FORMAT within the RM event log.
AccOverrun (32)	Logged as LOS_SEC_TD_ACC_OVERRUN within the RM event log.
CommitFormat (33)	Logged as LOS_SEC_TD_COMMIT_FORMAT within the RM event log.
TrkSeqError (34)	Logged as LOS_SEC_TD_SEQ_ERROR within the RM event log.
UnpackFormat (35)	Logged as LOS_SEC_TD_UNPACK_FORMAT within the RM event log.
SwitchovrTst (36)	Logged as LOS_SWITCHOVER_TEST within the RM event log.
SyncCksumErr (37)	Logged as LOS_SYNC_CHECKSUM_FAIL within the RM event log.
PriSyncHwErr (38)	Logged as LOS_SYNC_HW_FAILURE_PRI within the RM event log.

SecSyncHwErr (39)	Logged as LOS_SYNC_HW_FAILURE_SEC within the RM event log.
TrkBuffTmo (40)	Logged as LOS_TD_BUFFER_TIMEOUT within the RM event log.
TrkPndRxFail (41)	Logged as LOS_TD_PNDING_RX_FAILURE within the RM event log.
TrkPndTxFail (42)	Logged as LOS_TD_PNDING_TX_FAILURE within the RM event log.
IoPurgeDone (43)	Not a loss-of-sync condition; this event used to trigger initial sync upon completion of the action that incurred the IoPurgeBusy RDNLOS State. Logged as SYN_IOMGR_PURGE_COMPLETE within the RM event log.
PartnStarted (44)	Not a loss-of-sync condition; this event used to trigger initial sync upon completion of the action that incurred the PartnStartup RDNLOS State. Logged as SYN_PARTNER_STARTUP within the RM event log.
PseudoDbWr (45)	Logged as DBG_PSEUDO_DATABASE_WRITES within the RM event log.
SyncConnOpen (46)	Logged as LOS_SD_CONN_OPEN_FAILURE within the RM event log.
SyncConnRx (47)	Logged as LOS_SD_CONN_RX_FAILURE within the RM event log.
SyncConnTx (48)	Logged as LOS_SD_CONN_TX_FAILURE within the RM event log.
TrkConnOpen (49)	Logged as LOS_TD_CONN_OPEN_FAILURE within the RM event log.

TrkConnRx (50)	Logged as LOS_TD_CONN_RX_FAILURE within the RM event log.
SecCommitTmo (51)	Logged as LOS_CLNPT_COMMIT_TIMEOUT within the RM event log.
ResrcClrBusy (52)	Logged as LOS_EDIT_RSRC_CLR_INPROG within the RM event log.
ResrcClrDone (53)	Not a loss-of-sync condition; this event used to trigger initial sync upon completion of the action that incurred the ResrcClrBusy RDNLOS State. Logged as SYN_EDIT_RSRC_CLR_DONE within the RM event log.
SecUnknown (54)	Logged as LOS_UNKNOWN_SECONDARY within the RM event log.
CombufAlloc (55)	Logged as LOS_COMBUF_ALLOC within the RM event log.
QueueSyncData (56)	Logged as LOS_QUEUE_SYNC_DATA within the RM event log.
InitSyncTmo (57)	Logged as LOS_INITIAL_SYNC_TIMEOUT within the RM event log.
PriAppAbort (58)	Logged as LOS_PRIMARY_APP_ABORT within the RM event log.
SecAppAbort (59)	Logged as LOS_SECONDARY_APP_ABORT within the RM event log.
PriAppError (60)	Logged as LOS_PRIMARY_APP_ERROR within the RM event log.
SecAppError (61)	Logged as LOS_SECONDARY_APP_ERROR within the RM event log.
PriAppBusy (62)	Logged as LOS_PRIMARY_APP_BUSY within the RM event log.

PriAppDone (63)	Not a loss-of-sync condition; this event used to trigger initial sync upon completion of the action that incurred the PriAppBusy RDNLOS State. Logged as SYN_PRIMARY_APP_DONE within the RM event log.
SecAppBusy (64)	Logged as LOS_SECONDARY_APP_BUSY within the RM event log.
SecAppDone (65)	Not a loss-of-sync condition; this event used to trigger initial sync upon completion of the action that incurred the SecAppBusy RDNLOS State. Logged as SYN_SECONDARY_APP_DONE within the RM event log.
PriUnknown (66)	Logged as LOS_UNKNOWN_PRIMARY within the RM event log.
IndSyncDis (67)	Logged as LOS_INDIRSYNC_DISABLED within the RM event log.
IndSyncEnb (68)	Logged as LOS_INDIRSYNC_ENABLED within the RM event log.
IndSyncWait (69)	Logged as LOS_INDIRSYNC_CMD_WAIT within the RM event log.
IndSyncXfer (70)	Not a loss-of-sync condition; this event used to trigger initial sync upon completion of the action that incurred the IndSyncWait RDNLOS State. Logged as SYN_INDIRSYNC_TRANSFER within the RM event log.
SecSnapTmo (71)	Logged as LOS_SEC_SNAPSHOT_TIMEOUT within the RM event log.
IndSyncAbort (72)	Logged as LOS_INDIRSYNC_ABORTED within the RM event log.

	IndSyncFail (73)	Logged as LOS_INDIRSYNC_FAILED within the RM event log.
	IndSyncTmo (74)	Logged as LOS_INDIRSYNC_TIMEOUT within the RM event log.
Default	None (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLIM, FIM, C200	
Related Parameters		
Remarks		

RDNOPMFRZTIME

Specific to Block(s)	Primary/Secondary Platform Blocks for C200, C300, LIOM
Description	OPM Freeze Ctrl Time (msec) - indicates the duration that control was frozen during controller On-Process Migration transfer of dynamic data. Controller OPM aborts due to session timeout after a maximum of 10 seconds for the C200 and LIOM or 20 seconds for the C300.
Data Type	UNIT32
Range	>= 0
Default	0
Config Load	No
Access Lock	View Only
Residence	Controller
Related Parameters	STATSRESET
Remarks	

RDNOPMSTATUS

Specific to Block(s)	Primary Platform Blocks for C200, C300, LIOM		
Description	OPM Status - This parameter is used by the Controller Migration Wizard to detect controller OPM session abnormal termination.		
Data Type	Enumeration		
Range	– – –	(0)	Controller OPM Disabled.
	Enabled	(1)	STEP: Controller Migration Wizard starts a controller On-Process Migration

		session.
BlocksCreated	(2)	STEP: Secondary OPM checkpoint restore to instantiate the control strategy on the secondary controller is complete.
InitialSync	(3)	STEP: Controller Migration Wizard commands the controller to commence OPM initial-sync.
OpenIoConns	(4)	STEP: Begin OPM transfer of I/O connection related data.
MatchPeerRefs	(5)	STEP: Begin OPM transfer of peer cross-reference ID data.
TransferData	(6)	STEP: Begin OPM transfer of dynamic data. From this point forward, control is frozen on the primary controller for up to 10 seconds for the C200 or 20 seconds for the C300 (depending on the size of the control strategy). Control is resumed following either the switchover (upon completing OPM initial-sync) or on abnormal termination of the OPM session.
SessionComplete	(7)	STEP: This indicates successful completion of the controller OPM session.
PartialColdInit	(8)	WARN: Successful completion of the controller OPM session but one or more blocks have been cold initialized. The default behavior when one or more blocks have not yet implemented OPM support is to cold initialize the block(s).
CommandedAbort	(9)	FAIL: Controller Migration Wizard commands the controller to abort the current OPM session. This represents unsuccessful OPM session termination.
CreateBlockTimeout	(10)	FAIL: Timeout of OPM secondary checkpoint restore operation. Secondary checkpoint restore timeout occurs if checkpoint data is stalled for longer than 2 minutes. This represents abnormal OPM session termination.
InitialSyncTimeout	(11)	FAIL: Initial sync does not commence within 2 minutes following the receipt of the Controller Migration Wizard command to commence initial-sync. This represents abnormal OPM session termination.
IoConnsTimeout	(12)	FAIL: Indicates a loss-of-sync occurrence while waiting for the secondary controller to form at least the same number of I/O connections as the primary controller (as part of initial-sync during an OPM session). The secondary controller block's LASTOPMNAME parameter is blank. This represents abnormal OPM session termination. This only applies to C200 controllers because it forms connections directly with

			the Series A I/O. As with the C300, connections are formed between the FTEB and Series A I/O.
	IoDataFailure	(13)	FAIL: Indicates a loss-of-sync occurrence while transferring I/O connection data (as part of initial-sync during an OPM session). Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is the inability of the secondary controller to interpret the I/O connection data format. The secondary controller block's LASTOPMNAME parameter is blank in this case. This represents abnormal OPM session termination. Note that this applies to both C200 and C300 controllers because they both transfer Series A I/O Connection data during OPM initial-sync.
	PeerRefsMismatch	(14)	FAIL: Indicates a loss-of-sync occurrence while transferring peer cross-reference ID data (as part of initial-sync during an OPM session). Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is the presence of a ghost peer connection reference. A ghost peer connection reference exists if the primary controller has knowledge of a peer connection ID that was not instantiated in the secondary controller during OPM secondary checkpoint restore. The secondary controller block's LASTOPMNAME parameter is blank. This represents abnormal OPM session termination.
	PeerRefsFailure	(15)	FAIL: Indicates a loss-of-sync occurrence while transferring peer dynamic data. Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is the inability of the secondary controller to interpret the peer dynamic data format. The secondary controller block's LASTOPMNAME parameter is blank in this case. This represents abnormal OPM session termination.
	BlockDataFailure	(16)	FAIL: Indicates a loss-of-sync occurrence while transferring Block Dynamic Data. This notification represents abnormal OPM session termination. Although any loss-of-sync triggers this behavior, the most probable loss-of-sync cause is either the inability of the secondary controller to interpret the Block Dynamic Data format or the secondary controller has no destination block to receive the Dynamic Data. The latter is possible in the presence of a ghost block; a ghost block exists if the primary controller has knowledge of a block that

			was not instantiated in the Secondary controller during OPM Secondary Checkpoint Restore. The Secondary Platform FB's LASTOPMNAME parameter indicates the name of the last block to be (on-process) migrated; the LASTOPMNAME is used to isolate the name of the first CEE subordinate block that has detected a dynamic state data error. In the special case of a ghost block, the LASTOPMNAME is either blank (because the ghost block name no longer exists in the ERDB) or indicates the name of a block that is not loaded to the controller (i.e. only exists on the Control Builder project tree).
•	SessionTimeout	(17)	FAIL: The redundancy subsystem aborts controller OPM if control is frozen (during the one-time OPM initial-sync transfer of Dynamic Data) longer than the maximum specified time (i.e. 10 seconds for C200 and 20 seconds for C300).

Default	_ _ _
Config Load	No
Access Lock	View Only
Residence	C200, C300
Related Parameters	
Remarks	The primary controller updates RDNOPMSTATUS with an enumeration representing the OPMSTEP/OPMWARN/OPMFAIL notifications generated during an on-process migration session.

RDNROLESTATE

Specific to Block(s)	Primary/Secondary C200, C300, FIM4, IOLIM, EHG, LIOM, FTEB and FIM FBs	
Description	Redundancy Role - Indicates whether the module is operating as a Primary, Secondary, or logically Non-Redundant.	
Data Type	Enumeration	
Range	Undefined (0)	Initial redundancy role not yet determined.
	NonRedun (1)	Module configured as non-redundant.
	Primary (2)	Primary redundancy role.
	Secondary (3)	Secondary redundancy role.
Default	Undefined	
Config Load	No	
Access Lock	View Only	
Residence	C300, C200, C300, FIM4, IOLIM, EHG, LIOM, FTEB, FIM	
Related Parameters	RDNSYNCSTATE	
Remarks	When module is configured as redundant, primary always reports itself as Primary and secondary always reports itself as Secondary irrespective of whether or not the redundant module pair is synchronized.	

RDNSOTIMEMAX

Specific to Block(s)	Primary/Secondary C300, C200, FIM4, IOLIM, LIOM, FTEB and FIM FBs
Description	Maximum Switchover Time - Indicates the high-water mark with regard to redundancy switchover time, in milli-seconds.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, C200, FIM4, IOLIM, LIOM, FTEB, FIM
Related Parameters	STATSRESET
Remarks	This parameter is reset by storing to the STATSRESET parameter.

RDNSYNCPROG

Specific to Block(s)	Primary/Secondary C300, C200, FIM, IOLIM, FTEB, FIM4 and LIOM FBs Primary EHG
Description	Initial Sync Progress - Indicates the initial synchronization progress in terms of percent complete.
Data Type	32-Bit Integer
Range	0 to 100
Default	N/A
Config Load	No
Access Lock	View Only
Residence	Controller
Related Parameters	
Remarks	Parameter is set to 0 when initial sync is not in progress and it is set to 100 when initial-sync is complete.

RDNSYNCSTATE

Specific to Block(s)	Primary/Secondary C200, FIM, IOLIM, FTEB, FIM4, EHG, LIOM and C300 FBs	
Description	Redundant Synchronization State. Shows the current synchronization state of the module.	
Data Type	Enumeration	
Range	NOTINSYNC (0)	Not synchronized, Partner absent. Only used with C200/FIM/IOLIM/FTEB modules.
	PARTNERVISBL (1)	Not synchronized. Partner is visible.
	SYNCINPROG (2)	Synchronization is in progress.
	SYNCMAINT (3)	Synchronized.
	STANDBY (4)	Standby
	– – – (5)	N/A because module configured as non-redundant.
	NOPARTNER (6)	Not synchronized. Partner absent.
	INCOMPATIBLE (7)	Not synchronized. Communicating with incompatible partner.

Default	NOPARTNER (6)
Config Load	No
Access Lock	ViewOnly
Residence	C200, FIM, IOLIM, C300, FTEB, FIM4, EHG, LIOM
Related Parameters	
Remarks	Indicates level of module synchronization with redundancy partner module.

RDNXFERAVG

Specific to Block(s)	Primary/Secondary C200, FIM, IOLIM, FTEB, FIM4 and C300 FBs.
Description	Redundancy Transfer Rate Average. The average of module generated redundancy private path throughput in bytes/sec. Triggering the STATRESET parameter restarts averaging.
Data Type	64-Bit Real Number
Range	Greater-than or equal-to 0.00
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	C200, FIM, IOLIM, C300, FTEB, FIM4
Related Parameters	RDNXFERMAX, STATSRESET
Remarks	

RDNXFERMAX

Specific to Block(s)	Primary/Secondary C200, FIM, IOLIM, FTEB, FIM4 and C300 FBs.
Description	Redundancy Transfer Maximum (bytes/sec). The historical maximum of module generated redundancy private path throughput since the last store to STATRESET.
Data Type	64-Bit Real Number
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	C200, FIM, IOLIM, C300, FTEB, FIM4

Related Parameters	RDNXFERAVG, STATSRESET.
Remarks	

READERROPT

Specific to Block(s)	CAB types
Description	Read Error Option. CEs assign the instance default of parameter READERROPT at the time of creating a CAB type. READERROPT controls whether or not the block reports an event in response to parameter read errors. If READERROPT = Event, then an event is reported whenever READSTATUS <> OK.
Modification of Definition	The Attribute Instance Default may be modified at type creation time.
Data Type	Enumeration CABERROPT
Range	NoEvent, Event
Default	Assigned by CE on the type definition. See Note.
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	READSTATUS, WRITESTATUS, WRITEERROPT
Remarks	**Note**—When a CAB type is first created, the value of NoEvent is assigned as instance default of READERROPT. CEs can then change the instance default to Event if desired. The value of READERROPT cannot be changed on CAB instances.

READINESS

Specific to Block(s)	RM
Description	Ability of the RM to assume control of the assigned function. I.e., to become a Primary.
Data Type	Enumeration
Range	Undefined (0) NoPartner (1) Disqualified (2) Syncing (3) Synchronized (4) Standby (5)
Default	Undefined (0)
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

READINESSA

Specific to Block(s)	RM
Description	For each module in host chassis, readiness state of module.
Data Type	Enumeration [20]
Range	Undefined (0) NoPartner (1) Disqualified (2) Syncing (3) Synchronized (4) Standby (5)
Default	Undefined (0)
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded

Related Parameters	
Remarks	

READSTATUS

Specific to Block(s)	CAB types
Description	Read Status. READSTATUS indicates whether an error has occurred in read processing associated with the parameter references of a CAB program. Normally, READSTATUS shows OK. When an error occurs, its value provides information about the nature of the error. READSTATUS automatically reverts to OK after the error goes away.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	Enumeration CABACCSTATUS
Range	OK = 0, Bad = 10, RightsViol = 11, AccLevelViol = 12, IllegalValue = 13, RangeLimExc = 14, IndexLimExc = 15, ConfigMis = 16, CommFail = 17
Default	OK
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	READERROPT, WRITESTATUS, WRITEERROPT
Remarks	

READYFL

Specific to Block(s)	All Exchange Library Request Array function blocks: REQFLAGARRAY, REQNUMARRAY, REQTEXTARRAY
Description	The flag indicating whether the request array block is in a state that allows it to issue a request. This parameter is False if the block is not successfully loaded and when there is an outstanding request with a response has not been received.
Data Type	Boolean
Range	Off(0) On(1)
Default	Off(0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

REASONSET

Specific to Block(s)	Most Function Blocks
Description	Reason Set – Lets you specify the valid number of the reason set you want to apply to the signature.
Data Type	16-Bit Integer
Range	0 to 100
Default	0 = Not Required
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	You configure the reason sets through the System configuration for Operator Security/Electonric Signatures in Station. Please refer to the *Server and Client Configuration Guide* for more information.

RECDESC[1..50]

Specific to Block(s)	SCM
Description	Recipe Parameter Descriptor
Data Type	String
Range	Length: 23 characters
Default	Null String
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMRECPARMS
Remarks	RECDESC[i] defines the descriptor for the ith recipe parameter.

RECMATCODE[1..50]

Specific to Block(s)	SCM
Description	Recipe Parameter Material Code
Data Type	32-Bit Integer
Range	-2147483648 to 2147483647
Default	0
Config Load	Yes
Access Lock	Engineer/Application Developer
Residence	CEE
Related Parameters	NUMRECPARMS
Remarks	RECMATCODE[i] defines material code for the Ith recipe parameter.

RECOVMSGIDX

Specific to Block(s)	RM
Description	Redundancy Module Recovery Message Index. Full recovery code, which references a matching test string.
Data Type	16-Bit Unsigned Integer
Range	0 to 65535
Default	0
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

RECSCALE[1..50]

Specific to Block(s)	SCM
Description	Recipe Parameter Scale Allowed Option
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMRECPARMS
Remarks	RECSCALE[i] defines the scale allowed option for the ith recipe parameter. When On, the ith recipe parameter is indicated as scaled. The SCM does not do the scaling.

RECTARGET[1..50]

Specific to Block(s)	SCM
Description	Recipe Parameter Target Value
Data Type	64-Bit Real Number

Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	NUMRECPARMS
Remarks	

RECTARGETMAX[1..50]

Specific to Block(s)	SCM
Description	Recipe Parameter Target Value Maximum
Data Type	64-Bit Real Number
Range	N/A
Default	N/A
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMRECPARMS
Remarks	

RECTARGETMIN[1..50]

Specific to Block(s)	SCM
Description	Recipe Parameter Target Value Minimum
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMRECPARMS
Remarks	

RECVCLOSEREQ

Specific to Block(s)	FTEB
Description	Receive Close Request – Identifies the close requests received.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

RECVCLOSERSP

Specific to Block(s)	FTEB
Description	Receive Close Response – Identifies the close responses received.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

RECVNAKS

Specific to Block(s)	FTEB
Description	Received Negative Acknowledgements (NAKS) – Identifies the NAKS received.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

RECVOPENREQ

Specific to Block(s)	FTEB
Description	Receive Open Request – Identifies open requests received.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

RECVOPENRSP

Specific to Block(s)	FTEB
Description	Receive Open Response – Identifies open responses received.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

REDDATAA

Specific to Block(s)	All PM I/O Modules and Series C I/O Modules		
Description	Redundancy Data Channel A - Defines the synchronization state of a physical I/O Module device.		
Data Type	Enumeration		
Range	0	---	
	2	DumpFailed	Dump failed
	3	FreezeNotAccepted	Freeze not accepted
	4	SyncFailed	Synch failed
	16	IolTimeOut	IOI Time out
	128	Syncd	Synch'd
	129	DumpComplete	Dump complete
	130	FreezePermitted	Freeze permitted
	131	FreezeAccepted	Freeze accepted
	132	FoInProgess	Failover in progress
	133	FoComplete	Failover complete
	134	SwapInProgress	Swap in progress
	135	SwapComplete	Swap complete
	160	Frozen	Frozen
	161	DumpSeqBegin	Dump sequence begin
	162..	DumpSeq_02..20	Dump sequence 2-20

	180		
	255	DumpSeqMax	Dump sequence max
Default			
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks			

REDDATAB

Specific to Block(s)	All PM I/O Modules and Series C I/O Modules		
Description	Redundancy Data Channel B - Defines the synchronization state of a physical I/O Module device.		
Data Type	Enum		
Range	0	---	
	2	DumpFailed	Dump failed
	3	FreezeNotAccepted	Freeze not accepted
	4	SyncFailed	Synch failed
	16	IoITimeOut	IOI Time out
	128	Syncd	Synch'd
	129	DumpComplete	Dump complete
	130	FreezePermitted	Freeze permitted
	131	FreezeAccepted	Freeze accepted
	132	FoInProgess	Failover in progress
	133	FoComplete	Failover complete
	134	SwapInProgress	Swap in progress
	135	SwapComplete	Swap complete
	160	Frozen	Frozen
	161	DumpSeqBegin	Dump sequence begin
	162..180	DumpSeq_02..20	Dump sequence 2-20
	255	DumpSeqMax	Dump sequence max
Default			
Config Load	No		
Access Lock	ViewOnly		

Residence	IOP
Related Parameters	
Remarks	This parameter does not apply to nonredundant IOM configurations.

REDTAG

Specific to Block(s)	DevCtl, All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Red Tag - Allows the user to set the FB as being “out-of-service”; this indicates that the FB or the associated control strategy needs repair, or is being repaired.
Data Type	Boolean
Range	Off (0): Block operates normally On (1): Operator cannot make changes to the block
Default	Off
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	DevCtl only: MODEATTR, NUMDOUTS.
Remarks	DevCtl: Illegal if NUMDOUTS = 0. Illegal if MODEATTR is not Operator. Illegal if present state is Momentary. RegCtl MODE must be Manual before REDTAG can be turned On.

Specific to Block(s)	Series C I/O AOCHANNEL, DOCHANNEL		
Description	Red Tag		
Data Type	BOOLEAN		
Range	0	Off	Channel is in service and its output is not frozen.
	1	On	Channel is out of service and its output is frozen.
Default	Off		
Config Load	No		

Access Lock	Engineer
Residence	IOM
Related Parameters	MODE, MODEATTR
Remarks	This parameter allows the user to set the channel as being *out of service* indicating that this channel or its associated control loops need(s) repair(s) or are(is) being repaired. Once a channel is put in the red tag condition, its output is frozen at the last value, blocking manual or program changes, and its MODE and MODEATTR cannot be changed. This parameter can only be written when MODE is Man and MODEATTR is Operator.

REDUNDANCY_WARNING

Specific to Block(s)	C300
Description	Redundancy Warning Text. Entity is used to display the warning text mentioned in default value on the form next to MODISREDUN parameter.
Data Type	String
Range	Length: 31 Characters
Default	
Config Load	No
Access Lock	View Only
Residence	SR
Related Parameters	MODISREDUN
Remarks	NOTE: Checking/unchecking MODISREDUN will create/delete a secondary C300 automatically.

REDUNDANT

Specific to Block(s)	Server
Description	Redundancy – Indicates whether the server is redundant.
Data Type	Boolean
Range	(0) Non-redundant (1) Redundant
Default	(0) Non-redundant
Config Load	No
Access Lock	Application Developer Only
Residence	SCAN
Related Parameters	
Remarks	

REDUNSTATE

Specific to Block(s)	RM
Description	Redundancy State of the RM and the Chassis.
Data Type	Enumeration
Range	Undefined (0) Primary (1) Secondary (2)
Default	Undefined (0)
Config Load	No
Access Lock	ViewOnly
Residence	Not Loaded
Related Parameters	
Remarks	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).

REDUNSTATEA

Specific to Block(s)	RM
Description	For each module in host chassis, redundancy state of module
Data Type	Enumeration [20]
Range	Undefined (0) Primary (1)

	Secondary (2)
Default	Undefined (0)
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

REEXECOPT

Specific to Block(s)	SCM, RCM
Description	Step Re-execution Option – Provides a Step Re-execution selection that is applied to all Steps in the SCM/RCM. Individual Steps can deviate from this selection by setting the Step level REEXECOPT parameter as desired.
Data Type	ENUM
Range	ReExecute (0); Continue (1)
Default	ReExecute
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	REEXECPOLICY, Step REEXECOPT, REEXECOPTOG, REEXECOPTOH, REEXECOPTOS
Remarks	On re-execution of a Step, the behavior is either: • ReExecute – Step is executed “from the top”; all Outputs will be executed. • Continue – Step is continued “from where it left off”; only incomplete Outputs are executed.

Specific to Block(s)	Step
Description	Re-execution Option – Provides a Step specific Re-execution selection. A value of FollowContainer means that the Step will follow its container’s (SCM or RCM that contains the Step) REEXECOPT.
Data Type	ENUM
Range	ReExecute (0); Continue (1); FollowContainer (2)

Default	FollowContainer
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	REEXECPOLICY, SCM/RCM REEXECOPT, REEXECOPTOG, REEXECOPTOH, REEXECOPTOS
Remarks	On re-execution of a Step, the behavior is either: • ReExecute – Step is executed "from the top"; all Outputs will be executed • Continue – Step is continued "from where it left off"; only incomplete Outputs are executed.

REEXECOPTOG

Specific to Block(s)	Step
Description	Goto Re-execution Option Override – Provides a one-shot/one time override of the Step REEXECOPT for the manual Goto Step SCM/RCM execution scenario that is supported in SingleStep mode.
Data Type	ENUM
Range	ReExecute (0); Continue (1)
Default	ReExecute
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	REEXECPOLICY, REEXECOPT, REEXECOPTOH, REEXECOPTOS
Remarks	Read of REEXECOPTOG shows what will happen in the next Goto Step scenario, based on the Step's current REEXECOPT. This parameter is utilized in the SCM/RCM Table view Goto dialog, so direct user interaction with REEXECOPTOG is normally not required.

REEXECOPTOH

Specific to Block(s)	Step
Description	Handler Return Re-execution Option Override – Provides a one-shot/one time override of the Step REEXECOPT for the return from Handler to Main Handler SCM/RCM execution scenario.

Data Type	ENUM
Range	ReExecute (0); Continue (1)
Default	ReExecute
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	REEXECPOLICY, REEXECOPT, REEXECOPTOG, REEXECOPTOS
Remarks	Read of REEXECOPTOH shows what will happen in the next return from Handler to Main handler scenario, based on the Step's current REEXECOPT. This parameter can be set as required, normally by the SCM/RCM itself, prior to the return to the Step in the Main handler. Returns to the Main handler and a State of Running are from the States of either Held (no Restart handler), Restarting (Restart handler finishing), or Interrupting (Interrupt handle finishing).

REEXECOPTOS

Specific to Block(s)	Step
Description	Standard Sequence Re-execution Option Override – Provides a one-shot/one time override of the Step REEXECOPT for the standard sequence flow SCM/RCM execution scenario.
Data Type	ENUM
Range	ReExecute (0); Continue (1)
Default	ReExecute
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	REEXECPOLICY, REEXECOPT, REEXECOPTOG, REEXECOPTOH
Remarks	Read of REEXECOPTOS shows what will happen in the next standard sequence flow scenario, based on the Step's current REEXECOPT. This parameter can be set as required, normally by the SCM/RCM itself, prior to the re-execution of a Step. Looping back to a Step within a Handler is the most common example of a "standard sequence flow" execution scenario.

REEXECPOLICY

Specific to Block(s)	SCM, RCM
Description	Step Re-execution Policy – Provides selection of scheme to be used for the re-execution of Steps.
Data Type	ENUM
Range	AlwaysReExecute (0); Flexible (1)
Default	AlwaysReExecute
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	RETAINISTS, REEXECOPT, REEXECOPTOG, REEXECOPTOH, REEXECOPTOS
Remarks	A value of AlwaysReExecute means that Step re-executions will always re-execute all Outputs. One exception case is the return from Handler to a Step in the Main handler scenario when RETAINISTS is On, which will cause confirmable Instructions to not be re-executed. A value of Flexible enables the use of the configured and one-shot re-execution options (see REEXECOPT, REEXECOPTOG, REEXECOPTOH, REEXECOPTOS), which allow a Step to be re-executed or continued.

REFCOUNT

Specific to Block(s)	Primary and Secondary FTEB and C300 FBs
Description	Reference Count
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	FTEB, C300
Related Parameters	
Remarks	Internal Parameter used by FTEB module for debugging

REFRESHMS

Specific to Block(s)	RM
Description	Refresh Interval in milliseconds.
Data Type	32-Bit Unsigned Integer
Range	0 to 4294967295
Default	0
Config Load	No
Access Lock	ViewOnly
	Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

RELAYPRESENT

Specific to Block(s)	Series C DO Modules		
Description	Relay Board Present		
Data Type	Boolean		
Range	0	OFF	Relay board absent.
	1	ON	Relay board present.
Default	OFF		
Config Load	No		
Access Lock	View Only		
Residence	IOM		
Related Parameters			
Remarks	When asserted, indicates the DO IOM is connected to Relay Board.		

REMCASTYPE

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Remote Cascade Type - Defines the type of remote cascade intended between the regulatory control block in the ACE supervisory controller and Universal Control Network (UCN) Process Manager control point.
Data Type	Enumeration
Range	(0) None (1) Spc (2) Ddc (3) Rsp (4) DdcRsp
Default	(0) None
Config Load	Yes
Access Lock	Application Developer
Residence	ACE
Related Parameters	
Remarks	

REMSOAKTIME

Specific to Block(s)	RampSoak
Description	Remaining Soak Time for the current SOAK segment.
Data Type	Real
Range	0.0 - 120.0
Default	0.0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SOAKTIME[1..NUMPROFILES][1..NUMRAMPSOAK]
Remarks	

RESADDR[1..10]

Specific to Block(s)	SCM
Description	Resume Address Name
Data Type	BlockId
Range	N/A
Default	Null String
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	RESADDRFUTUR[1..10], RESADDRN[1..10], UPDRESOPT.
Remarks	RESADDR[i] contains the name (eg. SCMName.StepName) of the Step in thread i that will become the active step on return to the Main or Interrupt handlers from an exception. It can only be set to a valid step name in the Main or Interrupt handler that was preempted. RESADDR[1..10] is a BlockId parameter and not supported in expressions. Its Integer-32 Partner Parameter RESADDRN[1..10] can be used in Transition Condition expressions and Step Output expressions.

RESADDRFUTUR[1..10]

Specific to Block(s)	SCM
Description	Resume Address Future Name
Data Type	BlockId
Range	N/A
Default	Null String
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	RESADDRFUTUR[1..10], RESADDRN[1..10], UPDRESOPT.
Remarks	RESADDRFUTUR[i] contains the name (eg. SCMName.StepName) of the step in thread i that RESADDR [i] will be set to if the currently active Main or Interrupt hander is preempted. It can only be set to a valid step name in the

	currently active Main or Interrupt handler. If a step's UPDRESOPT is On, the step will update RESADDRFUTUR to its own name, for its thread. RESADDRFUTUR[1..10] is a BlockId parameter and not supported in expressions. Its Integer-32 Partner Parameter RESADDRFUTRN[1..10] can be used in Transition Condition expressions and Step Output expressions.

RESADDRFUTRN[1..10]

Specific to Block(s)	SCM
Description	Resume Address Future Number
Data Type	32-Bit Integer
Range	N/A
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	RESADDRN[1..10], UPDRESOPT.
Remarks	RESADDRFUTUR[i] contains the name (eg. SCMName.StepName) of the step in thread i that RESADDR [i] will be set to if the currently active Main or Interrupt hander is preempted. It can only be set to a valid step name in the currently active Main or Interrupt handler. If a step's UPDRESOPT is On, the step will update RESADDRFUTUR to its own name, for its thread. RESADDRFUTRN[1..10] may be used in Transition Condition expressions and Step Output expressions, whereas RESADDRFUTUR[1..10] (a BlockId parameter) is not supported in expressions.

RESADDRN[1..10]

Specific to Block(s)	SCM
Description	Resume Address Number
Data Type	32-Bit Integer
Range	N/A
Default	0
Config Load	No

Access Lock	Engineer
Residence	CEE
Related Parameters	RESADDRFUTUR[1..10], RESADDRN[1..10], UPDRESOPT.
Remarks	RESADDR[i] contains the name (eg. SCMName.StepName) of the Step in thread i that will become the active step on return to the Main or Interrupt handlers from an exception. It can only be set to a valid step name in the Main or Interrupt handler that was preempted. RESADDRN[1..10] may be used in Transition Condition expressions and Step Output expressions, whereas RESADDR[1..10] (a BlockId parameter) is not supported in expressions.

RESET

CAUTION	When reinitialized, the function block loses all knowledge of past process behavior. Reinitialize only if process biases no longer reflect deviation from the true property (for instance, after fixing a failed analyzer).

Specific to Block(s)	PID-PL	
Description	Reinitialize Function Block – Reinitializes function block database. Selecting this switch is equivalent to inactivating and reactivating the control module.	
Data Type	Boolean	
Range	Off(0):	Do not reinitialize function block.
	On(1):	Reinitialize function block to current operation conditions.
Default	Off	
Config Load	No	
Access Lock	Engineer	
Residence	CEE	
Related Parameters		
Remarks	Important! Do not confuse this parameter with RESETMODEL. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.	

RESETDEVDROPOFF

Specific to Block(s)	FIM, FIM4
Description	Resets device drop off counters for all devices across all links.
Data Type	Boolean
Range	N/A
Default	False
Config Load	No
Access Lock	Engineer
Residence	Controller
Related Parameters	DEVDROPOFFCOUNT on Fieldbus Devices
Remarks	Clears all device drop off counters on a per FIM/FIM4 basis.

RESETERRORSCMD

Specific to Block(s)	All PM I/O Modules		
Description	Reset I/O Link Errors. Resets the I/O Processor's error counts.		
Data Type	Boolean		
Range	0	On	Reset Errors command has been initiated.
	1	Off	No command.
Default	Off (1)		
Config Load	No		
Access Lock	Engineer		
Residence	IOLIM		
Related Parameters			
Remarks	Used to reset the IOM's error counts. Unlike the Link FB's COMMAND parameter that affects the entire I/O Link, the scope of this command is limited to the redundant IOM pair (or single IOM, if non-redundant).		

RESETFL

Specific to Block(s)	Totalizer, Pulse Input Totalizer
Description	Reset Totalizer Command Flag - When this flag changes from Off to On, the Totalizer function block resets the PV to equal the value of the RESETVAL variable.

Data Type	Boolean
Range	Off (0): Do not reset the accumulator. On (1): Reset the accumulator.
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	RESETVAL, STARTFL, STOPFL.
Remarks	The Totalizer block must be reset using the reset pin prior to counting.

Specific to Block(s)	Timer
Description	Reset Command Flag – Provides ability to issue Reset command to the Timer function block using Boolean parameter.
Data Type	Boolean
Range	Off (0): Do not reset the accumulator. On (1): Reset the accumulator.
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	COMMAND, RESTARTFL, STARTFL, STOPFL.
Remarks	An Off-to-On transition of RESETFL causes the timer to be reset.

Specific to Block(s)	Pulse Input IOC, Pulse Input w/ Fast Cutoff IOC
Description	Reset Counter Flag – storing On to this parameter will cause the pulse count to reset to 0; reading this parameter always returns a value of Off.
Data Type	Boolean
Range	Off (0): Do not reset the accumulator. On (1): Reset the accumulator.
Default	Off (0)
Config Load	No

Access Lock	Operator
Residence	CEE
Related Parameters	SO
Remarks	

Specific to Block(s)	DevCtl
Description	Maintenance Statistics Reset Flag – When set from Off to On, resets all Maintenance Statistics to their default or 0 values.
Data Type	Boolean
Range	Off (0): Do not reset the accumulator. On (1): Reset the accumulator.
Default	Off (0)
Config Load	No
Access Lock	Operator, Other Function Block (see remarks)
Residence	CEE
Related Parameters	MAINTOPT, MAXTIME[0..2], MAXTRANS[0..2], NUMSIOVRD, NUMTRANS, REDTAG, STATETIME[0..2].
Remarks	Illegal if MAINTOPT is not set On. Operator may reset only when REDTAG is set on.

RESETFL[0..7]

Specific to Block(s)	Pulse Input IOM
Description	Reset Counter Flag – Storing On to this parameter will cause the pulse count associated with the Pulse Input Channel to reset to 0. RESETFL is edge-triggered, so reading this parameter always returns a value of Off.
Data Type	Boolean
Range	Off (0): Normal value On (1): Storing On will reset accumulated value in device.
Default	Off (0)
Config Load	No
Access Lock	Engineer
Residence	CEE

Related Parameters	SO[6..7]
Remarks	

RESETHCOMERR

Specific to Block	HAICHANNEL and HAOCHANNEL (PM I/O)
Description	Reset Errors and Failures – Clears and resets HART communication diagnostic parameters to their default values. See Remarks.
Data Type	Boolean Push button
Range	
Default	0
Config Load	No
Access Lock	Engineer
Residence	
Related Parameters	HCOMERFL HNCOMERR HCOMSTS HCOMFAIL HCMDFAIL HCMDRESP
Remarks	When RESETHCOMERR is pressed: • HCOMERFL is cleared. • HNCOMERR is set to zero. • HCOMSTS is set to its default value. • HCOMFAIL is set to its default value. • HCMDFAIL is set to its default value. • HCMDRESP is set to its default value. • Any pending notifications relating to HNCOMERR, HCOMSTS and HCMDFAIL are returned to normal.

RESETMODEL

Specific to Block(s)	PID-PL
Description	Reset Model – Reset the model buffer to active model in the function block.
Data Type	Boolean
Range	
Default	
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	UPDATEMODEL
Remarks	To prevent undesired bumps in the controller due to partial model updating, the user-entered model is stored in a buffer until complete model is entered. UPDATEMODEL indicates that the model stored in buffer should be transferred to the active controller; whereas, RESETMODEL resets the buffer with model stored in active controller. Important! Do not confuse this parameter with RESET. Setting this parameter, regardless of its value, forces a reset of the model buffer. Ordinarily, this flag is set on to initiate the reset and is switched off, by the function block, during the reset. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

RESETTIMR

Specific to Block(s)	RampSoak
Description	Reset Segment Timer On Profile.
Data Type	Boolean
Range	Unchecked ( ) Checked (X)
Default	Unchecked ( )
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	

Remarks	Access in monitoring mode.

RESETVAL

Specific to Block(s)	Totalizer, Pulse Input Totalizer
Description	Accumulator Reset Value - Value that the Totalizer function block uses to reset the accumulator. When RESET is applied, the Process Variable (PUSHSP PV) is set to RESETVAL.
Data Type	64-Bit Real Number
Range	N/A
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	RESETFL
Remarks	

RESTART

Specific to Block(s)	SCM	
Description	Restart - Indicates type of last restart.	
Data Type	Enumeration SCMRESTARTSIGNAL	
Range	None (0)	There has been no restart transition since the last execution of the SCM.
	CEESWITCH (1)	The controller hosting the CEE which contains the SCM has gone through a redundancy switchover since the last execution of the SCM.
	CEEWARM (2)	The CEE containing the SCM has gone through a warm restart since the last execution of the SCM.
	CEECOLD (3)	The CEE containing the SCM has gone through a cold restart since the last execution of the SCM.
	CMACTIVE (4)	The SCM has been stopped and reset since it's last execution.
	CMLOAD (5)	The SCM has been loaded since its last execution. This value also applies the very first time an SCM is executed.

Default	None (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	STARTSIGNAL	
Description	This is an enumeration type summary parameter. It stores the type of restart that has occurred since last execution	
Data Type	Enumeration RESTARTTYPE	
Range	CMLOAD (0)	This parameter holds True for the first execution cycle following a load of the parent CM.
	CMACTIVE (1)	This parameter holds True for the first execution cycle following inactivation and then activation of the parent CM.
	CEECOLD (2)	This parameter holds True for the first execution cycle following cold start of the CEE.
	CEEWARM (3)	This parameter holds True for the first execution cycle following warm start of the CEE.
	CEESWITCH (4)	This parameter holds True for the first execution cycle following redundant switchover of the CEE on a C200 Controller.
	NONE (5)	The normal value for the RESTART parameter is NONE. Following a transition, it shows a value other than NONE until the end of the first block execution.
Default	NONE	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks		

RESTARTFL

Specific to Block(s)	Timer
Description	Restart Command Flag - Provides ability to issue Restart command to the Timer function block.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	COMMAND, RESETFL, STARTFL, STOPFL.
Remarks	An Off-to-On transition of RESTARTFL causes the timer to restart.

RESTARTOPT

Specific to Block(s)	DevCtl All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Sequential Control Module (SCM) Restart Option – Indicates activity for device when ControlModule.SCMSTATE returns to Restarting or Running.
Data Type	Enumeration RESTARTOPT
Range	None (0) LastReq (1)
Default	None (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	HOLDOPT, LASTOPMNAME, LASTOPREQ, LASTOPTYPE, LASTSTEP,

	OPREQ, OPTYPE, SAFEOP, SCMASTEP[1..10], SCMOPT, SCMSTATE, STARTOPT, STOPOPT.
Remarks	Illegal if ControlModule.SCMOPT = None.

RETAINISTS

Specific to Block(s)	SCM
Description	Retain Instruction Status - Provides a mechanism to control what happens to the Instruction completion status of the Step in the Main handler that is returned to from an Interrupt, Restart, or Hold handler.
Data Type	Boolean
Range	Off – Instruction Status of the Step in Main returned to is not retained, which means that any confirmable Instructions of the Step will have to be confirmed again, even if already confirmed prior to leaving the Main handler On – Instruction Status of the Step in Main returned to is retained, which means that any confirmable Instructions of the Step that have already been confirmed will not need to be confirmed again
Default	Off
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	For STEP block: INSTRUCTCOMP, OP[1..16].INSTRUCTCOMP.
Remarks	The Instruction completion status of the Step overall (INSTRUCTCOMP) and the Step Outputs (OP[].INSTRUCTCOMP) is the specific information that is retained or not. RETAINISTS can only be used when the SCM/RCM REEXECPOLICY is set to AlwaysReExecute. Store errors will result on attempts to store to RETAINISTS when the SCM/RCM REEXECPOLICY is set to Flexible. RETAINISTS can be set to On by the Interrupt, Restart, or

	Hold handler as required before returning to the Main handler. The value of RETAINISTS that is set in a Hold handler will be used on the next return to Main. If a user configured Restart handler is defined and selected, it can choose to write a new value to RETAINISTS or not before the return to Main is actually executed. The value of RETAINISTS at the time of the return to Main will drive the SCM behavior. After the return to Main handler is completed, RETAINISTS is always be set to Off. RETAINISTS must be set to On again for the next return to Main if retaining the Instruction Status is desired again.

RETRYSCURR

Specific to Block(s)	QIPACCHAN
Description	Retrys Last Transaction
Data Type	UINT32
Range	n/a
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	None
Remarks	

RETRYSTOTAL

Specific to Block(s)	QIPACCHAN
Description	Retrys Total
Data Type	UINT32
Range	n/a
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	None
Remarks	

RFB

Specific to Block(s)	PIDER
Description	Reset Feedback (RFB) – Indicates RFB input value.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, S1, K1, SP, TRFB.
Remarks	

RG

Specific to Block(s)	FLOWCOMP
Description	Reference Specific Gravity – Reference specific gravity or molecular weight used by the block. The value must be in the same engineering units as G (specific gravity).
Data Type	Real
Range	NaN is not allowed
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	G
Remarks	

RHOB

Specific to Block(s)	AGA8GS_94 AGA8DL_94 AGA30M_92 AGA9UM_98 AGA7TM_96
Description	Gas Density at Base (Contract) Conditions
Data Type	FLOAT64

Range	Output
Default	-
Config Load	No
Access Lock	Operator
Residence	No Load
Related Parameter	RHOS, RHOB
Remarks	

RHOTP

Specific to Block(s)	AGA8GS_94 AGA8DL_94 AGA30M_92 AGA9UM_98 AGA7TM_96
Description	Gas Density at Flowing Conditions
Data Type	FLOAT64
Range	Output
Default	-
Config Load	No
Access Lock	Operator
Residence	No Load
Related Parameter	RHOS, RHOB
Remarks	

RHOS

Specific to Block(s)	AGA8GS_94 AGA8DL_94 AGA30M_92
Description	Gas Density at Standard Conditions (Internally fixed at 60 DegF, 14.73 PSI)
Data Type	FLOAT64
Range	Output
Default	-
Config Load	No
Access Lock	Operator
Residence	No Load
Related Parameter	RHOTP, RHOB
Remarks	

RJRAW

Specific to Block(s)	LLAI
Description	Reference Junction's Raw Count, in microvolts
Data Type	32-Bit Real Number
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	

RJTEMP

Specific to Block(s)	LLAI
Description	Reference Junction Temperature, in Celsius. Displays the current temperature of the reference junction sensor, and is updated only if the thermocouple input is configured.
Data Type	32-Bit Real Number
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	

RMW

Specific to Block(s)	FLOWCOMP
Description	Reference Molecular weight. The RMW value must be in the same engineering units as MW (Molecular Weight).
Data Type	Real
Range	NaN is not allowed
Default	1.0
Config Load	Yes
Access Lock	Engineer

Residence	ACE/C200
Related Parameters	MW
Remarks	

ROCNEGALM.FL

Specific to Block(s)	DataAcq
Description	Negative Rate-of-Change Alarm Flag – Indicates if a negative rate-of-change alarm has been issued.
Data Type	Boolean
Range	Off (0): Negative rate-of-change alarm does not exist. On (1): Negative rate-of-change alarm present.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

ROCNEGALM.PR

Specific to Block(s)	DataAcq
Description	Negative Rate-of-Change Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

ROCNEGALM.SV

Specific to Block(s)	DataAcq
Description	Negative Rate-of-Change Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

ROCNEGALM.TP

Specific to Block(s)	DataAcq
Description	Negative Rate-of-Change Alarm Trip Point (in Engineering Units per minute) - Maximum change in the Process Variable (PV), in the negative direction, before a negative rate-of-change alarm is issued.
Data Type	64-Bit Real Number
Range	NaN, or greater-than or equal-to 0.0.
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, ROCNEGALM.FL, ROCNEGALM.PR, ROCNEGALM.SV.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

ROCPOSALM.FL

Specific to Block(s)	DataAcq
Description	Positive Rate-of-Change Alarm Flag - Indicates if a positive rate-of-change alarm has been issued.
Data Type	Boolean
Range	Off (0): Positive rate-of-change alarm does not exist. On (1): Positive rate-of-change alarm present.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, ROCPOSALM.PR, ROCPOSALM.SV, ROCPOSALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

ROCPOSALM.PR

Specific to Block(s)	DataAcq
Description	Positive Rate-of-Change Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, ROCPOSALM.FL, ROCPOSALM.SV, ROCPOSALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

ROCPOSALM.SV

Specific to Block(s)	DataAcq
Description	Positive Rate-of-Change Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, ROCPOSALM.FL, ROCPOSALM.PR, ROCPOSALM.TP.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data

	Acquisition) Block,.Alarm processing.

ROCPOSALM.TP

Specific to Block(s)	DataAcq
Description	Positive Rate-of-Change Alarm Trip Point (in Engineering Units per minute) - Maximum change in the Process Variable (PV), in the positive direction, before a positive rate-of-change alarm is issued.
Data Type	64-Bit Real Number
Range	NaN, or greater-than or equal-to 0.0.
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, ROCPOSALM.FL, ROCPOSALM.PR, ROCPOSALM.SV.
Remarks	For more information on DataAcq alarming, refer to the *Control Builder Components Theory*, DATAACQ (Data Acquisition) Block,.Alarm processing.

ROLE

Specific to Block(s)	Step
Description	Role
Data Type	String
Range	16 Characters
Default	Blank
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

ROMAPPIMGCHKSMFAIL

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	ROM Application Image Checksum Failure
Data Type	Boolean
Range	On, Off
Default	Off
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	SOFTFAIL
Remarks	The Application image has a checksum value appended to the end. If this checksum value is not the same as the value calculated at runtime then this flag is set to indicate the softfail condition and a diagnostic alarm is issued.

ROMBOOTIMGCHKSMFAIL

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	ROM Boot Image Checksum Failure
Data Type	Boolean
Range	On, Off
Default	Off
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	SOFTFAIL
Remarks	The Boot image has a checksum value appended to the end. If this checksum value is not the same as the value calculated at runtime then this flag is set to indicate the softfail condition and a diagnostic alarm is issued.

RP

Specific to Block(s)	FLOWCOMP
Description	Reference Pressure - Defines the reference pressure used by the block. The RP value must be in the same engineering units as P (pressure).
Data Type	Real
Range	NaN is not allowed
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	P
Remarks	

RPEERAVGLPS [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Average IMRs Per Second - The average number of peer messages per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERAVGLPSCONN [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Average IMRs Per Connection - The average number of peer messages per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERAVGPPS [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Average Parameters Per Second - The average number of parameters per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERAVGPPSCONN [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Average Parameters Per Connection - The average number of parameters per Connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0.0

Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERCONN

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Peer Connections - The number of peer connections currently open.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERCONNMAX

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Responder Peer Connections Maximum - The maximum number of peer connections supported in this version of firmware.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERDEGIMRCONN [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Number of Peer IMRs Degraded to Request-Response - Indicates the count of peer IMRs that have degraded to Request-Response on each connection.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERDEGRADIMR[1..RPEERCONNMAX]

Specific to Block(s)	CEE, IOLIM, FIM
Description	Request-Response Peer Degradation IMRs - The number of peer IMRs that have degraded to Request -Response on each connection.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

RPEERMAXLPS [1..RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Maximum IMRs Per Second - The maximum number of peer messages per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0

Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERMAXLPSCONN [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Maximum IMRs Per Connection - The maximum number of peer messages per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERMAXPPS [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Maximum Parameters Per Second - The maximum number of parameters per second sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERMAXPPSCONN [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Report By Exception Peer Maximum Parameters Per Connection - The maximum number of parameters per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPEERNAME [1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300, ICG
Description	Originator's Peer Name - The name of the CPM, ACE, FIM, or IOLIM peer originator block.
Data Type	EntityID
Range	16 Characters
Default	Null
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM, ICG
Related Parameters	
Remarks	

RPEERSUBPER[1...RPEERCONNMAX]

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Originator Peer Subscription Period - The subscription period in milliseconds for the originator peer block.
Data Type	32-Bit Integer
Range	10 to 10000
Default	100

Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RPHYCONNID

Specific to Block(s)	CEE, CEEC300, CEEACE, CEESIMC200, FIM, OPC, ICG, IOLIM,GEE FBs
Description	Physical Connection ID
Data Type	16-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM, ACE, SIM_C200.
Related Parameters	
Remarks	

RQ

Specific to Block(s)	FLOWCOMP
Description	Reference Steam Quality Factor - Defines the reference steam quality factor used by the block. The RQ value must be in the same engineering units as Q (steam quality).
Data Type	Real
Range	NaN is not allowed
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	Q
Remarks	

RRRCEESTATE

Specific to Block(s)	CEEC300, CEE, CPM
Description	RAM Retention Restart CEESTATE. Specifies the CEESTATE after RAM Retention Restart.
Data Type	ENUM
Range	IDLE (0) LASTCOLD (1) LASTWARM (2) LASTTIMEOUT (3)
Default	IDLE
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), C200(CEE, CPM)
Related Parameters	WARMTIMEOUT
Remarks	

RSPPIN

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Remote Setpoint value in Percent Input - Indicates the value brought from the primary in percent.
Data Type	Float64
Range	-6.9 to 106.9 percent
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	REMCASTYPE
Remarks	

RSTPROCESSED

Specific to Block(s)	SCM
Description	Reset Processed Command
Data Type	Boolean
Range	Off (0) On (1)

Default	Off (0)
Config Load	
Access Lock	Operator
Residence	
Related Parameters	
Remarks	

RT

Specific to Block(s)	RatioBias
Description	Ratio Input Value (in Engineering Units) - The value by which X1 is multiplied.
Data Type	Real
Range	RTLOLM to RTHILM
Default	1
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	RTHILM, RTLOLM.
Remarks	RT is an initializable input.

Specific to Block(s)	FLOWCOMP
Description	Reference Temperature - Defines the reference temperature used by the block. The RT value must be in the same engineering units as T (temperature).
Data Type	Real
Range	NaN is not allowed
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	
Remarks	

RTABLE.DIAG[1..5000]

Specific to Block(s)	SCM	
Description	Diagnostic Bits of RTable Part	
Data Type	Integer32	
Range	Bit 0:	The object has been selected by the user to permanently enable get requests.
	Bit 1:	The object is an InvokeTransition
	Bit 2:	The object is a Step with configured exception condition(s).
	Bit 3:	The object is needed for the current context of execution of the SCM.
	Bit 4:	The object is needed to satisfy external requests (other function blocks, CB Monitoring, Displays etc.).
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	Diagnostic parameter only , Not for use by operator or normal project engineering	

RTABLEIDX

Specific to Block(s)	STEP, TRANSITION	
Description	Index of Step/Transition in RTable	
Data Type	Integer32	
Range	0:	Step/Transition not registered in RTable
	>= 1	The index of Step/Transition in RTable.
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	Diagnostic parameter only , Not for use by operator or normal project engineering	
Remarks	Diagnostic parameter only , Not for use by operator or normal project engineering	

RTBACKCALOUT

Specific to Block(s)	RatioBias
Description	RT Secondary Data - Contains limits, initialization data, windup status, etc. for the RT primary.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	RatioBias function block maintains separate BACKCALC records for each of its primaries, i.e., RTBACKCALOUT for RT primary and X1BACKCALOUT for X1 primary.

RTCONN

Specific to Block(s)	RatioBias
Description	RT Connector
Data Type	
Range	
Default	
Config Load	
Access Lock	Application Developer
Residence	
Related Parameters	
Remarks	

RTHIFL

Specific to Block(s)	RatioBias
Description	RT High Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

RTHILM

Specific to Block(s)	RatioBias
Description	Ratio High Limit (in Engineering Units)
Data Type	Real
Range	Greater-than RTLOLM
Default	100.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	RTLOLM
Remarks	

RTLOFL

Specific to Block(s)	RatioBias
Description	RT Low Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	
Access Lock	ViewOnly

Residence	
Related Parameters	
Remarks	

RTLOLM

Specific to Block(s)	RatioBias
Description	Ratio Low Limit (in Engineering Units)
Data Type	Real
Range	Less-than RTHILM
Default	0.001
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	RTHILM
Remarks	

RTOTACYCIMR

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Total Acyclic IMRs Used
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RTOTACYCLGREQ

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Total Acyclic Large Requests
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RTOTACYCSMREQ

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Total Acyclic Small Requests
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RTOTCYCIMR

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Total Cyclic IMRs Used
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	

Remarks	

RTOTCYCLGREQ

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Total Cyclic Large Requests
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RTOTCYCSMREQ

Specific to Block(s)	CEE, CEEC300, IOLIM, FIM, IOLINKC300
Description	Total Cyclic Small Requests
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300, IOLINKC300), C200(CEE), IOLIM, FIM
Related Parameters	
Remarks	

RTPPRESENT

Specific to Block(s)	AIM
Description	RTP Present.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	RTPPRESENT is only configurable on the Thermocouple module.

RV

Specific to Block(s)	Timer
Description	Remaining Time - Indicates the current remaining time until the Timer function block will time out.
Data Type	Integer
Range	0 to 2,147,483,647 (2^31-1)
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, SO, SP, TIMEBASE.
Remarks	RV is equal to the difference between the Set Point and Process Variable (SP - PV). Units are set by TIMEBASE.

RX

Specific to Block(s)	FLOWCOMP
Description	Reference Steam Compressibility - Defines the reference steam compressibility used by the block. The RX value must be in the same engineering units as Q (steam compressibility).
Data Type	Real
Range	NaN is not allowed
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	
Remarks	

S*xxxx* Parameters

S

Specific to Block(s)	RS, SR
Description	S input value
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

S1

Specific to Block(s)	PIDER
Description	Switch 1 – Specifies state of the tracking control switch.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	RETRYSCURR, RETRYSTOTAL, TRFB.
Remarks	

Specific to Block(s)	AICHANNEL (PM I/O)
Description	Status. Shows the current status of the Smart Transmitter associated with this Smart Transmitter Interface (STI) point.
Data Type	String
Range	N/A, Blank
Default	Null

Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	
Remarks	This parameter is only exposed, if ASSOCIOPTYP is STI-MV. However, it does not appear on the block form in Control Builder. Transmitter status includes the following: • Transmitter scratch pads 1, 2, 3 and 4, • Detailed transmitter status • List of parameters whose values are not the same in both the STI database and the Smart Transmitter's database. (Parameters are mismatched.)

SAFEOP

Specific to Block(s)	RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Safe Output (OP) Value (in Percent)
Data Type	64-Bit Real Number
Range	NaN, or OPEXLOLM to OPEXHILM
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	NaN causes the last good value of OP to be used.

Specific to Block(s)	DevCtl
Description	Safe Output State
Data Type	Enumeration GENSTATE
Range	S0(4): State0, State1, State2 S1(5): State1, State0, State2 S2(6): State2, State0, State1
Default	S0(4)
Config Load	Yes
Access Lock	Engineer

Residence	CEE	
Related Parameters	DIPVMAP[0..15], GOP, GPV, GOPREQ, HOLDOPT, NUMDOUTS, NUMSTATES, OI[0..2],	OP, OPCMD[0..2], OPREQ, RESTARTOPT, SEALOPT, SI, STARTOPT, STOPOPT.
Remarks	Illegal if NUMDOUTS = 0. SAFEOP may not be assigned to a Momentary State. S2 is illegal if NUMSTATES = 2.	

SAFEOPCMD

Specific to Block(s)	PosProp, PidPosProp
Description	Safe Output (OP) Command.
Data Type	Enumeration PULSECMD
Range	Idle (0) Raise (1) Lower (2)
Default	Idle (0)
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	PULSECMD
Remarks	

SAFEOUTPUT

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Output Safe State – Selects safe state of the associated Output. When target is reached the output is set to this state.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Affects Channels 6-7 only.

SAFEOUTPUT[6..7]

Specific to Block(s)	Pulse Input IOM
Description	Output Safe State – Selects safe state of the associated Output. When target is reached the output is set to this state.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Affects Channels 6-7 only.

SAFEREDTAG

Specific to Block(s)	DevCtl
Description	Safe State Before RedTag – Requires that Output (OP) be Safe before RedTag may be set.
Data Type	Boolean
Range	Off (0) On (1)

Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	GOP, OP, REDTAG, SAFEOP.
Remarks	Illegal if NUMDOUTS= 0.

SAFESTATE[0..numChans-1]

Specific to Block(s)	DOM
Description	Safe State – Specifies a safe output state to be assumed in the event of a controller failure or loss of communication between the controller and IOM.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	FAILSTATE[0..numChans-1]
Remarks	FAILSTATE must be enabled in order to configure and use the SAFESTATE. If the IOM device itself fails, the output value is not deterministic.

SAMPLERATE

Specific to Block(s)	AIM, AOM (Note that although a part of the configuration assembly, SAMPLERATE is not used for output modules.)
Description	Sample Rate (msec) – Defines the input module sampling period.
Data Type	32-Bit Integer
Range	Default Values
Default	25 msec, with the following exceptions: 50 msec for Thermocouple and RTD AIM 250 msec for Non-Isolated (high-density) AIM
Config Load	No
Access Lock	AIM: Application Developer AOM: ViewOnly
Residence	CEE
Related Parameters	SIPTYPE[0..numChans-1]
Remarks	The parameter is not loaded, but appears on the AIM configuration form for informational purposes.

SAMPLESKEW

Specific to Block(s)	FIM, FIM4
Description	Sample Skew
Data Type	Enumeration
Range	0 SKEW 1 NOSKEW
Default	SKEW (0)
Config Load	Yes
Access Lock	Engineer
Residence	SR
Related Parameters	
Remarks	

SC.BYPPERM

Specific to Block(s)	Step
Description	Step Stop Condition Bypass Permit
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SC.BYPREQ, SC.FL.
Remarks	When On, SC.FL is set according to SC.BYPREQ.

SC.BYPREQ

Specific to Block(s)	Step
Description	Step Stop Condition Bypass Request
Data Type	Enumeration CSCOBYPREQ
Range	ToOff (0) ToOn (1) None (2)
Default	None (2)
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SC.BYPPERM, SC.FL.
Remarks	See SC.BYPPERM for additional information.

SC.CONFIGCODE

Specific to Block(s)	Step
Description	Step Stop Condition Configuration Code
Data Type	Enumeration CSCOCONFIGCODECOND
Range	None (0) Ok (1) UnknownError (2) ImplicitConv (3) LossOfPrecsn (4) UnexpctEnd (5) UnexpctComma (6) ColonWoQMark (7) FctNotMltArg (8) ClosParenExp (9) OperandExp (10) MissingArg (11) OperatorExp (12) ColonExp (13) TypeMismatch (14) TypeNotSupp (15) SyntaxError (16) ExprTooCmplx (17) NotEPcodeMe (18) NotEDataStak (19) UnsuppFeatur (20) ExprTooLong (21) DivideByZero (22) UnknownToken (23) UnexpTokenOS (24) UnknownFunc (25) UnexpOCExpr2 (26) UnexpOCExpr3 (27) ZeroArgument (28) UnexpToken (29) InvalResult (30) InvalTokenTb (31) IntegerExp (32) DoubleExp (33) MissedImpl (34) UnicodeConv (35) ConstExprRem (36) DuplExprRem (37) ExtUse38 (38) ExtUse39 (39) ExtUse40 (40)

	ExtUse41 (41) ExtUse42 (42) ExtUse43 (43) ExtUse44 (44) ExtUse45 (45) ExtUse46 (46) ExtUse47 (47) ExtUse48 (48) ExtUse49 (49) ExtUse50 (50) UnSupConType (51) UnExpClsParn (52) CantAssRVal (53) UnExpArrOpen (54) ArrClsExpect (55) ArrOpnExpect (56) ArrIndxError (57) StringExpect (58) InvalidRefer (59) TooManyConnS (60) CantConvInpt (61)
Default	None (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See SC.CONFIGSTS for additional information.

SC.CONFIGDESC

Specific to Block(s)	Step
Description	Step Stop Condition Configuration Description
Data Type	String
Range	Maximum of 39 characters.
Default	None
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See SC.CONFIGSTS for additional information.

SC.CONFIGSTS

Specific to Block(s)	Step
Description	Step Stop Condition Configuration Status
Data Type	Enumeration CSCOCONFIGSTS
Range	Ok (0) Information (1) Warning (2) SevereWarn (3) Error (4) SevereError (5)
Default	Ok (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SC.CONFIGCODE, SC.CONFIGDESC.
Remarks	Stop input condition configuration status parameters SC.CONFIGSTS, SC.CONFIGCODE, and SC.CONFIGDESC are set on SCM STATE transition from Inactive to Validated.

SC.DESC

Specific to Block(s)	Step
Description	Stop Stop Condition Description
Data Type	String
Range	String Length: 23 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	
Remarks	

SC.EXECCODE

Specific to Block(s)	Step
Description	Step Stop Condition Execution Code
Data Type	Enumeration CSCOEXECCODE
Range	None (0) ConfigError (1) ExprEvalFail (2) StoreFailed (3) CommError (4) StoreWarning (5) InternalErr (6) CtrlReqErr (7) DataTypeErr (8) StorePending (9)
Default	None (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See SC.EXECSTS for additional information.

SC.EXECDESC

Specific to Block(s)	Step
Description	Step Stop Condition Execution Code Descriptor
Data Type	String
Range	Maximum of 39 characters.
Default	None
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	See SC.EXECSTS for additional information.

SC.EXECSTS

Specific to Block(s)	Step
Description	Step Stop Condition Execution Status
Data Type	Enumeration CSCOEXECSTS
Range	Ok (0) Bypass (1) Info (2) Warning (3) Fail (4) Error (5) OkPaused (6) BypassPaused (7) InfoPaused (8) WarnPaused (9) FailPaused (10) ErrorPaused (11)
Default	Ok (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SC.EXECCODE, SC.EXECDESC.
Remarks	Step Stop Condition execution status parameters SC.EXECSTS, SC.EXECCODE, and SC.EXECDESC are updated when the step is in the Sequential Control Module's (SCM) current scope of execution.

SC.EXPR

Specific to Block(s)	Step
Description	Step Stop Condition Expression
Data Type	String
Range	String Length: 255 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	
Remarks	

SC.EXPRPCODE

Specific to Block(s)	Step
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

SC.FL

Specific to Block(s)	Step
Description	Step Stop Condition Status Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SC.INVOKFL

Specific to Block(s)	Step
Description	Step Stop Condition Invoke Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly

Residence	CEE
Related Parameters	SC.FL
Remarks	Provides the status of the step's stop condition at the time the stop handler was invoked.

SC.OPT

Specific to Block(s)	Step
Description	Step Stop Condition Option
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	SC.OPT must be set to On, to enable the Step Stop Condition.

SCALEMOTION[1..24]

Specific to Block	QIPACTERM	
Description	Scale Motion	
Data Type	BOOLEAN	
Range	Off(0)	No Motion
	On(1)	Motion
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 4 of the Status 1 byte in the input assembly for the designated position [1-24].	

SCALEMOTION[1..200]

Specific to Block	QIPACCHAN	
Description	Scale Motion	
Data Type	BOOLEAN	
Range	Off(0)	No Motion
	On(1)	Motion
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 4 of the Status 1 byte in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

SCALESELECTD[1..4]

Specific to Block(s)	JAGXCHAN	
Description	Scale selected (weight on local display)	
Data Type	BOOLEAN	
Range	Off(0)	Scale Not Selected
	On(1)	Scale Selected
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 5 of the status word in the floating point input assembly for the designated scale slot [1..4].	

SCANAREA

Specific to Block(s)	All tagged blocks
Description	Name of the Server area.
Data Type	String
Range	Length: 2 characters
Default	Null string
Config Load	
Access Lock	Application Developer
	RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Server/SR
Related Parameters	
Remarks	

SCANASSOCDSP

Specific to Block(s)	All tagged blocks
Description	Associated Display - Name of Server Associated Display
Data Type	String
Range	Length: 255 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
	RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Server
Related Parameters	
Remarks	If left blank, the default display is used.

SCANCTRLLVL

Specific to Block(s)	All tagged blocks
Description	Server Security Level.
Data Type	Integer
Range	0 to 255

Default	200
Config Load	Yes
Access Lock	Application Developer RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Server
Related Parameters	
Remarks	

SCANEUHI

Specific to Block(s)	All tagged blocks
Description	Server Engineering Units High.
Data Type	String
Range	Length: 255 characters.
Default	Null String
Config Load	
Access Lock	Application Developer RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Server
Related Parameters	
Remarks	

SCANEULO

Specific to Block(s)	All tagged blocks
Description	Server Engineering Units Low.
Data Type	String
Range	Length: 255 characters.
Default	Null String
Config Load	Yes
Access Lock	Application Developer RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).

Residence	Server
Related Parameters	
Remarks	

SCANGRPDTL

Specific to Block(s)	All tagged blocks
Description	Name of Server Group Display.
Data Type	String
Range	Length: 255 characters.
Default	Null String
Config Load	Yes
Access Lock	Application Developer RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Server
Related Parameters	
Remarks	

SCANPNTDTL

Specific to Block(s)	All tagged blocks
Description	Name of Server Detail Display.
Data Type	String
Range	Length: 255 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Server
Related Parameters	
Remarks	If left blank, the default display is used

SCANRATE

ATTENTION

The 100_ms selection is not valid for an AO16HART IOP (MU/MCPHAO01). Be sure you do not choose this selection on the Main tab of the AO16HART Block configuration form in Control Builder.

Specific to Block(s)	All PM I/O Modules		
Description	Scan Rate. Lets users configure how often periodic process data is collected from the I/O Modules and published to the controller.		
Data Type	Enumeration		
Range	100	100MS	Process data scanned once every 100 milliseconds. (See Attention note.)
	200	200MS	Process data scanned once every 200 milliseconds.
	250	250MS	Process data scanned once every 250 milliseconds.
	500	500MS	Process data scanned once every 500 milliseconds.
	1000	1S	Process data scanned once every second.
	2000	2S	Process data scanned once every 2 seconds.
Default	250MS		
Config Load	Yes		
Access Lock	Application Developer		
Residence	IOLINK		
Related Parameters			
Remarks	100 ms selection is invalid and cannot be chosen for AO8, AO16, and AO16HART IOMs. To insure fresh I/O data in the associated Control Module (CM), configure the IOM scan rate to be twice the execution period of the CM. For example, if the CM execution period is set to 1S, set the IOM scan rate to 500ms.		

Specific to Block(s)	Series C I/O AI-HART, AI-LLMUX, DI-24, DI-HV
Description	Scan Rate. Lets users configure how often periodic process data is collected from the I/O Modules) and published to the controller.

Data Type	Enumeration		
Range	1	Priority_IOM	Process data scanned at the same rate as internal CEE SCANRATE. See Remarks.
	200	200MS	Process data scanned once every 200 milliseconds.
	250	250MS	Process data scanned once every 250 milliseconds.
	500	500MS	Process data scanned once every 500 milliseconds.
	1000	1S	Process data scanned once every second.
	2000	2S	Process data scanned once every 2 seconds.
Default	1S		
Config Load	Yes		
Access Lock	Application Developer		
Residence	IOLINK		
Related Parameters			
Remarks	Priority_IOM scan is not supported for the AI-LLMUX module.		

Specific to Block(s)	Series C I/O AO-HART and DO-24B		
Description	Scan Rate. Lets users configure how often periodic process data is collected from the I/O Modules) and published to the controller.		
Data Type	Enumeration		
Range	1	Priority_IOM	Process data scanned at the same rate as internal CEE SCANRATE
	1000	1S	Process data scanned once every second.
Default	1S		
Config Load	Yes		
Access Lock	Application Developer		
Residence	IOLINK		
Related Parameters			
Remarks			

SCANRATE [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	I/O Link Scanning Rate	
Data Type	Enumeration	
Range	100MS (100)	Process data scanned once every 100 milliseconds.
	200MS (200)	Process data scanned once every 200 milliseconds.
	250MS (250)	Process data scanned once every 250 milliseconds.
	500MS (500)	Process data scanned once every 500 milliseconds.
	1S (1000)	Process data scanned once every second.
	2S (2000)	Process data scanned once every 2 seconds.
Default	1S (1000)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLIM, C300 IOLINK	
Related Parameters		
Remarks	The scan rate parameter determines how often periodic process data is collected from the IOPs/IOMs and published to the controllers. The index of this array corresponds to the the IOP/IOM number.	

SCHDOPTIMIZE

Specific to Block(s)	FIM, FIM4	
Description	Link Schedule Optimization	
Data Type	Enumeration	
Range	0	OPT
	1	OPT_NOFORCE
	2	NO_OPT
Default	OPT (0)	
Config Load	Yes	
Access Lock	Engineer	

Residence	SR
Related Parameters	
Remarks	

SCMASTEP[1..10]

Specific to Block(s)	CM
Description	Monitored Sequential Control Module (SCM) Active Step
Data Type	Integer
Range	0 to 32,767
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SCMOPT, SCMMODE, SCMSTATE.
Remarks	Invalid if SCMOPT = None.

SCMID

Specific to Block(s)	CM
Description	Sequential Control Module Identifier
Data Type	Entity Id (Independent Block Code)
Range	N/A
Default	Null String
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SCMOPT
Remarks	Identifies the SCM controlling the Control Module contained devices. Applicable only when SCMOPT is not equal to NONE.

SCMMODE

Specific to Block(s)	CM
Description	Monitored Sequential Control Module (SCM) Mode
Data Type	Enumeration of SCMMODE
Range	None (0) Auto (1) SemiAuto (2) SnglStep (3) Manual (4) Normal (5)
Default	Manual (4)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SCMOPT, SCMASTEP[1..10], SCMSTATE.
Remarks	SCMMODE is invalid if SCMOPT is NONE.

SCMMONITOR

Specific to Block(s)	SCM
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

SCMMONSRC

Specific to Block(s)	CM
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	Depending on the order in which blocks are loaded, the following status may be returned for this parameter: "Referenced FB Not Found". This indicates that a function block was referenced which has not yet been loaded to the controller. When this happens, no action is required except to load the referenced block before putting the strategy on control.

SCMNAME

Specific to Block(s)	CM
Description	Name of associated Sequential Control Module (SCM).
Data Type	String
Range	String Length: 16 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	SCMASTEP[1..10] SCMID, SCMMODE, SCMSTATE.
Remarks	The block designated by SCMNAME is the SCM associated with the CM. Parameters SCMASTEP[1..10], SCMID, SCMMODE and SCMSTATE reflect the status of this SCM. SCM Name is configurable on CM configuration form. It identifies the related SCM and it cannot be changed on-line. This entry is not required if SCMOPT selection is None.

SCMOPT

Specific to Block(s)	CM
Description	Sequential Control Module (SCM) Option
Data Type	Enumeration SCMOPT
Range	None (0) Fixed (1) Dynamic (2)
Default	None (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	SCMID
Remarks	Specifies the relationship of the Control Module and its contained devices SCMs.

SCMSTATE

Specific to Block(s)	CM
Description	Monitored Sequential Control Module (SCM) State
Data Type	Enumeration SCMSTATE
Range	Loading (0) Loaded (1) Inactive (2) Validated (3) Running (4) Complete (5) Checking (6) Idle (7) Interrupting (8) Interrupted (9) Restarting (10) Restarted (11) Holding (12) Held (13) Stopping (14) Stopped (15) Aborting (16) Aborted (17) CommErr (18)
Default	Null (2)

Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SCMOPT, SCMMODE, SCMASTEP[1..10].
Remarks	Invalid if SCMOPT = None.

SCNUMSRCCONN

Specific to Block(s)	Step Block
Description	Number of Source Connections for Stop Condition expression. Represents number of source references in the Step-specific Stop Condition expression.
Data Type	Integer32
Range	0 to 6
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	ACE, C200, SIM_C200
Related Parameters	SPCODESIZE
Remarks	

SCRIPTOR

Specific to Block(s)	All tagged blocks
Description	Script Editor - Lets you configure a script in the form of a XML string that is loaded to the Experion Server and executed by the Server's scripting engine.
Data Type	Blob
Range	
Default	
Config Load	Yes
Access Lock	Application Developer Only
Residence	Server
Related Parameters	SERVER SCRIPTOR
Remarks	You launch the Script Editor through a button on the Server History tab of the associated block's configuration form in Control Builder. Do not attempt to edit the SCRIPTOR

parameter with a tool other then the Script Editor.

SCSRC[1..6]

Specific to Block(s)	Step
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

SDENUMTEXT

Specific to Block(s)	Type Convert, Push.
Description	Enumeration Text
Data Type	String
Range	Maximum 12 characters
Default	SDENUM0 to SDENUM63
Config Load	Yes
Access Lock	Engineer
Residence	SR
Related Parameters	
Remarks	

SEALOPT

Specific to Block(s)	DevCtl
Description	Seal-in Option.
Data Type	Enumeration ENABLE
Range	Disable (0) Enable (1)
Default	Disable (0)
Config Load	Yes

Access Lock	Engineer
Residence	CEE
Related Parameters	GOP, GOPFINAL, MOMSTATE, NUMDOUTS, NUMDINPTS, OP OPFINAL, SAFEOP.
Remarks	Illegal if NUMDOUTS = 0 or NUMDINPTS = 0. Function block must be InActive to change SEALOPT. Illegal if MOMSTATE is not NONE. Illegal if Command Disagree is not configured [All CMDDISALM.TM[x] = 0].

SECBLOCKNAME [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	IOP Block Name. Indicates the corresponding Secondary IOP/IOM Tag. The index of this array corresponds to the number of the IOP/IOM.
Data Type	BlockId
Range	N/A
Default	0
Config Load	No
Access Lock	View Only
Residence	IOLINK
Related Parameters	PRIBLOCKNAME[1…40]
Remarks	

SECCHNERRA [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Errors on Channel A. Shows the number of I/O link channel A errors encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A

Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRA
Remarks	Note that this is the same as the IOMCHAER parameter in a TPS system.

SECCHNERRB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Errors on Channel B. Shows the number of I/O link channel B errors encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRB
Remarks	Note that this is the same as the IOMCHBER parameter in a TPS system.

SECCHNMNA [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Channel A-Edges. Shows the number of I/O link channel A missed minus edge transitions encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK

Related Parameters	TOTCHNMNA
Remarks	

SECCHNMNB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Channel B- Edges. Shows the number of I/O link channel B missed minus edge transitions encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNMNB
Remarks	

SECCHNPLA [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Channel A+ Edges. Shows the number of I/O link channel A missed plus edge transitions encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLA
Remarks	

SECCHNPLB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Channel B+ Edges. Shows the number of I/O link channel B missed plus edge transitions encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLB
Remarks	

SECCHNSILA [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Silences on Channel A. Shows the number of I/O link channel A silences encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNSILA
Remarks	Note that this is the same as the IOMCHASL parameter in a TPS system.

SECCHNSILB [1…40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Input/Output Processor (IOP) Silences on Channel B. Shows the number of I/O link channel B silences encountered by the Secondary IOP/IOM, where the index of this array corresponds to the number of the IOP/IOM.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNSILB
Remarks	Note that this is the same as the IOMCHBSL parameter in a TPS system.

SECCOMMERR[1..40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Secondary Input/Output Processor (IOP) Last Communication Error. Shows the last I/O link communication error experienced by the Secondary IOP/IOM, where the index of the array corresponds to the number of the IOP/IOM.	
Data Type	Enumeration	
Range	None (0):	No communication error.
	InvAlert (1):	Invalid Alert – message bit problem.
	InvDest (2):	Invalid Destination.
	InvChCnt (3):	Invalid Character Count.
	InvSourc (4):	Invalid Source.
	InvCmd (5):	Invalid Command.
	CheckSum (6):	Data record Checksum Error.
	No_Resp (7):	No Response.
	ChTimOut (8):	Channel Time Out.
	MsgOvRun (9):	Message Overrun.
	GapError (10):	Message gap is too long.

	LpbckErr (11):	Loop Back Error.
	NTH_O (12):	Next Token Holder equals zero.
	TknRecov (13):	Token Recovery in progress.
	RplBufOv (14):	Reply Buffer Overflow.
	TknTmOut (15):	Token Pass Time Out.
	IolDrver (16):	IOL Driver Error.
	--- (17):	IOP is not configured.
Default	None (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	Note that this is the same as the IOMCOMER parameter in a TPS system.	

SECDATAIN

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Seconday Data Input - Brings SECDATA (Secondary Data) parameter from the Universal Control Network (UCN) Process Manager control point.
Data Type	ExtRefStruct
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

Specific to Block(s)	REEOUT
Description	Seconday Data Input - Fetches SECDATA (Secondary Data) parameter from the secondary Experion cluster.
Data Type	STRUCTDATA
Range	N/A
Default	N/A
Config Load	No

Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.ARWSTS

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Anti-Reset Windup Status - Brings the anti-reset windup status from the Universal Control Network (UCN) Process Manager secondary.
Data Type	Enumeration
Range	(0) Normal (1) Hi (2) Lo (3) HiLo
Default	
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Anti-Reset Windup Status - Fetches the anti-reset windup status from the secondary Experion cluster
Data Type	Enumeration
Range	(0) Normal (1) Hi (2) Lo (3) HiLo
Default	
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Anti-Reset Windup Status - Reads the anti-reset windup status that is propagated to a Regulatory Control block from its secondary.
Data Type	Enumeration
Range	(0) Normal (1) Hi (2) Lo (3) HiLo
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SECDATAIN.CASREQ

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Cascade Request - Show if the secondary is requesting a cascade.
Data Type	Boolean
Range	Off - Cascade is not requested ON - Cascade is requested
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

SECDATAIN.CASSHED

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Cascade Shed - Shows if the secondary
Data Type	Boolean
Range	Off - Has not shed On - Has shed
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

SECDATAIN.EUHI

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Engineering Units High - Shows the Engineering Units High value that is propagated to a Regulatory Control block from its secondary.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SECDATAIN
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Engineering Units High - Shows the Engineering Units High value that is fetched from the secondary Experion cluster.
Data Type	Float64
Range	N/A
Default	N/A
Config Load	No

Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

SECDATAIN.EULO

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Engineering Units Low - Shows the Engineering Units Low Limit that corresponds to 0 percent of the scale that is brought from the Universal Control Network (UCN) Process Manager secondary.
Data Type	Float64
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Engineering Units Low - Shows the Engineering Units Low Limit that corresponds to 0 percent of the scale that is fetched from the secondary Experion cluster
Data Type	Float64
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Engineering Units Low - Shows the Engineering Units Low value that is propagated to a

	Regulatory Control block from its secondary.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SECDATAIN.EUSPAN100

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Engineering Units Span - Shows the normalized Engineering Units span that is equal to (EUHI - EULO) divided by 100, and is brought from the Universal Control Network (UCN) Process Manager secondary.
Data Type	Float64
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

SECDATAIN.HISELECT

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input High Select- Shows the override feedback type (high or low selector) that is propagated to a Regulatory Control block from its secondary .
Data Type	Boolean
Range	(0) False (1) True
Default	False
Config Load	No
Access Lock	ViewOnly

Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input High Select- Shows the override feedback type (high or low selector) that is fetched from the secondary Experion cluster .
Data Type	Boolean
Range	(0) False (1) True
Default	False
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.INITREQ

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Initialization Request - Shows if the secondary is requesting initialization.
Data Type	Boolean
Range	Off - Initialization is not requested On - Initialization is requested
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

SECDATAIN.INITSTS

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Initialization Status - Reads the initialization status that is propagated to a Regulatory

	Control block from its secondary..
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Initialization Status - Reads the initialization status that is fetched from the secondary Experion cluster
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.INITVAL

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Initialization Value - Shows the value that is provided from the secondary.
Data Type	Float64
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Initialization Value - Shows the value that is fetched from the secondary Experion cluster.
Data Type	Float64
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Engineering Units Low - Reads initializatrion value that is propagated to a Regulatory Control block from its secondary.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SECDATAIN.LOCALMAN

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Local Manual - Reads the local manual status that is propagated to a Regulatory Control block from its secondary.
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Local Manual - Reads the local manual status that is fetched from the secondary Experion cluster
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.ONESHOT

Specific to Block(s)	REEOUT
Description	Secondary Data Input One Shot - Indicates the one-shot initialization value that is fetched from the secondary Experion cluster
Data Type	32-Bit Integer
Range	N/A
Default	N/A

Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.ORFBSTS

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Override Feedback Status- Reads the override feedback status that is propagated to a regulatory control point from its secondary.
Data Type	Enumeration
Range	(0) Notconnected (1) Selected (2) Notselected
Default	Notconnected
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PRIMDATA.[1..8].OROFFSET
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Override Feedback Status- Reads the override feedback status that is fetched from the secondary Experion cluster
Data Type	Enumeration
Range	(0) Notconnected (1) Selected (2) Notselected
Default	Notconnected
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.ORFBVAL

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Override Feedback Value- Reads the override feedback value that is propagated to a regulatory control point from its secondary.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Override Feedback Value- Reads the override feedback value that is fetched from the secondary Experion cluster.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.OROFFSET

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Input Override Offset- Shows the override offset value that is propagated to a regulatory control point from its secondary.
Data Type	Boolean
Range	(0) False (1) True
Default	False

Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Input Override Offset- Shows the override offset value that is fetched from the secondary Experion cluster
Data Type	Boolean
Range	(0) False (1) True
Default	False
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.PROPOVRD

Specific to Block(s)	All Regulatory Control Blocks
Description	Secondary Data Propagation Override - Reads propagation override value that is propagated to a Regulatory Control block from its secondary.
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	REEOUT
Description	Secondary Data Propagation Override - Reads propagation

	override value that is fetched from the secondary Experion cluster
Data Type	Boolean
Range	(0) False (1) True
Default	
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	
Remarks	

SECDATAIN.SECTYPE

Specific to Block(s)	UCNOUT, HIWAYOUT
Description	Secondary Data Input Secondary Type - Shows the secondary type that is configured in the Universal Control Network (UCN) Process Manager control point.
Data Type	Enumeration
Range	(0) None (1) Spc (2) Ddc
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	SECDATAIN
Remarks	

SECIFCHNERRA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Errors on Channel A. Shows the number of I/O link channel A errors encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRA
Remarks	

SECIFCHNERRB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Errors on Channel B. Shows the number of I/O link channel B errors encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNERRB
Remarks	

SECIFCHNMNA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Channel A- Edges. Shows the number of I/O link channel A missed minus edge transitions encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNMNA
Remarks	

SECIFCHNMNB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Channel B- Edges. Shows the number of I/O link channel B missed minus edge transitions encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNMNB
Remarks	

SECIFCHNPLA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Channel A+ Edges. Shows the number of I/O link channel A missed plus edge transitions encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A

Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLA
Remarks	

SECIFCHNPLB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Channel B+ Edges. Shows the number of I/O link channel B missed plus edge transitions encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNPLB
Remarks	

SECIFCHNSILA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Silences on Channel A. Shows the number of I/O link channel A silences encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNSILA
Remarks	

SECIFCHNSILB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Secondary Link Interface Silences on Channel B. Shows the number of I/O link channel B silences encountered by the secondary link interface.
Data Type	16-Bit Unsigned Integer
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	TOTCHNSILB
Remarks	

SECIFCOMMERR

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Secondary Link Interface Last Communication Error. Shows the last I/O link communications error experienced by the secondary link interface.	
Data Type	Enum	
Range	None (0):	No communication error.
	InvAlert (1):	Invalid Alert – message bit problem.
	InvDest (2):	Invalid Destination.
	InvChCnt (3):	Invalid Character Count.
	InvSourc (4):	Invalid Source.
	InvCmd (5):	Invalid Command.
	CheckSum (6):	Data record Checksum Error.
	No_Resp (7):	No Response.
	ChTimOut (8):	Channel Time Out.
	MsgOvRun (9):	Message Overrun.
	GapError (10):	Message gap is too long.
	LpbckErr (11):	Loop Back Error.
	NTH_O (12):	Next Token Holder equals zero.
	TknRecov (13):	Token Recovery in progress.

	RplBufOv (14):	Reply Buffer Overflow.
	TknTmOut (15):	Token Pass Time Out.
	IolDrver (16):	IOL Driver Error.
Default	None (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks		

SECIFRCVCHN

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Secondary Link Interface Active Receive Channel. Shows the channel that is actively listening to transmitted messages.	
Data Type	Enumeration	
Range	UNKNOWN:	No active channel.
	CHANNEL_A:	Channel A is active.
	CHANNEL_B:	Channel B is active.
Default	UNKNOWN	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters	PERSWAPENB	
Remarks	If the PERSWAPENB parameter is On, the active receive channel toggles between A and B once a minute.	

SECINITOPT[1..8]

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDER, PIDFF, PID-PL, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RatioCtl, RegCalc, RegSummer, and Switch.	
Description	Secondary Initialization Option – Indicates if a Regulatory Control function block should accept or ignore initialization requests, and override feedback data from the secondary. There is one option parameter for each secondary. (The number of secondaries depends on the function block type.)	
Data Type	Enumeration ENBSTATE	
Range	Disable (0):	Ignore initialization and override data from secondary
	Enable (1):	Accept initialization and override data from secondary.
Default	Enable (1)	
Config Load	Yes	
Access Lock	Engineer	
Residence	CEE	
Related Parameters	BACKCALCIN, BACKCALCIN[1..3], BACKCALCIN[1..8].	
Remarks		

SECINITOPT1

Specific to Block(s)	RampSoak
Description	
Data Type	
Range	
Default	Checked (X)
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

SECMODNAME

Specific to Block(s)	Primary/Secondary C200, C300, FIM, IOLIM, FTEB, FIM4, EHG, RM and LIOM
Description	The name of the secondary module.
Data Type	BlockId
Range	N/A
Default	None
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	NAME
Remarks	

SECNAMESTRG

Specific to Block(s)	Primary/Secondary C300, C200, FIM, IOLIM, FIM4, EHG, LIOM, RM and FTEB FBs
Description	Secondary Name String – Specifies name of secondary module, if configured for redundancy.
Data Type	String
Range	Length: 16 characters
Default	Null
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	
Remarks	

SECNAMESTRING

Specific to Block(s)	CPM, RM
Description	The name of the secondary module
Data Type	String
Range	N/A
Default	None
Config Load	0
Access Lock	Engineer
Residence	SR
Related Parameters	
Remarks	

SECOND

Specific to Block(s)	CPM, CEEC300, SIM_C200, ACE
Description	Defines the second component of the Controller's local time.
Data Type	32-Bit Integer
Range	0 to 59
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	C200, C300(CEEC300), SIM_C200, ACE
Related Parameters	DAYLIGHTTIME, TIMEZONE.
Remarks	

SECONDARYSIG

Specific to Block(s)	Most Function Blocks
Description	Secondary Signature – Lets you specify the meaning associated with entering the secondary signature.
Data Type	String
Range	Length: 24 characters
Default	Null
Config Load	Yes
Access Lock	Engineer

Residence	SR
Related Parameters	NUMSIGS
Remarks	

SECOVERLAP[1..24]

Specific to Block	QIPACTERM	
Description	Secondary Overlapped Feed in Progress	
Data Type	BOOLEAN	
Range	Off(0)	Off
	On(1)	In Progress
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 15 of the Status 2 word in the input assembly for the designated position [1-24].	

SECOVERLAP[1..200]

Specific to Block	QIPACCHAN	
Description	Secondary Overlapped Feed in Progress	
Data Type	BOOLEAN	
Range	Off(0)	Off
	On(1)	In Progress
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 15 of the Status 2 word in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

SECRCVCHN[1..40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Secondary IOM Active Receive Channel. Shows the channel that is actively listening to the transmitted messages, where the index of this array corresponds to the number of the IOP/IOM.	
Data Type	Enumeration	
Range	UNKNOWN	No active channel.
	CHANNEL_A	Channel A is active.
	CHANNEL_B	Channel B is active.
	---	IOM is not configured or is not configured as a redundant pair.
Default	UNKNOWN	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	If the PERSWAPENB parameter is On, the active receive channel toggles between channel A and B once a minute.	
	Note that this is the same as the IOMRECHN parameter in a TPS system.	

SECSIGSECLVL

Specific to Block(s)	Most Function Blocks
Description	Secondary Signer Security Level – Lets you select the minimum security level of the second signature when required.
Data Type	Enumeration
Range	VIEWONLY (0) ACKONLY (1) OPER (2) SUPR (3) ENGR (4) MNGR (5)
Default	VIEWONLY (0)
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR

Related Parameters	
Remarks	

SECTMPNAME

Specific to Block(s)	Primary C200, FIM, IOLIM, EHG, FIM4, LIOM, RM, FTEB, C300 and RM
Description	The name of the secondary template
Data Type	String
Range	N/A
Default	Null
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	
Remarks	

SECVAR

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O)
Description	Secondary Variable. Shows the value of secondary variable for the given Smart Transmitter.
Data Type	32-Bit Real Number
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	
Remarks	This parameter is only exposed, if ASSOCIOPTYP is STI-MV. The secondary variable for a given Smart Transmitter is as follows: • For Pressure Transmitter: Temperature of the transmitter • For Temperature Transmitter: Cold junction temperature • For Magnetic Flowmeter Transmitter: Totalized value

SELDESC

Specific to Block(s)	SignalSel
Description	Selected Input Descriptor
Data Type	SDENUM: PDESC
Range	N/A
Default	" "
Config Load	No
Access Lock	ViewOnly
Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	PDESC
Remarks	This parameter contains the description of the currently selected input , which is shown in SELIN parameter

SELECTCABLEACMD

Specific to Block(s)	All PM I/O Modules		
Description	Select I/O Link Cable A. Used to select the A cable (channel A) to communicate between the IOM and the IOLIM.		
Data Type	Boolean		
Range	0	On	Select I/O Link Cable A command has been initiated.
	1	Off	No command.
Default	Off (1)		
Config Load	No		
Access Lock	Engineer		
Residence	IOLIM		
Related Parameters			
Remarks	Used to select the A cable (channel A) to communicate between the IOM and the IOLIM. Unlike the Link FB's COMMAND parameter that affects the entire I/O Link, the scope of this command is limited to the redundant IOM pair (or single IOM if non-redundant). If Periodic Cable Swap is enabled, the effect of selecting a particular channel does not persist longer than one minute.		

SELECTCABLEBCMD

Specific to Block(s)	All PM I/O Modules		
Description	Select I/O Link Cable B. Used to select the B cable (channel B) to communicate between the IOM and the IOLIM.		
Data Type	Boolean		
Range	0	On	Select I/O Link Cable B command has been initiated.
	1	Off	No command.
Default	Off (1)		
Config Load	No		
Access Lock	Engineer		
Residence	IOLIM		
Related Parameters			
Remarks	Used to select the B cable (channel B) to communicate between the IOM and the IOLIM. Unlike the Link FB's COMMAND parameter that affects the entire I/O Link, the scope of this command is limited to the redundant IOM pair (or single IOM if non-redundant). If Periodic Cable Swap is enabled, the effect of selecting a particular channel does not persist longer than one minute.		

SELHANDLER[1..8]

Specific to Block(s)	SCM
Description	Selected Handler Handle
Data Type	BlockId
Range	
Default	Null String
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	TYPE
Remarks	A handler of TYPE is assigned by setting SELHANDLER[i] to that handler's name (eg. SCMName.HandlerName). For example, to change the selected Hold Handler (TYPE 6) to another named Long-Hold, the assignment SELHANDLER[6] = LONGHOLD.Name would be made. The recommended method of deselecting a handler of TYPE i is to set

	SELHANDLER[i] = 0. The selected handler of a given TYPE can only be changed if it is not currently executing. The Main handler selection cannot be changed once the SCM transitions to Running. The Interrupt handler selection cannot be changed if the currently selected Interrupt handler is being preempted. The Null and Edit handler selections cannot be changed by the user or program.

SELHANDLERN[1..8]

Specific to Block(s)	SCM
Description	Specifies the component number of the selected handler of the SCM for each handler type. SELHANDLERN is an internal numeric form for the Handler name that the controller can recognize. Numeric identifiers are assigned to handlers at the time the SCM's handlers are built.
Data Type	32-Bit Integer
Range	
Default	N/A
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	SELHANDLER[1..8]; NUM
Remarks	The index [1..8] identifies the handler type as: 1-Edit 2-Main 3-Check 4-Interrupt 5-Restart 6-Hold 7-Stop 8-Abort. SELHANDLERN[1] for the Edit handler cannot be changed. SELHANDLERN[i] cannot be changed when handler type i is active, e.g. the selected Hold handler cannot be changed (via SELHANDLERN[6]) when the SCM STATE is Holding. An SCM can be used to change the selected handler, using an Output expression. Example: SCMName.SELHANDLERN[7] := SCMName.StopHandlerName.NUM

	Changes the selected Stop handler to the handler StopHandlerName To disable a specific handler type, set the SELHANDLERN to 0. Example: To disable all Hold Handlers use the expression: SELHANDLERN[6] = 0. After setting SELHANDLERN[6] = 0, the read value of SELHANDLERN[6] will equal -16. The value when a handler type is not selected reads: SELHANDLERN[2] = -12 SELHANDLERN[3] = -13 SELHANDLERN[4] = -14 SELHANDLERN[5] = -15 SELHANDLERN[6] = -16 SELHANDLERN[7] = -17 SELHANDLERN[8] = -18

SELIN

Specific to Block(s)	SignalSel
Description	Selected Input
Data Type	ENUM: PINP
Range	0: None 1: SelectP1 2: SelectP2 3: SelectP3 4: SelectP4 5: SelectP5 6: SelectP6
Default	None
Config Load	No
Access Lock	ViewOnly
Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	SELMETHOD, P, PV
Remarks	This parameter denotes which P input is taken as the PV value.

SELMETHOD

Specific to Block(s)	SignalSel
Description	Selection Method
Data Type	ENUM: SELMETHOD
Range	0: MIN 1: MAX 2: AVG 3: MED 4: MUX
Default	MIN
Config Load	Yes
Access Lock	Engineer
Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	P, PV
Remarks	This parameter defines the functionality of the block.

SELXDESC

Specific to Block(s)	Switch, OvrdSel, RemCas
Description	Selected Input Descriptor - 15-character descriptor for the currently-selected input to the OvrdSel and Switch function blocks.
Data Type	String
Range	Length: 15 characters
Default	Null String
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	XDESC[1..8]
Remarks	

SELXFL[1..4]

Specific to Block(s)	OvrdSel
Description	Input Selection Flags - Identifies the currently-selected input to the OvrdSel function block. There is one flag per input.
Data Type	Boolean
Range	Off (0): Input is not selected. On (1): Input is selected
Default	SELXFL[1] = On (1) All others =Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SELXINP
Remarks	

SELXFL[1..6]

Specific to Block(s)	SignalSel
Description	Boolean Selection flags for Individual inputs
Data Type	Boolean
Range	Each array element takes values OFF, ON OFF (0) The associated input is not selected ON (1) The associated input has been selected
Default	ON
Config Load	Yes
Access Lock	Operator
Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	SELMETHOD, BOOLMUX
Remarks	This parameter represents the selection flags for Boolean MUX selection.

SELXFL[1..8]

Specific to Block(s)	Switch, OvrdSel
Description	Input Selection Flags - Identifies the currently-selected input to the Switch function block. There is one flag per input.
Data Type	Boolean
Range	Off (0): Input is not selected. On (1): Input is selected
Default	SELXFL[1] = On (1) All others =Off (0)
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SELXINP
Remarks	

SELXINP

Specific to Block(s)	Switch
Description	Selection ID - Identifies the currently-selected input to the function block.
Data Type	Integer
Range	1 to 8
Default	1
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SELXDESC, SELXFL[1..8].
Remarks	

Specific to Block(s)	OvrdSel, RemCas
Description	Selection ID - Identifies the currently-selected input to the function block.
Data Type	Integer
Range	1 to 4
Default	1
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	SELXDESC, SELXFL[1..8].
Remarks	

SENDCLOSEREQ

Specific to Block(s)	FTEB
Description	Send Close Request – Identifies the close requests sent.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

SENDCLOSERESP

Specific to Block(s)	FTEB
Description	Send Close Response – Identifies the close responses sent.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

SENDFL

Specific to Block(s)	All Exchange Library Request Array function blocks: REQFLAGARRAY, REQNUMARRAY, REQTEXTARRAY
Description	The flag used as a trigger for the request block to send a request to the target. A request is sent tothe target when this flag transitions from False to True if the READYFL parameter was previously True. For periodic reads or writes, the READYFL must be connected to the SENDFL.
Data Type	Boolean
Range	Off(0) On(1)
Default	Off(0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SENDFL[0..15]

Specific to Block(s)	Message
Description	Send Flag to trigger sending message.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	
Access Lock	Operator
Residence	CEE
Related Parameters	
Remarks	

SENDOPENREQ

Specific to Block(s)	FTEB
Description	Send Open Request – Identifies open requests sent.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

SENDOPENRSP

Specific to Block(s)	FTEB
Description	Send Open Response – Identifies open responses sent.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

SENSORTYPE[0..numChans-1]

Specific to Block(s)	AIM
Description	Sensor Type
Data Type	Enumeration of SENSOR_RTD for RTD AIM Enumeration of SENSOR_TC for Thermocouple AIM
Range	SENSOR_RTD Ohms (0) 100_PI_385 (1) 200_PI_385 (2) 500_PI_385 (3) 1000_PI_385 (4) 100_PI_3916 (5) 200_PI_3916 (6) 500_PI_3916 (7) 1000_PI_3916 (8) 10_Cop_427 (9) 120_Ni_672 (10) 100_Ni_618 (11) 120_Ni_618 (12) 200_Ni_618 (13) 500_Ni_618 (14) SENSOR_TC MV (0) B (1) C (2) E (3) J (4) K (5) N (6) R (7) S (8) T (9)
Default	SENSOR_RTD: Ohms (0) SENSOR_TC: MV (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	OHMOFFSET[0..numChans-1]
Remarks	Configurable only on RTD and Thermocouple AIMs.

SENSRTYP

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O)	
Description	Sensor Type. Defines the type of field sensor or field device connected to the Field Termination Assembly (FTA) for the given I/O Module type. For STI, it defines the smart transmitter type.	
Data Type	Enum	
Range	1_5_V (0):	1 to 5 volts
	0_5_V (1):	0 to 5 volts
	0_100_MV (2):	0 to 100 millivolts
	THERMCPL (3):	Thermocouple
	RTD (4):	Resistance Temperature Device
	P4_2_V (5):	0.4 to 2 volts
	SPT_DP (8):	ST3000 – differential pressure
	SPT_GP (9):	ST3000 – gauge pressure
	SPT_AP (10):	ST3000 – absolute pressure
	STT (11):	ST3000 – temperature
	SFM (12):	ST3000 – MagneW 3000 – magnetic flow and most multivariable transmitters
Default	1_5_V (0):	HLAI, HLAIHART, LLAI, and unassigned channels
	THERMCPL (2):	LLMUX, RHMUX
	SPT_DP (8):	STI
Config Load	Yes	
Access Lock	Application Developer	
Residence	IOP	
Related Parameters		
Remarks	Range restrictions based on IOP type are as follows: HLAI: 1_5_V, 0_5_V, P4_2_V, only. HLAIHART: 1_5_V, 0_5_V, P4_2_V HAICHANNEL blocks: When HENABLE is true,	

	SENSRTYP is forced to 1_5_V. LLAI: 1_5_V, 0_5_V, 0_100_MV, THERMCPL, or RTD only. LLMUX: 0_100_MV, THERMCPL, or RTD only. RHMUX: are 0_100_MV orTHERMCPL only. STI: SPT_DP, SPT_GP, SPT_AP, STT or SFM only.

Specific to Block(s)	Series C AICHANNEL		
Description	Sensor Type		
Data Type	ENUM		
Range	0	1_5_V	1 to 5 volts
	1	0_5_V	0 to 5 volts
	2	0_100_MV	0 to 100 millivolts
	3	THERMCPL	Thermocouple
	4	RTD	Resistance Temperature Device
	5	P4_2_V	0.4 to 2 volts
	6	Not Used	Was Slidewire in PM I/O, Not used and reserved in Series C I/O
	8	SPT_DP	ST3000 – differential pressure
	9	SPT_GP	ST3000 – gauge pressure
	10	SPT_AP	ST3000 – absolute pressure
	11	STT	ST3000 – temperature
	12	SFM	ST3000 – MagneW 3000 – magnetic flow and most multivariable transmitters
Default	0	1_5_V	Channels on an AI-LLMUX and AI-HART
	8	SPT_DP	Channels on an STI module
Config Load	Yes		
Access Lock	Application Developer		
Residence	IOM		
Related Parameters	HENABLE		
Remarks	For channels on AI-HART and AI-LLMUX modules, this parameter defines the type of field sensor connected to the I/O Terminal Assembly (IOTA). For channels on an STI module, this parameter defines the Smart Transmitter Type. When HENABLE is set to TRUE on AI channels, SENSRTYP is forced to 1_5_V.		

The user is always provided with the list of valid values for the particular AI channel type. The user is NEVER shown or given the opportunity to select an invalid value for any particular AI channel type. Valid values for each AI module type are listed below.	
AI-HART	Valid values are 1_5_V, 0_5_V, P4_2_V
AI-LLMUX	Valid values are 1_5_V, 0_5_V, 0_100_MV, THERMCPL, RTD

SERIALNO

Specific to Block(s)	AICHANNEL
Description	Serial Number. Shows the value of the serial number/PROM number for the Smart Transmitter.
Data Type	String
Range	
Default	NULL
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	This parameter is only exposed, if ASSOCIOPTYP is STI-MV.

SERIALNUM

Specific to Block(s)	RM
Description	Redundancy Module Serial Number
Data Type	32-Bit Unsigned Integer
Range	0 to 4294967295
Default	Null
Config Load	No
Access Lock	ViewOnly RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	

Remarks

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Serial Number. Unique module serial number. Used within initial redundancy role determination as final tie breaker during simultaneous module power up.
Data Type	INT
Range	0…4294967295
Default	Null
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	

SERVERIP

Specific to Block(s)	Primary/Secondary FTEB and C300 FBs
Description	Server's Primary IP
Data Type	String
Range	Length : 16 Characters
Default	Null
Config Load	No
Access Lock	View Only
Residence	FTEB, C300
Related Parameters	
Remarks	

SHEDMODE[0..7]

Specific to Block(s)	Chassis HART AO IOM
Description	Shed Mode - Shed to Safe Value enabler If enabled, the output will assume the Safe Value (FAULTVALUE) in the event of controller failure or a loss of communication between the controller and the IOM. If disabled, the output will hold the last value processed.
Data Type	Boolean
Range	Hold Last Output Value (0),

	Use Safe Value (1)
Default	Use Safe Value (1)
Config Load	Yes
Access Lock	AppDevOnly
Residence	CEE
Related Parameters	FAULTVALUE
Remarks	SHEDMODE must be set to "Use Safe Value" in order to configure FAULTVALUE. Note that if the IOM device fails, the output value is not deterministic.

SHORT

Specific to Block(s)	DOC
Description	Indicates that a short circuit or overload condition exists.
Data Type	Boolean
Range	Short condition does not exist (0) Short condition exists (1)
Default	Short condition does not exist (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SHORT[0..numChans-1]

Specific to Block(s)	DOM
Description	Indicates that a short circuit or overload condition exists.
Data Type	Boolean
Range	Short condition does not exist (0) Short condition exists (1)
Default	Short condition does not exist (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SHUTDOWNCMD

Specific to Block(s)	IOLIM, Secondary IOLIM
Description	Shutdown IOLIM
Data Type	Boolean
Range	Off (0): The command is not active. Of (1): The command is active.
Default	Off (0)
Config Load	No
Access Lock	Engineer
Residence	IOLIM
Related Parameters	ENCMDS
Remarks	Pressing this button will shutdown the IOLIM. The 'Shutdown IOLIM' button is located on the Main tab of the IOLIM configuration form and is enabled only when Enable IOLIM Commands (ENCMDS) is set to ON.

WARNING

Performing an IOLIM shutdown will result in a loss of control. All outputs will transition to their configured safe state.

SI

Specific to Block(s)	DevCtl
Description	Safety Override Interlock
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Engineer, Other Function Block, (see Remarks)
Residence	CEE
Related Parameters	GOP, NUMDOUTS, OI[0..2], OP, SAFEOP, SIALM.FL, SIALM.OPT,

	SIALM.PR, SIALM.SV.
Remarks	Engineer can change only when function block is inactive or CEE is idle. Illegal if NUMDOUTS = 0

SIALM.FL

Specific to Block(s)	DevCtl All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, Regsummer, and Switch.
Description	Safety Override Alarm
Data Type	Boolean
Range	Off (0): Is not in Safety Interlock alarm. On (1): Is in Safety Interlock alarm condition.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SIFL, SIALM.OPT, SIALM.PR, SIALM.SV. DevCtl Only: HENABLE, HEU, HEXCOMERRSFL, HFASSYNO, HFLAGS, HHWREV, HIALM, INALM, NUMDOUTS, SI.
Remarks	DevCtl Only: Illegal if NUMDOUTS = 0.

SIALM.OPT

Specific to Block(s)	DevCtl
Description	Safety Interlock Alarm Option

Data Type	Enumeration OVRDALOP
Range	No Yes:
Default	N/A
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SIFL, SIALM.FL, SIALM.PR, SIALM.SV.
Remarks	Illegal if NUMDOUTS = 0. To change, function block must be InActive.

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Safety Interlock Alarm Option - Indicates if Safety Interlock alarming is enabled.
Data Type	Enumeration ENBSTATE
Range	Checked (X): Enable Safety Interlock alarming Unchecked ( ): Disable Safety Interlock alarming
Default	Checked (X)
Config Load	Yes
Access Lock	Engineer/Application Developer
Residence	CEE
Related Parameters	SIFL, SIALM.FL, SIALM.PR, SIALM.SV.
Remarks	

SIALM.PR

Specific to Block(s)	DevCtl All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel,

	PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Safety Interlock Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SIFL, SIALM.FL, SIALM.OPT, SIALM.SV. DevCtl Only: NUMDOUTS, SI
Remarks	DevCtl Only: Illegal if NUMDOUTS = 0.

SIALM.SV

Specific to Block(s)	DevCtl All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Safety Interlock Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SIFL, SIALM.FL, SIALM.OPT, SIALM.PR. DevCtl Only:

	NUMDOUTS, SI
Remarks	DevCtl Only: Illegal if NUMDOUTS = 0.

SIFL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Safety Interlock Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	SIOPT, SIALM.FL, SIALM.OPT, SIALM.PR, SIALM.SV.
Remarks	

SIMC200MACID

Specific to Block(s)	SIM_C200
Description	Simulation C200 Media Access Control (MAC) ID – Specifies the MAC address assigned to the PCIC card installed in the SIM_C200 node for ControlNet connections.
Data Type	32-Bit Integer
Range	1 to 99
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	CMLOADFL, CNISLOT, CNETCONNECT
Remarks	

SIMCOMMAND

Specific to Block(s)	CEEC300, CEEACE, CEESIMC200	
Description	Simulation Command - Initiates Simulation Command from Shadow Plant.	
Data Type	Enumeration	
Range	SIMFREEZE (0)	Freezes CEESIMC200 operation and stops simulation.
	SIMRUN (1)	Commands CEESIMC200 to start running simulation or stepping through different execution cycles.
	SIMDISABLE (2)	Disables simulation because Shadow Plant has exited or the SIMDISABLE command has been issued. This changes SIMSTATE to SIMRUN.
	NONE (3)	No command has been issued or the issued command has been processed.
Default	NONE	
Config Load	No	
Access Lock	Engineer Point Build (Lock is a combination of Engineer and Application Developer Only access levels)	
Residence	C300, ACE, SIM_C200	
Related Parameters	CEESTATE, SIMENABLE, SIMSTATE	
Remarks	This parameter is exposed only when SIMENABLE = TRUE	

SIMDEVICEIDX

Specific to Block(s)	Primary/Secondary C300 and FIM4 FB
Description	Simulation Node's Device Index. User configured FTE Device Index of the SIMC300 node.
Data Type	32-Bit Integer
Range	1-511
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	SIMIPADDRESS, SIMENABLE
Remarks	

SIMENABLE

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs CEEACE, CEESIMC200, OPC, ICG, GEE
Description	Simulation Enable
Data Type	Boolean
Range	Off (0) – Disabled On (1) – Enabled
Default	Off
Config Load	Yes
Access Lock	Application Developer Only
Residence	C300, ACE, SIM_C200, OPC, ICG, GEEFB
Related Parameters	SIMDEVICEIDX, SIMIPADDRESS
Remarks	

SIMIPADDRESS

Specific to Block(s)	Primary/Secondary C300 & FIM4
Description	Simulation Node IP Address
Data Type	String
Range	Length : 15 Characters

Default	0.0.0.0
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	SIMDEVICEIDX, SIMENABLE
Remarks	

SIMMODE

Specific to Block(s)	DICHANNEL, AICHANNEL		
Description	Simulation Mode		
Data Type	Enumeration		
Range	0	None	No simulation. Input value is obtained from the wire.
	1	DirectSub	Operator / ShadowPlant writes to PV.
	2	SimValSub	Operator / ShadowPlant writes to SIMVALUE. Or SIMVALUE is fetched from a parameter connection.
Default	0 None		
Config Load	Yes		
Access Lock	Engineer		
Residence	IOP		
Related Parameters	SIMVALUE		
Remarks	SIMMODE is always 0 (None) in a non-simulation environment.		

SIMSTATE

Specific to Block(s)	CEEC300, CEEACE, CEESIMC200
Description	Simulation State - Specifies the current state of the simulation.
Data Type	Enumeration
Range	SIMFREEZE (0) SIMRUN (1) NONE (2)
Default	NONE
Config Load	No
Access Lock	ViewOnly
Residence	C300, ACE, SIM_C200
Related Parameters	CEESTATE, SIMENABLE, SIMCOMMAND
Remarks	If Shadow Plant is not controlling the CEESIMC200, the SIMSTATE always equals NONE.

Specific to Block(s)	All IOM blocks		
Description	Simulation State - Specifies the current simulation state of the I/O link.		
Data Type	ENUMERATION		
Range	0	SIMFREEZE	IOM is not assigned to I/O link of a frozen simulation environment.
	1	SIMRUN	IOM is assigned to I/O link of an executing simulation environment.
	2	NONE	IOM is not assigned to I/O link of simulation environment.
Default	NONE		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOLIM		
Related Parameters			
Remarks	The Simulation State of the I/O Link is accessible on each IOM for display purposes. If IOMs are assigned to the physical IOLIM (non-simulation), the SIMSTATE always equals NONE.		

SIMVALUE

Specific to Block(s)	DICHANNEL
Description	Simulation Value
Data Type	BOOLEAN
Range	Off
	On
Default	Off
Config Load	No
Access Lock	Operator
Residence	IOP
Related Parameters	SIMMODE
Remarks	When SIMMODE = SimValSub, the PV is substituted with SIMVALUE. SIMVALUE can be fetched from another block using a parameter connection or it can be set by an operator or the ShadowPlant application.
	Reading SIMVALUE always returns the value of PV.
	Writing SIMVALUE returns an error if SIMMODE does not equal SimValSub.

Specific to Block(s)	AICHANNEL
Description	Simulation Value
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	Operator
Residence	IOM
Related Parameters	SIMMODE
Remarks	When SIMMODE = SimValSub, the PV is substituted with SIMVALUE. SIMVALUE can be fetched from another block using a parameter connection or it can be set by an operator or the ShadowPlant application.
	Reading SIMVALUE always returns the value of PV.
	Writing SIMVALUE returns an error if SIMMODE does not equal SimValSub.

SIOPT

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.	
Description	Safety Interlock Option – Indicates what to do when Safety Interlock Flag (SIFL) is On.	
Data Type	Enumeration BADCTLOPT	
Range	No_Shed (0):	MODE remains unchanged and OP is held at the last good value.
	ShedHold (1):	MODE is shed to Manual, MODEATTR goes to Operator, external mode switching is disabled, and OP is held at the current value.
	ShedLow (2):	MODE is shed to Manual, MODEATTR goes to Operator, external mode switching is disalbed, and OP goes to OPEXLOLM.
	ShedHigh (3):	MODE is shed to Manual, MODEATTR goes to Operator, external mode switching is disabled, and OP goes to OPEXHILM.
	ShedSafe (4):	MODE is shed to Manual, MODEATTR goes to Operator, external mode switching is disabled, and OP goes to SAFEOP.
Default	ShedHold (1)	
Config Load	Yes	
Access Lock	Engineer	
Residence	CEE	
Related Parameters	ESWENB, MODE,	

MODEATTR,
OP,
SIFL.

Remarks

SIPTYPE[0..7]

Specific to Block(s)	Chassis HART AO IOM
Description	Output Range Mode
Data Type	Enumeration of SIPTYPE
Range	4-20mA (0) -10/+10 V (1)
Default	SIPTYPE_HART: 4mA_to_20mA (0)
Config Load	Yes
Access Lock	AppDevOnly
Residence	CEE
Related Parameters	
Remarks	Note that when the HART Channel parameter is selected for a channel (HART Channel parameter box is checked), the SIPTYPE becomes SIPTYPE_HART. This is because HART is available only in CURRENT mode. The SIPTYPE can be changed to VOLTAGE mode only when the respective HART Channel parameter box is not checked.

SIPTYPE[0..numChans-1]

Specific to Block(s)	AIM, AOM
Description	Channel Type / Range Mode
Data Type	Enumeration: SIPTYPE Enumeration: RANGEMODE (8-channel AOM only)
Range	SIPTYPE: 10V_Input (65) RTD_SIP (66) Thermocouple (67) 10V_Output (88) 4-20mA_Cur (89) RANGEMODE: Voltage_Mode (0) Current Mode (1)
Default	Specified appropriately on a per module basis.

Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	SIPTYPE is only configurable on an 8-channel AOM, which operates in both current and voltage modes.

SLOT0[0..7]

Specific to Block(s)	Chassis HART AO IOM
Description	This parameter is for configuring slot 0 variables to be fetched from a HART device. The device variables in each HART device are given an index code. This parameter must be configured by the user.
Data Type	INT16
Range	0-255
Default	0 = no configuration
Config Load	Yes
Access Lock	AppDevOnly
Residence	CEE
Related Parameters	
Remarks	Note that the SLOT parameter for SLOT0 should be set to a value other than zero. A value of 0 indicates that the SLOT is not configured and it may give unpredictable results.

SLOT0DDESC

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 0 Description - Indicates a user-defined description of slot0 variable. Valid only for output devices.
Data Type	String
Range	Length: 32 characters
Default	
Config Load	No
Access Lock	AppDevOnly
Residence	SR
Related Parameters	

Remarks	

SLOT0UNITS

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 0 Unit - Enumeration of type HARTUNITS.
Data Type	This enumeration is as defined in Table 2 of Common tables definition in the HART specification.
Range	
Default	Unknown
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SLOT0VALUE
Remarks	

SLOT0VALUE

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 0 Value - Indicates the slot0 variable.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SLOT0UNITS
Remarks	

SLOT1[0..7]

Specific to Block(s)	Chassis HART AO IOM
Description	This parameter is for configuring the 2nd slot variable to be fetched from a HART device. The device variables in each HART device are given an index code. This parameter must be configured by the user.
Data Type	INT16
Range	0-255
Default	0 = no configuration
Config Load	Yes
Access Lock	AppDevOnly
Residence	CEE
Related Parameters	
Remarks	Note that the SLOT parameter SLOT0 should be set to a value other than zero. A value of 0 indicates that the SLOT is not configured and it may give unpredictable results.

SLOT1DESC

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 1 Description - Indicates a user-defined description of slot1 variable. Valid only for output devices.
Data Type	String
Range	Length: 32 characters
Default	
Config Load	No
Access Lock	AppDevOnly
Residence	SR
Related Parameters	
Remarks	

SLOT1UNITS

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 1 Unit - Indicates the engineering unit of Slot1
Data Type	Enumeration of type HARTUNITS.
Range	This enumeration is as defined in Table 2 of Common

	tables definition in the HART specification.
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SLOT1VALUE
Remarks	

SLOT1VALUE

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 1 Value - Indicates the variable from Slot1.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SLOT1UNITS
Remarks	

SLOT2[0..7]

Specific to Block(s)	Chassis HART AO IOM
Description	This parameter is for configuring the 3rd slot variable to be fetched from a HART device. The device variables in each HART device are given an index code. This parameter must be configured by the user.
Data Type	INT16
Range	0-255
Default	0 = no configuration
Config Load	Yes
Access Lock	AppDevOnly
Residence	CEE
Related Parameters	
Remarks	Note that the SLOT parameter for SLOT0 and SLOT1 should be set to a value other than zero. A value of 0 indicates that the SLOT is not configured and it may give

unpredictable results.

SLOT2DESC

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 2 Description - Indicates a user-defined description of slot2 variable. Valid only for output devices.
Data Type	String
Range	Length: 32 characters
Default	
Config Load	No
Access Lock	AppDevOnly
Residence	SR
Related Parameters	
Remarks	

SLOT2UNITS

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 2 Unit - Indicates the engineering unit of slot2.
Data Type	Enumeration of type HARTUNITS.
Range	This enumeration is as defined in Table 2 of Common tables definition in the HART specification.
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SLOT2VALUE
Remarks	

SLOT2VALUE

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 2 Value - Indicates the variable of slot2.
Data Type	Float64
Range	
Default	NaN

Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SLOT2UNITS
Remarks	

SLOT3[0..7]

Specific to Block(s)	Chassis HART AO IOM
Description	This parameter is for configuring the 4th slot variable to be fetched from a HART device. The device variables in each HART device are given an index code. This parameter must be configured by the user.
Data Type	INT16
Range	0 to 255
Default	0 = no configuration
Config Load	Yes
Access Lock	AppDevOnly
Residence	CEE
Related Parameters	
Remarks	Note that the SLOT parameter for SLOT0, SLOT1 and SLOT2 should be set to a value other than zero. A value of 0 indicates that the SLOT is not configured and it may give unpredictable results.

SLOT3DESC

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 3 Description - Indicates a user-defined description of slot3 variable. Valid only for output devices.
Data Type	String
Range	Length: 32 characters
Default	
Config Load	No
Access Lock	AppDevOnly
Residence	SR
Related Parameters	
Remarks	

SLOT3UNITS

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 3 Unit - Indicates the engineering unit of Slot3.
Data Type	Enumeration of type HARTUNITS.
Range	This enumeration is as defined in Table 2 of Common tables definition in the HART specification.
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SLOT3VALUE
Remarks	

SLOT3VALUE

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Slot 3 Value - Indicates the variable of slot3.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Active Connector	Yes
Related Parameters	SLOT3UNITS
Remarks	

SLOTNUMBER

Specific to Block(s)	CPM, RM, IOLIM, FTEB
Description	Slot Number – Represents number of the slot in the chassis where the module is installed.
Data Type	32-Bit Integer
Range	0 to 16
Default	
Config Load	Yes

Access Lock	Application Developer
Residence	SR
Related Parameters	ABORTALM.PR
Remarks	Chassis slot numbering is zero based, starting from the left most slot.

SLOTSFBT

Specific to Block(s)	All PM I/O Channels
Description	Channel Soft Failures. Shows bit that represents one of the soft failure codes listed in the Remarks row below.
Data Type	Bit String
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	
Remarks	The following Soft Failure Codes are presented for the associated I/O Processor (IOP) block. 0: Null Soft Failure – Not Used. 7: EEPROM checksum error or IOP not calibrated. 8: EEPROM counter error - too many writes or unformatted EEPROM. 21: Input point failed diagnostic. 23: Failure in input circuitry detected by AO or DO. 29: Bad input or bad FTA plug-in module. 31: FTA type mismatch with slot configuration. 35: Illegal internal zero configuration attempted on this channel. 36: *** Spare failure indicator *** 37: *** Spare failure indicator *** 38: Calibration of this slot has aborted. 42-80: A/D slot conversion on AIM slot underflowed minimum allowed count.

Specific to Block(s)	All Series C I/O Modules
Description	Channel Soft Failures

Data Type	Bit String
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	IOM
Related Parameters	
Remarks	Each bit represents one of the Soft Failures listed in the *Series C IO User's Guide*.

SLOWSTEPTIMR[1..24]

Specific to Block	QIPACTERM
Description	Time Until Slow Step Timer Expires in Seconds
Data Type	INT32
Range	0-65535
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value in the input assembly for the designated position [1-24].

SLOWSTEPTIMR[1..200]

Specific to Block	QIPACCHAN
Description	Time Until Slow Step Timer Expires in Seconds
Data Type	FLOAT64
Range	N/A
Default	NAN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value in the input assembly for the designated channel [1-200] in the QiMPACT cluster.

SNTPADDRESS

Specific to Block(s)	Primary C300 and FIM4 FBs
Description	SNTP Address – Indicates the active SNTP server address
Data Type	String
Range	Length: 15 Characters
Default	0.0.0.0
Config Load	Yes
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	

SNTP1ADDR

Specific to Block(s)	Primary and Secondary C300 FBs
Description	SNTP Server 1 IP Address
Data Type	String
Range	Length: 15 Characters
Default	
Config Load	No
Access Lock	View Only
Residence	C300
Related Parameters	TIMESOURCE, SNTPSTAT
Remarks	

SNTP2ADDR

Specific to Block(s)	Primary and Secondary C300 FBs
Description	SNTP Server 2 IP Address
Data Type	STRING
Range	Length: 15 Characters
Default	
Config Load	No
Access Lock	View Only
Residence	C300
Related Parameters	TIMESOURCE, SNTPSTAT
Remarks	

SNTPSKEWTHLD

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	SNTP Skew Limit (msec) - Sets the maximum skew tolerated between the module clock and SNTP time under which gradual correction of the module clock is allowed.
Data Type	32-bit unsigned integer
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	MAXSNTPSKEW, NUMSNTPSKEWEX
Remarks	When the difference between the module clock and SNTP time exceeds the value of SNTPSKEWTLHD, the module clock will be adjusted with a one time, discontinuous jump. SNTPSKEWTLHD limit is 5 Minutes.

SNTPSTAT

Specific to Block(s)	Primary and Secondary C300 and FIM4 FBs
Description	SNTP Status
Data Type	Enumeration

Range	------- (0) – Default on project side NotActive (1) – Currently SNTP is not the time source NoServer (2) – No SNTP server available SNTP1 (3) – SNTP Server 1 is active SNTP2 (4) – SNTP Server 2 is active
Default	-------
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TIMESOURCE
Remarks	

SO

Specific to Block(s)	Timer, Transition
Description	Timer Status Output - Indicates when the timer has expired.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, RV, SP.
Remarks	SO is set to On when the timer expires, (i.e., PV = SP). SO is returned to Off when the timer is reset.

Specific to Block(s)	DOC
Description	Status Output
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Operator

Residence	IOP
Related Parameters	DOMSO[0..numChans-1]
Remarks	

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Output State – Indicates current state of the Output associated with the Pulse Input channel.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	DOCHANNEL (PM I/O) DOCHANNEL (Series C I/O)
Description	Status Output. Specifies the state of the status output from a digital output point as On or Off.
Data Type	Boolean
Range	0 0ff Field contact is to be de-energized. 1 On Field contact is to be energized.
Default	Off
Config Load	No
Access Lock	Operator
Residence	IOM
Related Parameters	
Remarks	This parameter is the output from a digital output point. • When the channel is configured as STATUS and the SO pin is connected to a Function Block, the value indicates the fetched value from the upstream Function Block. The SO value can only be changed by changing the value in the upstream Function Block. • When the channel is configured as STATUS and either the ONPULSE or OFFPULSE pins are connected to a Function Block, storing to SO will be rejected. The value shows OFF for ONPULSE configuration, and ON for

OFFPULSE configuration.

- When the channel is configured as STATUS and SO, ONPULSE, and OFFPULSE are not connected to a Function Block, the user can store a value to this parameter and control the Status Output. The value indicates the current Status Output status.
- When the channel is configured as PWM, the user cannot write to SO. The value indicates OFF.
- When the channel's **Error! Reference source not found.** parameter is On the Status Output is frozen at its last value.

SO[1..NUMCHAN]

Specific to Block(s)	DO16, DO32
Description	Status Output
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Operator
Residence	IOP
Related Parameters	DOMSO[0..numChans-1]
Remarks	

SO[6..7]

Specific to Block(s)	Pulse Input IOM
Description	Output State – Indicates current state of the Output associated with the Pulse Input Channel.
Data Type	Boolean
Range	Off (0): Current state of the output screw is de-energized. On (1): Current state of the output screw is energized.
Default	Off (0)
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	SO
Remarks	This parameter can be set from the Control Builder configuration form. Writing this parameter overrides any SO set from the associated PI channel with fast cutoff block.

SOAKTIME[1..NUMPROFILES][1..NUMRAMPSOAK]

Specific to Block(s)	RampSoak
Description	Soak Time (in Minutes) - The target soak times, specified by the user. There is one soak time per Ramp/Soak pair.
Data Type	Real
Range	0.0 to 120.0
Default	0.0
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	NUMRAMPSOAK[1..NUMPROFILES], RAMPRATE[1..NUMPROFILES][1..NUMRAMPSOAK], SOAKVAL[1..NUMPROFILES][1..NUMRAMPSOAK], STARTOP[1..NUMPROFILES], STARTSEG[1..NUMPROFILES].
Remarks	

SOAKVAL[1..NUMPROFILES][1..NUMRAMPSOAK]

Specific to Block(s)	RampSoak
Description	Soak Value (in Engineering Units) - The target soak values, specified by the user. There is one soak value per Ramp/Soak pair.
Data Type	Real
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	NUMRAMPSOAK[1..NUMPROFILES], RAMPRATE[1..NUMPROFILES][1..NUMRAMPSOAK], SOAKTIME[1..NUMPROFILES][1..NUMRAMPSOAK], STARTOP[1..NUMPROFILES], STARTSEG[1..NUMPROFILES].
Remarks	

SOCMDOFF

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Command Status Output Off – storing On to this parameter will cause the Output associated with the Pulse Input channel to be set Off; reading this parameter always returns a value of Off.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SO
Remarks	

SOCMDON

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Command Status Output On – storing On to this parameter will cause the Output associated with the Pulse Input channel to be set On; reading this parameter always returns a value of On.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SO
Remarks	

SOFTFAIL

Specific to Block(s)	Primary/Secondary C300, FIM4
Description	Soft Failures present - Indicates the Soft Fail state at the C300 Controller or FIM4 level. (See Soft Failures tab for details)
Data Type	Boolean
Range	On – One or more Soft Failures occurred or exists. Off – No Soft Failure.
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	C300, FIM4
Related Parameters	WDTHWFAIL, WDTSWFAIL, ROMBOOTIMGCHKSMFAIL, ROMAPPIMGCHKSMFAIL, IOL2SOFTFAIL, IOL1SOFTFAIL, DEBUGFLAGSET, BCDSWSTS, BATTERYNOTOKSFTAB, BACKUPRAMSCRUBERRS, BACKUPRAMSWEEPERR, BATTERYNOTOK, RAMSCRUBERRS, RAMSWEEPERR
Remarks	SOFTFAIL derives it's state from the parameters listed in Related Parameters.

SOFTFAIL1A

Specific to Block(s)	All IOM Blocks
Description	Primary IOM Block Soft Failure
Data Type	Bit String
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	Each bit represents one of the Soft Failures listed in the PM I/O and Series C I/O soft failure codes.

SOFTFAIL2A

Specific to Block(s)	All IOM Blocks
Description	Primary IOM Block Soft Failure
Data Type	Bit String
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	Each bit represents one of the Soft Failures listed in the PM I/O and Series C I/O soft failure codes.

SOFTFAIL1B

Specific to Block(s)	All IOM Blocks
Description	Secondary IOM Block Soft Failure
Data Type	Bit String
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	Each bit represents one of the Soft Failures listed in the PM I/O and Series C I/O soft failure codes.

SOFTFAIL2B

Specific to Block(s)	All IOM Blocks
Description	Secondary IOM Block Soft Failure
Data Type	Bit String
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	Each bit represents one of the Soft Failures listed in the PM I/O and Series C I/O soft failure codes.

SOFTWAREREV[0..7]

Specific to Block(s)	Chassis HART AI IOM, HART AO IOM
Description	Software Revision Number- Indicates the software revision number of the HART device connected to the channel.
Data Type	UINT8
Range	0 to 255
Default	0
Config Load	No
Access Lock	ViewOnly

Residence	CEE
Related Parameters	
Remarks	

SOINITVAL

Specific to Block(s)	DOCHANNEL (PM I/O) DOCHANNEL (Series C I/O)
Description	SO Initialize Value. This is the field output value of the DOCHANNEL.
Data Type	Boolean
Range	Off Field contact is to be de-energized. On Field contact is to be energized.
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	SO
Remarks	This parameter is the field output value of this channel. The data reflects the actual IOM output for both STATUS and PWM configurations.

SOINITVAL[1..NUMCHAN]

Specific to Block(s)	DO16, DO32
Description	Status Echoback Value
Data Type	Boolean
Range	Off: Field contact is to be de-energized. On: Field contact is to be energized.
Default	Off
Config Load	No
Access Lock	ViewOnly
Residence	IOP
Related Parameters	SO
Remarks	The data reflects the actual IOP output for both STATUS and PWM configurations.

SOREADFAIL

Specific to Block(s)	DOC, DO16, DO32; DOCHANNEL (Series C I/O)		
Description	SO Initialize Value Invalid		
Data Type	Boolean		
Range	0	Off	The SO data for the channel was successfully read.
	1	On	Error occurred upon reading the SO data from the IOM.
Default	Off		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks	This parameter is only valid for Status types.		

SOSOURCE

Specific to Block(s)	DOC
Description	Timer Status Output (SO) Source Connector
Data Type	
Range	
Default	
Config Load	
Access Lock	Application Developer
Residence	
Related Parameters	
Remarks	

SOSTS

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Status of Output (SO)
Data Type	Boolean
Range	Good (0) Bad (1)
Default	Good (0)
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	SO
Remarks	

SLWSRCID

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O)
Description	Slidewire Voltage Source Identifier: Defines the slot number of the voltage source for the slidewire.
Data Type	Integer
Range	1 to 16
Default	1
Config Load	No
Access Lock	Engineer
Residence	IOP
Related Parameters	
Remarks	The SENSRTYP must equal Slidewire. This parameter is currently not supported.

SP

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Setpoint Value (in Engineering Units)
Data Type	64-Bit Real Number
Range	SPLOLM to SPHILM
Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	
Remarks	SP is an initializable input for all function blocks

Specific to Block(s)	RATIOCTL
Description	Setpoint Value – Defines target ratio between X1 and X2 inputs.
Data Type	Float64

Range	SPLOLM to SPHILM
Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	SPHILM, SPLOLM,
Remarks	

Specific to Block(s)	Timer
Description	Preset Time Value - Sets the amount of time that the Timer function block is to run.
Data Type	Integer
Range	Determined by TIMEBASE parameter selection.

If TIMEBASE is set to …	SP Range is…
Seconds	0 to 4,294,947
Minutes	0 to 71,581
Cycles	0 to 2,147,483,647 (2^31-1)

Default	0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	PUSHSP, PV, RV, SO, TIMEBASE
Remarks	SP limit is determined by TIMEBASE units selection, but not to exceed equivalent of 49.71 days.

SP1FASTFEED[1..4]

Specific to Block(s)	JAGXCHAN	
Description	Setpoint 1 Fast Feeding	
Data Type	BOOLEAN	
Range	Off(0)	Not Fast Feeding
	On(1)	Fast Feeding
Default	Off	

Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value of bit 2 of the status word in the floating point input assembly for the designated scale slot [1..4].

SP2FASTFEED[1..4]

Specific to Block(s)	JAGXCHAN	
Description	Setpoint 2 Fast Feeding	
Data Type	BOOLEAN	
Range	Off(0)	Not Fast Feeding
	On(1)	Fast Feeding
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 3 of the status word in the floating point input assembly for the designated scale slot [1..4].	

SP1FEEDING[1..4]

Specific to Block(s)	JAGXCHAN	
Description	Setpoint 1 Feeding	
Data Type	BOOLEAN	
Range	Off(0)	Not Feeding
	On(1)	Feeding
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 0 of the status word in the floating point input assembly for the designated scale slot [1..4].	

SP2FEEDING[1..4]

Specific to Block(s)	JAGXCHAN	
Description	Setpoint 2 Feeding	
Data Type	BOOLEAN	
Range	Off(0)	Not Feeding
	On(1)	Feeding
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 1 of the status word in the floating point input assembly for the designated scale slot [1..4].	

SP1TOLERANCE[1..4]

Specific to Block(s)	JAGXCHAN	
Description	Setpoint 1 In Tolerance	
Data Type	BOOLEAN	
Range	Off(0)	Not in Tolerance
	On(1)	In Tolerance
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 4 of the status word in the floating point input assembly for the designated scale slot [1..4].	

SPCODESIZE

Specific to Block(s)	Step Block
Description	Number of Pcode Bytes for Stop Condition expression. Represents number of bytes required for the Psuedo code of the Step-specific Stop Condition expression.
Data Type	Integer32
Range	0 to 200
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	ACE, C200, SIM_C200
Related Parameters	SCNUMSRCCONN
Remarks	

SPCONN

Specific to Block(s)	PID, PIDFF, PosProp
Description	This is an internal parameter for system use only.
Data Type	Depending on the order in which blocks are loaded, the following status may be returned for this parameter: “Referenced FB Not Found”. This indicates that a function block was referenced which has not yet been loaded to the controller. When this happens, no action is required except to load the referenced block before putting the strategy on control.
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

SPEUHI

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp
Description	Set Point (SP) High Range (in Engineering Units) - This value corresponds to 100% of full-scale value.
Data Type	64-Bit Real Number
Range	Same as PVEUHI
Default	Same as PVEUHI
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVEUHI, PVEULO, SPEULO.
Remarks	SPEUHI tracks PVEUHI

Specific to Block(s)	ENGREGCALC
Description	Set Point (SP) High Range (in Engineering Units) – Specifies set point high range value in Engineering Units.
Data Type	64-Bit Real Number
Range	Greater than SPEULO
Default	100.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SP, SPEULO
Remarks	

SPEULO

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp
Description	Set Point (SP) Low Range (in Engineering Units) - This value corresponds to 0% of full-scale value.
Data Type	64-Bit Real Number
Range	Same as PVEULO
Default	Same as PVEULO
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	PVEUHI, PVEULO, SPEUHI.
Remarks	SPEULO tracks PVEULO.

Specific to Block(s)	ENGREGCALC
Description	Set Point (SP) Low Range (in Engineering Units) – Specifies set point low range value in Engineering Units.
Data Type	64-Bit Real Number
Range	SPLOLM to SPHILM
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SP, SPEUHI
Remarks	

SPFORMAT

Specific to Block(s)	PID, PIDFF, PosProp
Description	Set Point Display Format
Data Type	Enumeration PVFORMAT
Range	D0 (0) D1 (1) D2 (2) D3 (3)
Default	D1 (1)
Config Load	No
Access Lock	ViewOnly
Residence	
Related Parameters	PVFORMAT
Remarks	

SPHI

Specific to Block(s)	PID-PL
Description	Setpoint High – Upper range limit when controlling PV within a range.
Data Type	Float64
Range	SPLO – SPHILM
Default	0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	CTRLMODE SPLO.
Remarks	This parameter is applicable only when CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPHIACTIVE

Specific to Block(s)	PID-PL
Description	Active SP High Limit – Upper SP limit used by the Profit Loop PKS control algorithm. This value may differ from the user-entered limit, SPHI, while ramping the SPHI limit.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SPHI
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPHIFL

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) High Limit Flag – Indicates if SP has exceeded its upper limit, as specified by the Set Point High Limit (SPHILM).
Data Type	Boolean
Range	Off (0): SP high limit is not exceeded. On (1): SP high limit is exceeded.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SPHILM
Remarks	

SPHILM

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) High Limit (in Engineering Units) - Defines the upper limit for the SP value.
Data Type	64-Bit Real Number
Range	NaN, or SPLOLM to PVEUHI
Default	100.00
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SPHIFL
Remarks	Entering NaN disables SP limit checking, by forcing SPHILM to its extreme value (PVEUHI).

SPHILMOPT

Specific to Block(s)	PID-PL
Description	SP High Limit for Optimization
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CTRLMODE, OPTMODE, SPHIOPTOFFSET, SPLOLMOPT.
Remarks	Profit Loop PKS can be configured to optimize the process over a limited operating range. As a guard against process excursions, the range used for optimization, SPLOLMOPT to SPHILMOPT, may be more restrictive than the normal control range, SPLO to SPHI. SPHILMOPT is calculated as: SPHILMOPT = SPHI - SPHIOPTOFFSET If a conflict exists between the OP optimization limits and the SP optimization limits, the SP limits are enforced while the OP limits are ignored. This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPHIOPTOFFSET

Specific to Block(s)	PID-PL
Description	SP High Limit Offset for Optimization
Data Type	Float64
Range	0 to (SPEUHI − SPEULO)
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE

Related Parameters	SPHI, SPHILMOPT.
Remarks	Profit Loop PKS can be configured to optimize the process over a limited operating range. As a guard against process excursions, the range used for optimization, SPLOLMOPT to SPHILMOPT, may be more restrictive than the normal control range, SPLO to SPHI. SPHILMOPT is calculated as: SPHILMOPT = SPHI - SPHIOPTOFFSET If a conflict exists between the OP optimization limits and the SP optimization limits, the SP limits are enforced while the OP limits are ignored. This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPHIRAMPRATE

Specific to Block(s)	PID-PL
Description	SPHI Ramp Rate, in Engineering Units/Minute – Ramp rate applied to external (operator or program) changes in the upper control limit, SPHI.
Data Type	Float64
Range	>0, NaN
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CTRLMODE, SPHI, SPHIACTIVE, SPLORAMPRATE.
Remarks	When the active high limit, SPHIACTIVE, is above the operator-set value, SPHI, the active limit ramps toward SPHI at this specified rate. A one-shot jump in the active limit toward the new SPHI limit is allowed if the jump is deemed to not adversely impact control. Ramping proceeds from this point. This jump is automatic and cannot be disabled by the end user. Setting the ramp rate to NaN disables ramping.

	SPHI ramping is valid only when the CTRLMODE is set to RANGE control. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPLO

Specific to Block(s)	PID-PL
Description	Setpoint Low – Lower range limit when controlling PV within a range.
Data Type	Float64
Range	SPLOLM – SPHI
Default	0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	CTRLMODE, SPHI.
Remarks	This parameter is applicable only when CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPLOACTIVE

Specific to Block(s)	PID-PL
Description	Active SP Low Limit – Lower SP limit used by the Profit Loop PKS control algorithm. This value may differ from the user-entered limit, SPLO, while ramping the SPLO limit.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SPHIACTIVE, SPLO.
Remarks	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPLOFL

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) Low Limit Flag – Indicates if SP has exceeded its lower limit, as specified by the Set Point Low Limit (SPLOLM).
Data Type	Boolean
Range	Off (0): SP low limit not exceeded. On (1): SP low limit exceeded.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SPLOLM
Remarks	

SPLOLM

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) Low Limit (in Engineering Units) - Defines the lower limit for the SP value.
Data Type	64-Bit Real Number
Range	NaN, or PVEULO to SPHILM
Default	0.00
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SPLOFL
Remarks	Entering NaN disables SP limit checking, by forcing SPLOLM to its extreme value (PVEULO).

SPLOLMOPT

Specific to Block(s)	PID-PL
Description	SP Low Limit for Optimization
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CTRLMODE, OPTMODE, SPHILMOPT, SPLOOPTOFFSET.
Remarks	Profit Loop PKS can be configured to optimize the process over a limited operating range. As a guard against process excursions, the range used for optimization, SPLOLMOPT to SPHILMOPT, may be more restrictive than the normal control range, SPLO to SPHI. SPLOLMOPT is calculated as: SPLOLMOPT = SPLO + SPLOOPTOFFSET If a conflict exists between the OP optimization limits and the SP optimization limits, the SP limits are enforced while the OP limits are ignored. This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPLOOPTOFFSET

Specific to Block(s)	PID-PL
Description	SP Low Limit Offset for Optimization
Data Type	Float64
Range	0 to (SPEUHI − SPEULO)
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE

Related Parameters	SPLO, SPLOLMOPT.
Remarks	Profit Loop PKS can be configured to optimize the process over a limited operating range. As a guard against process excursions, the range used for optimization, SPLOLMOPT to SPHILMOPT, may be more restrictive than the normal control range, SPLO to SPHI. SPLOLMOPT is calculated as: SPLOLMOPT = SPLO + SPLOOPTOFFSET If a conflict exists between the OP optimization limits and the SP optimization limits, the SP limits are enforced while the OP limits are ignored. This parameter is applicable only when OPTMODE is other than NONE and CTRLMODE is RANGE. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPLORAMPRATE

Specific to Block(s)	PID-PL
Description	SPLO Ramp Rate, in Engineering Units/Minute – Ramp rate applied to external (operator or program) changes in the lower control limit, SPLO.
Data Type	Float64
Range	>0, NaN
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CTRLMODE, SPHIRAMPRATE SPLO, SPLOACTIVE.
Remarks	When the active low limit, SPLOACTIVE, is below the operator-set value, SPLO, the active limit ramps toward SPLO at this specified rate. A one-shot jump in the active limit toward the new SPLO limit is allowed if the jump is deemed to not adversely impact control. Ramping proceeds from this point. This jump is automatic and cannot be disabled by the end user. Setting the ramp rate to NaN disables ramping.

	SPLO ramping is valid only when the CTRLMODE is set to RANGE control. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

SPOUT

Specific to Block(s)	UCNOUT, HIWAYOUT, REEOUT
Description	Setpont Output - Indicates the setpoint value that is being stored to the Universal Control Network (UCN) Process Manager control point SP parameter.
Data Type	Float64
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	REMCASTYPE, SPPIN.
Remarks	

SPP

Specific to Block(s)	PID, PIDFF, PosProp
Description	Setpoint Value (in Percent)
Data Type	64-Bit Real Number
Range	N/A
Default	NaN
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SP
Remarks	

SPPIN

Specific to Block(s)	UCNOUT, HIWAYOUT, REEOUT
Description	Setpoint in Percent Input - Shows the Setpoint value brought from the primary in percent.
Data Type	Float64
Range	-6.9 to 106.9 percent
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	ACE
Related Parameters	REMCASTYPE, SPOUT.
Remarks	

SPRATEREQ

Specific to Block(s)	PID, PIDFF, PosProp
Description	Requested Set Point (SP) ramp rate (from Sequential Control Module (SCM) Control Request)
Data Type	64-Bit Real Number
Range	NaN, positive or negative Real number, or 0.0
Default	0.0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	CONTROLREQ, LASTRATEREQ, RESTARTOPT, SCMOPT, SPTVREQ.
Remarks	A pending SPRATEREQ can be canceled by setting it to NaN. Operator change requires MODEATTR = Operator. A SPRATEREQ should immediately be followed by a SPTVREQ.

SPREQ

Specific to Block(s)	PID, PIDFF, PosProp
Description	The requested SP (Set Point) value. The SCM CONTROLREQ wants a step-change in the regulatory control block's SP.
Data Type	64-Bit Real Number
Range	SPLOLM to SPHILM
Default	0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	CONTROLREQ, LASTSPREQ, RESTARTOPT, SCMOPT.
Remarks	A pending SPREQ can be canceled by setting it to NaN. Operator change requires MODEATTR = Operator.

SPTOL

Specific to Block(s)	ENHREGCALC, RATIOCTL
Description	Set Point (SP) Tolerance – Define tolerance value for SP input.
Data Type	Float64
Range	
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	C200
Related Parameters	
Remarks	

SPTV

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) Target Value (in Engineering Units) – Contains the target SP value when SP ramping is being used.
Data Type	64-Bit Real Number
Range	NaN or SPLOLM to SPHILM
Default	N/A
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SPTVP
Remarks	To invoke SP ramping, the user must store a target SP value (SPTV). Note: In order to store the SPTV, target value processing must be enabled byt not running (i.e., SPTVOPT = Enable, and SPTVSTATE = Off or Preset). When SPTV is stored, and the function block is active, the following will occur: The system calculates a ramp time (SPTVTIME), based on the normal ramp rate. SPTVSTATE goes to Preset.

SPTVDEVFL

Specific to Block(s)	PID, PIDFF, PosProp
Description	Set Point (SP) Target Value Deviation Flag - This flag is set to “On (1)” when the difference between the Process Variable (PV) and the ramping SP is greater than SPTVDEVMAX. While SPTVDEVMAX is exceeded, the ramping is temporarily stopped. Ramping resumes once the difference between SP and PV is less than SPTVDEVMAX.
Data Type	Boolean
Range	Off (0): Deviation is within limits. On (1): Deviation exceeds maximum; Set Point (SP) ramping has temporarily stopped.
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE

Related Parameters	SPTVDEVMAX
Remarks	If the function block has a SP and PV input, the user can specify a maximum ramp deviation (SPTVDEVMAX). If the maximum deviation is exceeded, SP ramping will stop until PV catches up with the SP. SPTVDEVMAX is the maximum deviation allowed during set point ramping, in engineering units/min. Guaranteed Maximum Ramp processing works as follows: SPTVDEVMAX may be NaN or greter than zero. NaN means "do not check ramp deviation". If SPTVDEVMAX is not NaN, set point ramping stops when the absolute value of the deviation (|PV - SP|) exceeds SPTVDEVMAX. The deviation flag (SPTVDEVFL) is set, and SPTVSTATE remains in Run. Ramping resumes as soon as the absolute value of the deviation returns within the limit. When ramping resumes, the deviation flag (SPTVDEVFL) is reset. Note: If the user has specified a ramp time, and ramping is interrupted by Guaranteed Max Ramp processing, then the actual ramp time will be greater than the user-specified time.

SPTVDEVMAX

Specific to Block(s)	PID, PIDFF, PosProp
Description	Set Point (SP) Target Value Maximum Deviation - The maximum deviation allowed during set point ramping, in engineering units.
Data Type	64-Bit Real Number
Range	NaN, or greater than 0.0.
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	SPTVDEVFL
Remarks	

SPTVNORMRATE

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) Target Value Normal Ramp Rate - The rate that the set point will ramp, in engineering units/min.
Data Type	64-Bit Real Number
Range	NaN, or greater than 0.0.
Default	NaN
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	SPTVTIME
Remarks	This parameter allows the user to start SP ramping without having to specify a ramp time. SPTVNORMRATE may be NaN or greater than zero. NaN means “change immediately” (i.e., ramp time = 0). If the function block has a SP and PUSHSP PV input, specify a maximum deviation allowed between PV and SP during ramping (SPTVDEVMAX).

SPTVOPT

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC	
Description	Set Point (SP) Target Value Option - Indicates if SP target value processing is requested.	
Data Type	Enumeration ENBSTATE	
Range	Disable (0):	Target value processing is not requested.
	Enable (1):	Target value processing is requested.
Default	Disable (0)	
Config Load	Yes	
Access Lock	Engineer	
Residence	CEE	
Related Parameters	SPTV, SPTVDEVMAX, SPTVNORMRATE, SPTVSTATE.	

Remarks	To invoke SP ramping, the user must store a target SP value (SPTV). Note: In order to store to SPTV, target value processing must be enabled but not running (i.e., SPTVOPT = Enable, and SPTVSTATE = Off or Preset). When SPTV is stored, and the function block is active, the following will occur: The system calculates a ramp time (SPTVTIME), based on the normal ramp rate. SPTVSTATE goes to Preset.

SPTVP

Specific to Block(s)	PID, PIDFF, PosProp
Description	Set Point (SP) Target Value (in Percent)
Data Type	64-Bit Real Number
Range	NaN
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SPTV
Remarks	

SPTVRATE

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) Target Value Ramp Rate (calculated)
Data Type	64-Bit Real Number
Range	NaN
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SPTVTIME
Remarks	

SPTVREQ

Specific to Block(s)	PID, PIDFF, PosProp
Description	Requested Set Point (SP) target value. The SCM CONTROLREQ sets a target value in regulatory control block's SP in preparation for an SP ramp request.
Data Type	64-Bit Real Number
Range	NaN, or SPLOLM to SPHILM
Default	0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SPRATEREQ
Remarks	A pending SPTVREQ can be canceled by setting it to NaN. Operator change requires MODEATTR = Operator.

SPTVSTATE

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC	
Description	Set Point (SP) Target Value Processor State - State of the ramping function. A state of RUN(2) is required to start ramping.	
Data Type	Enumeration TVPROC	
Range	Off (0):	No target value processing.
	Preset (1):	Set-up the SP target value and ramp time.
	Run (2):	Perform the SP ramping function.
Default	Off (0)	
Config Load	No	
Access Lock	Operator	
Residence	CEE	
Related Parameters		
Remarks		

SPTVTIME

Specific to Block(s)	PID, PIDER, PIDFF, PID-PL, PosProp, ENHREGCALC
Description	Set Point (SP) Target Value Ramp Time
Data Type	64-Bit Real Number
Range	Greater than or equal to 0.0.
Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	SPTVRATE
Remarks	

SRC

Specific to Block(s)	Auxcalc, RegCalc
Description	This is an internal parameter for system use only.
Data Type	Depending on the order in which blocks are loaded, the following status may be returned for this parameter: “Referenced FB Not Found”. This indicates that a function block was referenced which has not yet been loaded to the controller. When this happens, no action is required except to load the referenced block before putting the strategy on control.
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

SRCDATA[0]

Specific to Block(s)	CAB types
Description	Source Data. Parameter that holds a copy of the CAB source code. In Library and Project view it reflects the latest CAB type code saved in ERDB. In Monitor view it reflects the source code that is loaded and running in CEE. This can be cut and pasted back into MSVS if you wish to recover code that was saved over.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	BIGSTRING
Range	Unlimited size string
Default	None
Config Load	No
Access Lock	ViewOnly
Residence	ERDB Only
Related Parameters	None
Remarks	

SSTEPLOCK

Specific to Block(s)	SCM
Description	Single Step Mode Access Lock
Data Type	Enumeration CSCOACCLOCK
Range	Operator (0) Engineer (1) ViewOnly (2) OtherFB (3)
Default	Engineer (1)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	MODE
Remarks	The value of SSTEPLOCK restricts who can change the Sequential Control Module (SCM) MODE to SingleStep.

STARTFL

Specific to Block(s)	Totalizer, Pulse Input Totalizer
Description	Start Totalizer Command Flag - When this flag changes from Off to On, the Totalizer function block starts the accumulator.
Data Type	Boolean
Range	Off (0): Do not start the accumulator On (1): Start the accumulator
Default	Off (0): Do not start the accumulator
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	RESETFL, STOPFL.
Remarks	

Specific to Block(s)	Timer
Description	Start Command Flag - Provides the ability to issue the Start command to Timer function block.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	COMMAND, RESETFL, RESTARTFL, STOPFL.
Remarks	An Off-to-On transition of STARTFL starts the timer.

STARTINDEX

Specific to Block(s)	SIFLAGARRCH, SINUMARRCH, SITEXTARRCH
Description	Starting Element Index – Identifies the start of the contiguous array in the device.
Data Type	32-Bit Integer
Range	0 to 99,999
Default	0
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Refer to the Allen-Bradley Interface Appendix the MODBUS Interface Appendix in the *Serial Interface Module Implementation Guide* for additional configuration data.

STARTOFFSET

Specific to Block(s)	Step
Description	Start Offset in seconds
Data Type	32-Bit Integer
Range	
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	Minitrend frozen values use two parameters defined for the step to allow visibility for phenomena occurring before the step started and after the step completed. Both times are in seconds with a default of 0. STARTOFFSET defines how much history is shown before the step started. The start is calculated as: Start time = Step start – STARTOFFSET When the step is repeated as part of an execution loop in SCM/RCM, the step start time is larger that the recorded step end time when the step is reactivated. In this case, the minitrend display resumes the realtime method for the current values for the duration of the repeated step execution.

STARTOP[1..NUMPROFILES]

Specific to Block(s)	RampSoak
Description	Starting Output (OP) Value for a RampSoak profile.
Data Type	Real
Range	N/A
Default	0.0
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	STARTSEG[1..NUMPROFILES]
Remarks	

STARTOPT

Specific to Block(s)	DevCtl, All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.	
Description	Starting State Option - A configurable parameter that specifies the action the control device takes, when SCMSTATE is Checking, Idle, or Complete.	
Data Type	Enumeration REGEXCOPT	
Range	None (0):	No changes
	Man (1):	Set MODEREQ = Manual
	Auto (2):	Set MODEREQ = Auto
	Cas (3):	Set MODEREQ = Cas
	FixedOP (4):	Set OPREQ = STARTVAL
	HoldPV (5):	Set SPREQ = PV
	FixedSP (6):	Set SPREQ = STARTVAL, and SPRATEREQ = NaN
	RampedSP (7):	Set SPTVREQ = STARTVAL, and SPRATEREQ = STARTRATE

Default	None (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STARTRATE, STARTVAL.
Remarks	Defines values for SPREQ, SPRATEREQ, OPREQ, and MODEREQ when MONSCOSTATE = Ready, Checking, or End. Illegal if SCMOPT = None.

STARTRATE

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Starting State Set Point (SP) Ramp Rate - The value used for setting SPRATEREQ, when STARTOPT is Ramped SP.
Data Type	64-Bit Real Number
Range	NaN, 0.0, or positive or negative Real numbers
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STARTOPT
Remarks	Defines value for SPRATEREQ, when STARTOPT = RampedSP.

STARTSEG[1..NUMPROFILES]

Specific to Block(s)	RampSoak
Description	Starting Segment ID
Data Type	Integer
Range	Greater than zero
Default	1
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	STARTOP[1..NUMPROFILES]
Remarks	

STARTVAL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Starting State Value - The value used for setting OPREQ, when STARTOPT is FixedOP; or for setting SPREQ or SPTVREQ, when STARTOPT is FixedSP or RampedSP.
Data Type	64-Bit Real Number
Range	OPEXLOLM to OPEXHILM, when STARTOPT = FixedOP. SPLOLM to SPHILM, when STARTOPT = FixedSP or RampedSP. (NaN, 0.0, positive or negative real numbers)
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STARTOPT
Remarks	Defines a value for OP, when STARTOPT = FixedOP; or a value for SP, when STARTOPT = FixedSP; Or a value for SP, when STARTOPT = RampedSP.

STATE

Specific to Block(s)	Totalizer, Pulse Input Totalizer
Description	Totalizer State - Indicates the current state of the Totalizer function block.
Data Type	Enumeration STATE
Range	Stopped (0) Running (1) - (accumulating)
Default	Stopped (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	RESETFL, STARTFL, STOPFL.
Remarks	

Specific to Block(s)	Timer
Description	Timer State - Indicates current state of Timer function block.
Data Type	Enumeration TIMERSTATE
Range	Stopped (0) Running (1)
Default	Stopped (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	COMMAND
Remarks	

Specific to Block(s)	SCM
Description	SCM State - Indicates current state of the SCM function block.
Data Type	Enumeration CSCOSTATE
Range	Loading (0) Loaded (1) Inactive (2) Validated (3) Running (4) Complete (5) Checking (6)

	Idle (7) Interrupting (8) Interrupted (9) Restarting (10) Restarted (11) Holding (12) Held (13) Stopping (14) Stopped (15) Aborting (16) Aborted (17) CommErr (18)
Default	Inactive (2)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	Refer to the SCM STATE transition diagram in <HH><EPKS@kb@scmug@kb@Planning Sequential Control Strategies@kb@How SCM Commands are limited by current State@kb@State / Command Interaction>*SCM STATE and COMMAND interraction*</HH> in the *Sequential Control Module User Guide* for additional information.

Specific to Block(s)	Handler, Step, Transition
Description	Sequential Control Module (SCM) Component State
Data Type	Enumeration CSCOPARTSTATE
Range	Edit (0) Inactive (1) Disabled (2) Enabled (3) Active (4) ActiveComplt (5) ProcOutputs (6) ProcMessages (7) ProcMinWait (8)
Default	Edit (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	I/O Link State. Shows the current state of the associated I/O link.	
Data Type	Enumeration	
Range	NOTLOADED (0):	IOLINK block has not been loaded.
	ONLINE (1):	IOLINK is online.
Default	NOTLOADED (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	The IOLINK does not have an “INACTIVE” state.	

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O)	
Description	Current State of the Smart Transmitter Interface (STI) point.	
Data Type	Enum	
Range	None (0):	Off net.
	Loading (2):	Loading of the database is occurring between the STI point and the transmitter.
	Loadcomp (3):	Loading of the database between the STI point and the transmitter has completed successfully.
	Loadfail (4):	Loading of the database between the STI point and the transmitter has failed.
	Calib (5):	The STI point is calibrating certain parameters at the transmitter.
	Calcomp (6):	Calibration has completed successfully.
	Calfail (7):	Calibration has failed.
	OK (8):	Normal State – The STI and the transmitter are okay. Transmitter is updating the Process Variable (PV) value at the STI point. State remains OK when the point is made inactive.

	DBChange (9):	A database mismatch exists between the STI point and the transmitter. Transmitter is not updating the PV value at the STI point. State remains Dbchange when point is made inactive.
Default	None (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOM	
Related Parameters		
Remarks	This parameter is only exposed, if ASSOCIOPTYP is STI-MV.	

STATE0

Specific to Block(s)	Flag, Push.
Description	State 0 Indicator
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVFL, STATE.
Remarks	Value is On, when Flag function block is in State 1 (Process Variable (PV) shows STATETEXT[0] and PVFL is Off).

STATE1

Specific to Block(s)	Flag, Push.
Description	State 1 Indicator
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, PVFL, STATE0.
Remarks	Value is On, when Flag function block is in State 1 (Process Variable (PV) shows STATETEXT[1] and PVFL is On).

STATETEXT[0..1]

Specific to Block(s)	Flag, Push
Description	State Descriptor Text - Defines text for the two states of the Flag FB; STATETEXT[0] corresponds to the Boolean state of Off for the Flag, while STATETEXT[1] corresponds to On.
Data Type	String
Range	Length: 12 characters
Default	“Off”, “On”
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NORMAL, PUSHSP, PV.
Remarks	

STATETEXT[0..3]

Specific to Block(s)	DICHANNEL		
Description	Text for Process Variable (PV) Normal State.		
Data Type	String		
Range	12 Characters		
Default	0	STATETEXT [0]	OFF
	1	STATETEXT [1]	ON
	2	STATETEXT [2]	RESERVED
	3	STATETEXT [3]	NONE
Config Load	Yes		
Access Lock	Engineer		
Residence	SR		
Related Parameters			
Remarks	This parameter is only exposed if ALMOPT is OFFNORML.		

STATETEXT[0..6]

Specific to Block(s)	DevCtl
Description	Text for Defined States
Data Type	String
Range	Length: 12 characters
Default	Null String
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	LASTOPMNAME, LASTOPREQ, NUMDINPTS, NUMDOUTS, PUSHSP, PV, PVAUTO, OP, OPFINAL, OPREQ.
Remarks	Access is illegal if NUMDINPTS = 0, and NUMDOUTS = 0.

STATETIME[0..2]

Specific to Block(s)	DevCtl
Description	Accumulated State Time - The amount of time (in hours) that the device has spent in any of the settable states.
Data Type	DeltaTime
Range	0 to 4000 days
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	GPV, MAINTOPT. NUMSTATES, PUSHSP, PV, RESETFL.
Remarks	Defaulted to 0 if MAINTOPT is not set On. Reset to 0 whenever RESETFL is set from Off to On. STATETIME[2] is illegal if NUMSTATES = 2.

STATRESET

Specific to Block(s)	IOLIM, Secondary IOLIM, FIM, CPM, IOLINK, FTEB, C300 IOLINK
Description	Reset Statistics.
Data Type	Boolean
Range	Off (0): Statistical parameters accumulate. On (1): All statistical parameters are reset.
Default	Off (0)
Config Load	No
Access Lock	Operator
Residence	IOLIM, IOLINK, FIM, C200, FTEB, C300 IOLINK
Related Parameters	
Remarks	Writing ‘ON’ to this parameter will reset all statistical parameters for the IOLIM block. It resets the CPUFREEMIN and CPUFREEAVG parameters on the FTE Bridge block.

STATSRESET

Specific to Block(s)	Primary/Secondary C300, C200, FIM4, EHG and LIOM ACE, SIM_C200, CEE, CEEACE, CEESIMC200, CEEC300, GEE, EE
Description	Reset Statistics command parameter
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Operator
Residence	ACE(CEEACE, ACE), C200(CEE, CPM), SIM_C200(SIM_C200, CEESIMC200), C300(C300, CEEC300), LIOM, EHG
Related Parameters	CPUCYCLEAVG[0..39] CPUCYCLEMAX[0..39], CPUFREEAVG, CPUFREEAVGA, CPUFREEAVGB, CPUFREEMIN, NUMPARRSPAVG, NUMPARRSPMAX, NUMNTFRQUAVG NUMNTFRQUMAX, NUMACCRQUAVG, NUMACCRQUMAX, RDNCMPT, RDNDELAYAVG, RDNDELAYMAXRDNXFERAVGRDNXFERMAX.
Remarks	Store to this parameter causes initialization of all statistics parameters maintained within the CPM and CEE (listed above). Any attempts to read this parameter will return Off(0).

STATRESETA

Specific to Block(s)	All Series C I/O Modules		
Description	Reset Statistics		
Data Type	BOOLEAN		
Range	0	Off	Statistical parameters remain.
	1	On	Reset all statistical parameters on the **A** IOM block..
Default	OFF		
Config Load	No		
Access Lock	Operator		
Residence	IOM		

Related Parameters	CPUFREEAVGA, CPUFREEMINA.
Remarks	Writing 'On' to this parameter will reset all statistical parameters (CPUFREEAVGA, CPUFREEMINA) on the **A** IOM block.

STATRESETB

Specific to Block(s)	All Series C I/O Modules		
Description	Reset Statistics		
Data Type	BOOLEAN		
Range	0	Off	Statistical parameters remain.
	1	On	Reset all statistical parameters on the **B** IOM block..
Default	OFF		
Config Load	No		
Access Lock	Operator		
Residence	IOM		
Related Parameters	CPUFREEAVGB, CPUFREEMINB.		
Remarks	Writing 'On' to this parameter will reset all statistical parameters (CPUFREEAVGB, CPUFREEMINB) on the **B** IOM block.		

STATUS_1[1..24]

Specific to Block	QIPACTERM
Description	Status 1 bYTE
Data Type	INT32
Range	0-255
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	The QiMPACT Status 1 byte bit-packed structure in integer format. This is the value in the input assembly for the designated position [1-24].

STATUS_2[1..24]

Specific to Block	QIPACTERM
Description	Status 2 Word
Data Type	INT32
Range	0-65535
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	The QiMPACT Status 2 word bit-packed structure in integer format. This is the value in the input assembly for the designated position [1-24].

STATUSRAW[1..4]

Specific to Block(s)	JAGXTERM
Description	Status Word
Data Type	UINT16
Range	0-65535
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	The status word presented as an integer.

STDBYMAN

Specific to Block(s)	AOCHANNEL, DOCHANNEL (PM I/O)	
Description	Standby Manual Flag: Indicates whether the associated hardware output is connected to a standby manual device. It is not an indication of whether or not the output is isolated from the process.	
Data Type	Boolean	
Range	Off (0):	Output is not connected to standby-manual device.

	On (1):	Output is connected to standby-manual device.
Default	Off (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOP	
Related Parameters		
Remarks		

STDBYSTS

Specific to Block(s)	AO, AO16, AO16HART, DO16, DO32	
Description	Standby Status．Shows whether the associated hardware is connected to a standby manual device or not.	
Data Type	Boolean	
Range	Off (0):	No Standby Manual device is present.
	On (1):	Standby Manual device is present.
Default	Off (0)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOP	
Related Parameters		
Remarks	This parameter does not show whether or not the output is isolated from the process.	

STDBYSTSA

Specific to Block(s)	PM I/O Output Modules and Series C I/O Output Modules		
Description	Standby Status Flag Channel A. Returns blind record of STDBYMAN status.		
Data Type	Boolean		
Range	0	Off	No Standby Manual present.
	1	On	Standby Manual is activated.
Default	Off (0)		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks	This parameter indicates whether the associated hardware is connected to a standby manual device. It is not an indication of whether or not the output is isolated from the process.		

STDBYSTSB

Specific to Block(s)	PM I/O Output Modules and Series C I/O Output Modules		
Description	Standby Status Flag Channel B. Returns blind record of STDBYMAN status.		
Data Type	Boolean		
Range	0	Off	No Standby Manual present.
	1	On	Standby Manual is activated.
Default	Off (0)		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks	This parameter indicates whether the associated hardware is connected to a standby manual device. It is not an indication of whether or not the output is isolated from the process.		

STDTIME

Specific to Block(s)	RM
Description	Standard or Daylight Savings Time
Data Type	Enumeration
Range	Standard (0) Daylight (1)
Default	Standard (0)
Config Load	No
Access Lock	Operator
	RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

STEADYSTATEOP

Specific to Block(s)	PID-PL
Description	Predicted Steady State OP, in Percent – Defines the predicted OP value at which the process will line out.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	STEADYSTATEOPEU, STEADYSTATEPV.
Remarks	This parameter may vary slightly with every execution, as Profit Loop PKS refines its steady-state estimate.
	Steady state conditions are not calculated when the controller is in manual.
	This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

STEADYSTATEOPEU

Specific to Block(s)	PID-PL
Description	Predicted Steady State OP, in Engineering Units – Defines the predicted OP value at which the process will line out.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	STEADYSTATEOP, STEADYSTATEPV.
Remarks	This parameter may vary slightly with every execution, as Profit Loop PKS refines its steady-state estimate. Steady state conditions are not calculated when the controller is in manual. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

STEADYSTATEPV

Specific to Block(s)	PID-PL
Description	Predicted Steady State PV, in Engineering Units – Defines the predicted PV value at which the process will line out.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	STEADYSTATEOP, STEADYSTATEOPEU.
Remarks	This parameter may vary slightly with every execution, as Profit Loop PKS refines its steady-state estimate. Steady state conditions are not calculated when the controller is in manual. This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

STEP

Specific to Block(s)	CEEC300, CEEACEFB,CEESIM200
Description	Specifies the number of cycles the CEE should run from the current PHASE.
Data Type	32-Bit integer
Range	0
Default	0 and larger
Config Load	No
Access Lock	Engineer Point Build (Lock is a combination of Engineer and Application Developer Only access levels)
Residence	C300(CEEC300), C200(CEE), ACE(C200), SIM_C200(CEE)
Related Parameters	CEESTATE, SIMSTATE.
Remarks	A STEP value of 0 means that the CEE runs continuously. A STEP value of 1 means that the CEE runs a single cycle.

STEPALM.FL

Specific to Block(s)	SCM
Description	Sequential Control Module (SCM) Step Timeout Alarm Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	MAXTIME, STEPALM.PR, STEPALM.SV.
Remarks	When On, this indicates that the SCM Step Timeout Alarm condition (the Active SCM Step has remained active for longer than the configured maximum step time, MAXTIME) exists.

STEPALM.PR

Specific to Block(s)	SCM
Description	Sequential Control Module (SCM) Step Timeout Alarm Priority - Specifies the alarm priority for the SCM Step Timeout alarm.
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STEPALM.FL, STEPALM.SV.
Remarks	

STEPALM.SV

Specific to Block(s)	SCM
Description	Sequential Control Module (SCM) Step Timeout Alarm Severity - Specifies the alarm severity for the SCM Step Timeout alarm.
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STEPALM.FL, STEPALM.PR.
Remarks	

STEPTOPHASE

Specific to Block(s)	CEEC300, CEEACEFB,CEESIM200
Description	Step to Phase - Specifies the PHASE the CEESIMC200 will go to from the current PHASE.
Data Type	32-Bit integer
Range	0 to 39
Default	-1
Config Load	No
Access Lock	Engineer Point Build (Lock is a combination of Engineer and Application Developer Only access levels)
Residence	C300(CEEC300), C200(CEE), ACE(C200), SIM_C200(CEE)
Related Parameters	CEESTATE
Remarks	

STICTIONL

Specific to Block(s)	PosProp, PidPosProp
Description	Stiction Lower Compensation of actuator (in seconds).
Data Type	Real
Range	0.0 to 60.0
Default	0.0
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	
Remarks	

STICTIONR

Specific to Block(s)	PosProp, PidPosProp
Description	Stiction Raise Compensation of actuator (in seconds).
Data Type	Real
Range	0.0 to 60.0
Default	0.0
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Remarks	

STIDBDISCRE

Specific to Block(s)	AICHANNEL
Description	Smart Transmitter Interface (STI) Database Discrepancy. Shows the list of parameters whose values are not the same in both the STI database and the Smart Transmitter's database. (Parameters are mismatched.)
Data Type	String
Range	26 Characters
Default	Null
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	This parameter is only exposed if ASSOCIOPTYP is STI-MV.

STI_EU

Specific to Block(s)	AICHANNEL
Description	Smart Transmitter Interface Engineering Units. Specifies the Engineering Units of measurement to be used for the display of transmitter range parameters LRL, LRV, URL, and URV.
Data Type	Enumeration

Range: SENSRTYP = SPT_AP, SPT_DP, or SPT_GP	(0) InH2O: Pressure Transmitter-Inches of Water
	(1) MMHG: Pressure Transmitter-Millimeters of Mercury
	(2) PSI: Pressure Transmitter-Pounds per Square Inch
	(3) KPA: Pressure Flow Transmitter-Kilopascals
	(4) MPA: Pressure Transmitter-Millipascals
	(5) MBar: Pressure Transmitter-Millibars
	(6) Bar: Pressure Transmitter-Bars
	(7) G_SQCM: Pressure Transmitter-Grams per Square Centimeter)
	(8) KG_SQCM: Pressure Flow Transmitter-Kilograms per Square Centimeter
	(9) MMH2O: Pressure Transmitter-Millimeters of Water
	(10) INHG: Pressure Transmitter-Inches of Mercury
Default: SENSRTYP = SPT_AP, SPT_DP or SPT_GP	(0) InH2O: Pressure Transmitter-Inches of Water

Range: SENSRTYP = SFM	(18) CM_HR: Magnetic Flow Transmitter (volume)-Cubic Meters per Hour
	(19) Gal_HR: (Magnetic Flow Transmitter (volume)-Gallons per Hour)
	(20) LIT_HR: Magnetic Flow Transmitter (volume)-Liters per Hour
	(21) CC_HR: Magnetic Flow Transmitter (volume)-Cubic Centimeters per Hour
	(22) CM_Min: Magnetic Flow Transmitter (volume)-Cubic Meters per Hour
	(23) Gal_Min: Magnetic Flow Transmitter (volume)-Gallons per Minute
	(24) Lit_Min: Magnetic Flow Transmitter (volume)-Liters per Minute
	(25) CC_Min: Magnetic Flow Transmitter (volume)-Cubic Centimeters per Minute
	(26) CM_Day: Magnetic Flow Transmitter (volume)-Cubic Meters per Day)
	(27) Gal_Day: Magnetic Flow Transmitter (volume)-Gallons per Day)

(28) KGal_Day: Magnetic Flow Transmitter (volume)-Thousands of Gallons per Day

(29) BRL_Day: Magnetic Flow Transmitter (volume)-Barrels per Day)

(30) CM_Sec: Magnetic Flow Transmitter (volume)-Centimeters per Second)

(31) KG_HR: Magnetic Flow Transmitter (mass)-Kilograms per Hour

(32) LBS_HRn: Magnetic Flow Transmitter (mass)-Pounds per Hour)

(33) Ft_Sec: Magnetic Flow Transmitter (velocity)-Feet per Second

(34) M_Sec: Magnetic Flow Transmitter (velocity)-Meters per Second

(35) KG_Min: Magnetic Flow Transmitter (mass)-Kilograms per Minute)

(36) KG_Sec: Magnetic Flow Transmitter (mass)-Kilograms per Second)

(37) LBS_Min: Magnetic Flow Transmitter (mass)-Pounds per Minute)

(38) LBS_Sec: Magnetic Flow Transmitter (mass)-Pounds per Second)

(39) PRCNT: Percent

(40) BLANK: Blank - Multivariable Transmitter with SFM SENSRTYP

(41) LBS: Pounds

(42) KG: Kilograms

(43) TONS: Tons

(44) GRAMS: Grams

(45) OZ: Ounces

(46) GAL: Gallons

(47) BRL: Barrels

(48) CUB_M: Cubic Meters

(49) LITERS: Liters

(50) MLITRES: Milliliters

(51) FL_OZ: Fluid ounce

(52) FEET: Feet

(53) METERS: Meters

(54) MM: Millimeters

	(55) INCHES: Inches
	(56) KG_CUM: Kilograms per Cubic Meter
	(57) G_CUM: Grams per Cubic Meter
	(58) LBS_CUFT: Pounds per Cubic Foot
	(59) LBS_CUIN: Pounds per Cubic Inch
Default: **SENSRTYP = SFM**	(40) BLANK (Blank): Multivariable transmitter with SFM SENSRTYP
Range: **SENSRTYP = STT and PVCHAR = Linear**	(15) MV: Temperature Transmitter-Millivolts (16) V: Temperature Transmitter-Volts
Default: **SENSRTYP = STT and PVCHAR = Linear**	(15) MV: Temperature Transmitter-Millivolts
Range: **SENSRTYP = STT and PVCHAR = RTDOHMS**	(17)-Ohms (Temperature transmitter-RTD Ohms)
Default: **SENSRTYP = STT and PVCHAR = RTDOHMS**	(17)-Ohms (Temperature transmitter-RTD Ohms)

Range: SENSRTYP = STT and PVCHAR = all other valid values	(11) Deg_C: (Temperature Transmitter-Degrees Centigrade) (12) Deg_F: (Temperature Transmitter-Degrees Fahrenheit) (13) Deg_K: (Temperature Transmitter-Degrees Kelvin) (14) Deg_R: (Temperature Transmitter-Degrees)
Default: SENSRTYP = STT and PVCHAR = all other valid values	11-Deg_C (Temperature transmitter-Degrees Centigrade)
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	This parameter specifies the units of measurement for parameters LRL, LRV, URL, and URV. These units are for display only. When BLANK is selected the limit values URL, LRL, URV and LRV are displayed in the base engineering units specified in the transmitter user manual. Loading an invalid STI_EU type causes an error. This parameter is only exposed if [ASSOCIOPTYP] = STI-MV.

STIPVNUMBER

Specific to Block(s)	AICHANNEL
Description	Smart Transmitter Interface (STI) Process Variable (PV) Number. Shows which of the up to 4 PVs from a single transmitter is associated with this STI.
Data Type	String
Range	7 Characters
Default	Null
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	

Remarks	This parameter is only exposed if ASSOCIOPTYP is STI-MV.

STISCRATCHPAD

Specific to Block(s)	AICHANNEL
Description	Smart Transmitter Interface (STI) Scratch Pad. Shows the current contents of scratch Pads 1, 2, 3, and 4 of the transmitter associated with this STI point.
Data Type	String
Range	35 Characters
Default	Null
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	This parameter is only exposed if ASSOCIOPTYP is STI-MV.

STISTATUS

Specific to Block(s)	AICHANNEL
Description	Smart Transmitter Interface (STI) Status. Show the current detailed status of the Smart Transmitter associated with this STI point.
Data Type	String
Range	67 Characters
Default	Null
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	This parameter is only exposed if ASSOCIOPTYP is STI-MV.

STISWVER

Specific to Block(s)	AICHANNEL
Description	Software Revision Level of the Smart Transmitter.
Data Type	String
Range	
Default	NULL
Config Load	No
Access Lock	ViewOnly
Residence	IOM
Related Parameters	
Remarks	STISWVER is exposed only if ASSOCIOPTYP is STI-MV.

STITAG

Specific to Block(s)	AICHANNEL
Description	Smart Transmitter Interface Tag Name. Defines the name of the Smart Transmitter to be used in the system and on displays, reports, and logs.
Data Type	String
Range	8 Characters
Default	All Spaces
Config Load	Yes
Access Lock	Application Developer
Residence	IOP
Related Parameters	
Remarks	This parameter is only exposed if the ASSOCIOPTYP is STI-MV For multivariable transmitters, the identical STITAG must be entered for each active slot related to that transmitter. The I/O Processor (IOP) uses the number of identical STITAG names to calculate the number of Process Variables (PVs) associated with a given transmitter. This parameter is an ASCII string and has no support for internationalization.

STOPALM.FL

Specific to Block(s)	SCM
Description	Sequential Control Module (SCM) Stop Alarm Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	STATE, STOPALM.PR, STOPALM.SV
Remarks	When On, it indicates that the Stop Alarm condition (SCM STATE has transitioned to Stopping or Stopped) exists.

STOPALM.PR

Specific to Block(s)	SCM
Description	Sequential Control Module (SCM) Stop Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STOPALM.FL, STOPALM.SV
Remarks	See STOPALM.FL for additional information.

STOPALM.SV

Specific to Block(s)	SCM
Description	Sequential Control Module (SCM) Stop Alarm Severity
Data Type	16-Bit Integer
Range	0 to 15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STOPALM.FL, STOPALM.PR.
Remarks	See STOPALM.FL for additional information.

STOPFL

Specific to Block(s)	Totalizer, Pulse Input Totalizer
Description	Stop Totalizer Command Flag - When this flag changes form Off to On, the Totalizer function block stops the accumulator.
Data Type	Boolean
Range	Off (0): Do not stop the accumulator On (1): Stop the accumulator
Default	Off (0): Do not stop the accumulator
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	RESETFL, STARTFL.
Remarks	

Specific to Block(s)	Timer
Description	Stop Command Flag - Provides ability to issue Stop command to Timer function block.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No

Access Lock	Other Function Block
Residence	CEE
Related Parameters	COMMAND, RESETFL, RESTARTFL, STARTFL.
Remarks	An Off-to-On transition of STOPFL stops the timer.

STOPOPT

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.	
Description	Fail State Option – A configurable parameter that specifies the action the control device takes, when SCMSTATE is Stopping or Stopped, or Aborting or Aborted. This option should be disabled, when sequencing actions are required as part of the SCM. In this case, the SCM should execute its Stop Handler. The SCM can also disable this option.	
Data Type	Enumeration REGEXCOPT	
Range	None (0):	No changes
	Man (1):	Set MODEREQ = Manual
	Auto (2):	Set MODEREQ = Auto
	Cas (3):	Set MODEREQ = Cas
	FixedOP (4):	Set OPREQ = STOPVAL
	HoldPV (5):	Set SPREQ = PUSHSP PV
	FixedSP (6):	Set SPREQ = STOPVAL, and SPRATEREQ = NaN
	RampedSP (7):	Set SPTVREQ = STOPVAL, and SPRATEREQ = STOPRATE)
Default	None (0)	
Config Load	Yes	
Access Lock	Engineer	
Residence	CEE	
Related Parameters	STOPVAL, STOPRATE.	
Remarks	Defines values for the following: SPREQ, SPRATEREQ, OPREQ and MODEREQ when ControlModule.SCMSTATE = Stopping or Stopped.	

Specific to Block(s)	DevCtl
Description	Fail State Option
Data Type	Enumeration DDOPTIONS
Range	None (0) SafeOp (1)
Default	None (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	HOLDOPT, OPREQ, OPTYPE, RESTARTOPT, SAFEOP, SCMASTEP[1..10], SCMOPT, SCMSTATE, STARTOPT.
Remarks	Illegal if ControlModule.SCMOPT = None.

STOPRATE

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Stop State Set Point (SP) Ramp Rate - The value used for setting SPRATEREQ, when STOPOPT is RampedSP.
Data Type	64-Bit Real Number
Range	NaN, 0.0, positive or negative Real numbers
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STOPOPT
Remarks	Defines values for SPRATEREQ when STOPOPT = RampedSP.

STOPVAL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Stop State Value - The value used for setting OPREQ, when STOPOPT is FixedOP; or for setting SPREQ or SPTVREQ, when STOPOPT is FixedSP or RampedSP.
Data Type	64-Bit Real Number
Range	OPEXLOLM to OPEXHILM when STOPOPT = FixedOP SPLOLM to SPHILM when STOPOPT = FixedSP or RampedSP. (NaN, 0.0, positive or negative Real numbers)
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STOPOPT
Remarks	Defines a value for: Output (OP) when STOPOPT = FixedOP; Or SP when STOPOPT = FixedSP; Or SPTV when STOPOPT = RampedSP.

STOREENB

Specific to Block(s)	Push
Description	Output store enable.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STORONCHGENB
Remarks	This value must be set to ON for continuous storing to destination. If the value is OFF, only the first store would be made to destination after inactivation of CM and CEE state change.

STORESTS

Specific to Block(s)	Push
Description	Store Status.
Data Type	Enumeration TCStoreSts
Range	STOREOK STOREFAIL STOREPENDING
Default	STOREOK
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This parameter describes the status of store request.

STORONCHGENB

Specific to Block(s)	Push
Description	Store on change Enable.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	STOREENB
Remarks	Setting this flag ensures that input value will be stored to destination only when it changes. The STOREENB flag has to be set though for store to take place.

STR[0..7]

Specific to Block(s)	REQTEXTARRCH, RSPTEXTARRAY
Description	Array of strings to be read from or written to the third-party device. Stores are accepted to this parameter only if hte COMMAND indicates that this is a “write” block.

Data Type	String
Range	Length: 8, 16, or 64 characters, as specified by STRLEN.
Default	N/A
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	ERRFL, NSTRING, STRLEN.
Remarks	STR[i] provides access to the array of data, one element at a time, by all other function blocks of the CEE. Initial values can be configured, but these will be overwritten once good data is imaged from the Serial Interface Module. When ERRFL is On, an error will be returned on attempted Gets and Stores to this parameter, to indicate that there is a problem with the array data.

STR[1..8]

Specific to Block(s)	SITEXTARRCH
Description	Process Value – Provides String value from the device.
Data Type	String
Range	Length: 8, 16, or 64 characters, as specified by STRLEN.
Default	Null String
Config Load	Yes
Access Lock	Determined by ACCLOCK
Residence	CEE
Related Parameters	ERRFL, NSTRING, STRLEN.
Remarks	STR[i] provides access to the array of data, one element at a time, by all other function blocks of the CEE. Initial values can be configured, but these will be overwritten once good data is imaged from the Serial Interface Module. When ERRFL is On, an error will be returned on attempted Gets and Stores to this parameter, to indicate that there is a problem with the array data.

STR[1..120]

Specific to Block(s)	TEXTARRAY
Description	String Data – Provides access to the String values, one element at a time, for all other function blocks of the CEE. Initial values can be configured.
Data Type	String
Range	Length: 8, 16, 32, or 64 characters, as specified by STRLEN.
Default	Null String
Config Load	Yes
Access Lock	Determined by ACCLOCK
Residence	CEE
Related Parameters	NSTRING, STRLEN.
Remarks	

STRLEN

Specific to Block(s)	TEXTARRAY, SITEXTARRCH
Description	String Length of String Values – Specifies the number of characters per string value.
Data Type	32-Bit Integer
Range	Length: 8, 16, 32, or 64 characters.
Default	8
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	TEXTARRAY: NSTRING, STR[1..120] SITEXTARRCH: NSTRING, STR[1..8].

Remarks

The Text Array block supports a maximum size of 960 two-byte characters. This number is chosen based on the amount of data that can fit in one ControlNet message. This is important when full array access is supported. The following table shows the maximum data combinations of NSTRING and STRLEN that are possible. Illegal combinations of NSTRING and STRLEN (those requiring more than 960 two-byte characters of data) will be rejected.

NSTRING	*STRLEN*	*STR[ ] Range*
15	64	1..15
30	32	1..30
60	16	1..60
120	8	1..120

SITEXTARRCH only: With the interface to the serial device haivng a maximum size of 64-bytes, the table below shows how the 64-bytes are interpreted, based on the NSTRING and STRLEN configured, and the resulting STR[ ] range. Illegal combinations of NSTRING and STRLEN (those requiring more than 64-bytes of data) will be rejected.

NSTRING	*STRLEN*	*STR[ ] Range*
1	64	1..1
2	32	1..2
4	16	1..4
8	8	1..8

Specific to Block(s) REQTEXTARRAY, RSPTEXTARRAY

Description The maximum length of each string that must be read or written. The product of NSTRING and STRLEN cannot exceed 64.

Data Type 32-Bit Integer

Range 1 to 8

Default	1
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	

STRRESP[ ]

Specific to Block(s)	CEE, CEEC300, CEEACE, CEESIMC200
Description	Store Response - Specifies the default store response expiration time to be used for all peer environments in seconds.
Data Type	Float64
Range	N/A
Default	15.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMPEERENV[ ] PEERENV[ ], PEERSTRRESP[ ].
Remarks	If a store response is not received within the configured expiration time, the store is marked failed.

STTEXT

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Soft Failure Text. Used to provide the string text found in the event packet attribute when the IOP is non-redundant for consistency with redundant IOP. The string is also appended with the DSA value of the IOP.
Data Type	Enumeration
Range	IOP_00 through IOP_40
Default	IOP_00
Config Load	No
Access Lock	View Only
Residence	SR
Related Parameters	STTEXTA, STTEXTB

Remarks

STTEXTA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Soft Failure Text Partner A. Used to provide the string text found in the event packet value attribute to further indicate that IOP partner A generated the alarm/event when the IOP is configured to be redundant. The string is also appended with the DSA value of the IOP.
Data Type	Enumeration
Range	
Default	PartnerA_00 through PartnerA_40
Config Load	No
Access Lock	View Only
Residence	SR
Related Parameters	STTEXT, STTEXTB
Remarks	

STTEXTB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Soft Failure Text Partner B. Used to provide the string found in the event packet value attribute to further indicate that IOP partner B generated the alarm/event when the IOP is configured to be redundant. The string is also appended with the DSA value of the IOP.
Data Type	Enumeration
Range	
Default	PartnerB_00 through PartnerB_40
Config Load	No
Access Lock	View Only
Residence	SR
Related Parameters	STTEXT, STTEXTA,
Remarks	

SUBSCPERIOD

Specific to Block(s)	CEE, CEEC300, CEEACE, CEESIMC200		
Description	Peer Update Rate for Peer-to-Peer communications between two or more CEE's (Control Execution Environments) in milliseconds (ms) from the following Range.		
Data Type	Enumeration		
Range	Configurable Range:	10 to 10000 ms	
		DEFAULT (0)	500 ms (6)
		10 ms (1)	1000 ms (7)
		20 ms (2)	2000 ms (8)
		50 ms (3)	5000 ms (9)
		100 ms (4)	10000 ms (10)
		200 ms (5)	
	Valid Range for 50 ms CEE:	100 to 1000 ms	
		DEFAULT (0)	500 ms (6)
		100 ms (4)	1000 ms (7)
		200 ms (5)	
	Valid Range for 50 ms CEE:	10 to 1000 ms	
		DEFAULT (0)	100 ms (4)
		10 ms (1)	200 ms (5)
		20 ms (2)	500 ms (6)
		50 ms (3)	1000 ms (7)
	Valid Range for ACE and SIM_C200	500 to 10000 ms	
		DEFAULT (0)	2000 ms (8)
		500 ms (6)	5000 ms (9)
		1000 ms (7)	10000 ms (10)
Default	DEFAULT (0) DEFAULT is converted to an actual value upon load: Converted to 500 ms for the 50 ms CEE Converted to 100 ms for the 5 ms CEE Converted to 1000 ms for CEEACE Converted to 2000 ms for CEESIMC200		
Config Load	Yes		
Access Lock	Engineer		

Residence	CEE
Related Parameters	BASEPERIOD
Remarks	The Peer Update Rate (SUBSCPERIOD parameter is the rate at which this CEE subscribes to data from other CEEs through peer-to-peer communications. In the event of a peer-to-peer communications problem such as a broken cable, the connection will timeout, returning an error. The valid values and function of the DEFAULT value for SUBSCPERIOD are different for the 50 and 5 ms CEE personalities as described below. **50 ms CEE:** Valid Range: DEFAULT, 100, 200, 500, 1000 ms DEFAULT value is converted to 500 ms upon load to a 50 ms CEE. Connection timeout time is approximately 5.2 seconds. **5 ms CEE:** Valid Range: DEFAULT, 10, 20, 50, 100, 200, 500, 1000 ms DEFAULT value is converted to 100 ms upon load to a 5 ms CEE. Connection timeout time is approximately 5.2 seconds.

SUPVFIFORATEA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Supervisor FIFO rate average – Currently not used.
Data Type	Float32
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	IOLINK
Related Parameters	
Remarks	

SUPVFIFORATEM

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Supervisor FIFO rate maximum – Currently not used.
Data Type	Float32
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	IOLINK
Related Parameters	
Remarks	

SWAPCTRLCMD

Specific to Block(s)	RM
Description	Swap Control Command
Data Type	Boolean
Range	True (0) False (1)
Default	N/A
Config Load	No
Access Lock	Operator RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

SWAPPOSCMD

Specific to Block(s)	RM
Description	Swap Position Command
Data Type	Enumeration
Range	Chassis_A (0) Chassis_B (1)
Default	N/A

Config Load	No
Access Lock	Operator
	RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

SWAPPRIMARYCMD

Specific to Block(s)	All redundant PM IOMs. (HLAI, HLAIHART, STI-MV, AO8, AO16, AO16HART, DI24V, DISOE and DO32)		
Description	Swap Primary I/O Processor.		
Data Type	Boolean		
Range	0	On	Swap Primary IOP command has been initiated.
	1	Off	No command.
Default	Off (1)		
Config Load	No		
Access Lock	Operator		
Residence	IOLIM		
Related Parameters			
Remarks	Used to command the secondary IOM to become the primary IOM. This operation is only allowed if {1} the IOM partners are synchronized and {2} if the Primary is connected to a FTA, the Secondary must also be connected to a FTA.		

SWAPSBYCMD

Specific to Block(s)	RM
Description	Swap to Standby Command
Data Type	Boolean
Range	True (0) False (1)
Default	N/A
Config Load	No
Access Lock	Operator
	RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

SWITCHCMD

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Initiate Switchover Command
Data Type	Boolean
Range	Off (0)
	On (1)
Default	Off
Config Load	No
Access Lock	Operator
Residence	C300, FIM4
Related Parameters	
Remarks	Used to command switchover to a synchronized pair of redundancy modules. This parameter has edge trigger semantics and always returns OFF when read.

SWREVNO

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Software Revision Number - Indicates the software revision number of the HART device connected to the channel.
Data Type	UINT8
Range	0 to 255
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

SWTCHACT

Specific to Block(s)	C200 IOLINK, C300 IOLINK		
Description	Switch Active		
Data Type	Boolean		
Range	0	Off	Inactive
	1	On	Active
Default	On		
Config Load	No		
Access Lock	View Only		
Residence	IOLINK		
Related Parameters			
Remarks	When this parameter is OFF, the backup request line from the IOM's partner is **NOT** asserted. When this parameter is ON, the backup request line from the IOM's partner is asserted. This parameter does not appear on the Control Builder forms.		

SYNCHSTS [1..40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	Synchronization Status. Shows the status of the Primary/Secondary IOM database synchronization, where the index of the array corresponds to the number of the IOM.	
Data Type	Enumeration	
Range	OK (0):	Redundant IOM pair is synchronized.
	WARNING (1):	Database inconsistency detected, but the secondary IOM appears capable of providing backup.
	FAIL (2):	IOM synchronization unsuccessful (after retries).
	NONREDUN (3):	IOM not configured for redundancy.
	--- (4):	IOM is not configured.
	Disable (5):	Synchronization disabled.
Default	FAIL (2)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	Applies to the primary IOM only.	
	Note that this is the same as the SYNCHSTS parameter in a TPS system.	

SYNCSECCMD

Specific to Block(s)	RM
Description	Synchronize Secondary Command
Data Type	Boolean
Range	True (0) False (1)
Default	True (0)
Config Load	No
Access Lock	Operator
	RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).

Residence	Not Loaded
Related Parameters	
Remarks	

SYNCTIMEBEG

Specific to Block(s)	Primary/Secondary C300, C200, FIM, IOLIM, FTEB, FIM4 and LIOM FBs
Description	Last Synchronization Time. System-time that module completed initial synchronization.
Data Type	TIME
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, C200, FIM, IOLIM, FTEB, FIM4, LIOM
Related Parameters	SYNCTIMEEND
Remarks	

SYNCTIMEEND

Specific to Block(s)	Primary/Secondary C300, C200, FIM, IOLIM, FTEB, FIM4 and LIOM FBs
Description	Last Sync Lost Time. System-time that module last lost synchronization.
Data Type	TIME
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, C200, FIM, IOLIM, FTEB, FIM4, LIOM
Related Parameters	SYNCTIMEBEG
Remarks	

System Template

Specific to Block(s)	Server, Asset, Alarm Group
Description	System Template name – Indicates the System Template that is source for this block.
Data Type	String
Range	Limit: 5 characters
Default	Null
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

T*xxxx* Parameters

T

Specific to Block(s)	FLOWCOMP
Description	Temperature Input - Shows the value of the temperature.
Data Type	Real
Range	
Default	1.0
Config Load	No
Access Lock	Other Function Block
Residence	ACE/C200
Related Parameters	
Remarks	

T0

Specific to Block(s)	FLOWCOMP
Description	Zero Reference for Temperature - Defines the value used to convert Celsius or Fahrenheit temperature to an absolute value.
Data Type	Real
Range	NaN is not allowed
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	ACE/C200
Related Parameters	T
Remarks	T0 must be in the same engineering units as the T input. T0 is typically 459.69 degrees F or 273.15 degrees C.

T1

Specific to Block(s)	PID, PIDFF
Description	Integral Time Constant (in Minutes)
Data Type	64-Bit Real Number
Range	T1LOLM to T1HILM
Default	0.0
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	T1HILM, T1LOLM.
Remarks	

T1HILM

Specific to Block(s)	PID, PIDFF
Description	T1 High Limit
Data Type	64-Bit Real Number
Range	T1LOLM to 1660.0
Default	1440.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	T1, T1LOLM.
Remarks	

T1LOLM

Specific to Block(s)	PID, PIDFF
Description	T1 Low Limit
Data Type	64-Bit Real Number
Range	Greater than T1HILM
Default	0.0
Config Load	Yes
Access Lock	Engineer

Residence	CEE
Related Parameters	T1, T1HILM.
Remarks	

T2

Specific to Block(s)	PID, PIDFF
Description	Derivative Time Constant (in Minutes)
Data Type	64-Bit Real Number
Range	T2LOLM to T2HILM
Default	0.0
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	T2HILM, T2LOLM.
Remarks	

T2HILM

Specific to Block(s)	PID, PIDFF
Description	T2 High Limit
Data Type	64-Bit Real Number
Range	T2LOLM to 1440.0
Default	1440.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	T2, T2LOLM.
Remarks	

T2LOLM

Specific to Block(s)	PID, PIDFF
Description	T2 Low Limit
Data Type	64-Bit Real Number
Range	0.0 to T2HILM
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	T2, T2HILM.
Remarks	

TAG

Specific to Block(s)	HARTDEVICE (Chassis I/O)
Description	Tag Name - Indicates the tag name that is written to the HART device connected to the channel.
Data Type	String
Range	Length: 8 characters
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

Tag Name

Specific to Block(s)	Asset, Alarm Group
Description	Tag name – A unique name that identifes the asset, point or alarm group in a system.
Data Type	String
Range	Limit: 40 characters
Default	Null
Config Load	No
Access Lock	Application Developer Only

Residence	SCAN
Related Parameters	
Remarks	

TARGETERROR[1..200]

Specific to Block	QIPACCHAN
Description	Deviation Error from Target Weight
Data Type	FLOAT64
Range	N/A
Default	NAN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	MATERIALPATH, COMMAND, COMMANDSTATS, MXFERSTATUS, MXFERSTATQ, OVERTOLRNCE, UNDERTOLRNCE, POWERFAIL, DELIVEREDWGT, AVGFLOWRATE, AVGSPILL
Remarks	This is the resultant deviation from target weight value for the material transfer. This value provides material transfer results and is valid after the material transfer for the designated channel [1..200] in the QiMPACT cluster completes.

TARGETSTEP[1..10]

Specific to Block(s)	SCM
Description	Target Step Name
Data Type	BlockId
Range	N/A
Default	Null String
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	MODE, SSTEPLOCK, STATE.

Remarks	TARGETSTEP[i] defines the name (eg. SCMName.StepName) of the Step on thread i that will become the active step when a Resume COMMAND is given. It may only be changed while the SCM.MODE = SingleStep.

TASKSTACKHILM

Specific to Block(s)	Primary/Secondary C200, C300 and FIM4 FBs
Description	Task Stack High Limit - If any one of the Task Stacks exceeds this limit, the function block generates a (Low Priority) system diagnostic alarm.
Data Type	32-Bit Integer
Range	0 to 100
Default	80
Config Load	Yes
Access Lock	Operator
Residence	C200, C300, FIM4
Related Parameters	TASKSTACKSIZE, TASKSTACKUSED.
Remarks	This parameter is provided for advanced diagnostic purposes only. If this alarm is generated, please contact Honeywell Technical Assistance Center.

TASKSTACKSIZE [0…N]

Specific to Block(s)	Primary/Secondary C200, C300 and FIM4 FBs
Description	Task Stack Size - Indicates the amount of stack space assigned to the indexed task in bytes.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C200, C300, FIM4
Related Parameters	TASKSTACKUSED
Remarks	This parameter is provided for advanced diagnostic purposes only. For C200 the array index N = 32 For C300 the array index N = 64.

TASKSTACKUSED [0…N]

Specific to Block(s)	Primary/Secondary C200, C300 and FIM4 FBs
Description	Task Stack User - Indicates the high-water mark for task stack usage for the indexed task in bytes.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C200, C300, FIm4
Related Parameters	TASKSTACKHILM
Remarks	This parameter is provided for advanced diagnostic purposes only.

TB

Specific to Block(s)	AGA8GS_94 AGA8DL_94 AGA30M_92
Description	Base Temperature
Data Type	FLOAT64
Range	Input
Default	15 (Deg C)
Config Load	Yes
Access Lock	Operator
Residence	CEE
Active Connections	No
Related Parameter	PB
Remarks	

TBADREADS

Specific to Block(s)	QIPACTERM
Description	Total Bad Reads.
Data Type	UNIT32
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	None
Remarks	Provides the total number of bad data blocks received from the QiMPact device, as determined by checksum validation of this block, since the block was set ACTIVE. When the block is set INACTIVE, this value is set to its default.

TBREF[0..2]

Specific to Block(s)	CM
Description	
Data Type	Structure
Range	
Default	
Config Load	No
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	

TCPACTIVEOPENS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Active Opens – Identifies the number of times TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state.
Data Type	32-Bit Integer
Range	

Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPATTEMPTFAILS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Attempt Fails – Identifies the number of times TCP connections have made a direct transition to the CLOSED state from either the SYN-SENT state or the SYN-RCVD state, plus the number of times TCP connections have made a direct transition to the LISTEN state from the SYN-RCVD state.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPCONNNUM

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Number of TCP Connections
Data Type	16-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPCONNTABLE

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Connections Table – Provides a table containing path information for all currently connected clients of the FTE Bridge module.
Data Type	String
Range	Length: 64 Characters Maximum
Default	Null
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPCURRESTAB

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Current Established – Identifies the number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPESTABRESETS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Established Resets – Identifies the number of times TCP connections have made a direct transition to the CLOSED state from either the ESTABLISHED state or the CLOSE-WAIT state.
Data Type	32-Bit Integer

Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPINERRS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) In Errors – Identifies the total number of segments received in error. For example, bad TCP checksums.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPINSEGS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) In Segments – Identifies the total number of segments received, including those received in error. This count includes segments received on currently established connections.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPMAXCONN

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Maximum Simultaneous Connections
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPOUTRESETS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Out Resets – Identifies the number of TCP segments sent containing the RST flag.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPOUTSEGS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Out Segments – Identifies the total number of segments sent, including those on current connections but excluding those containing only retransmitted octets.
Data Type	32-Bit Integer
Range	

Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPPASSIVEOPENS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Passive Opens – Identifies the number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPRETRANSSEGS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Transmission Control Protocol (TCP) Retransmitted Segments – Identifies the total number of segments retransmitted – that is, the number of TCP segments transmitted containing one or more previously transmitted octets.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	

Remarks

TCPRTOALGO

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Retransmission Algorithm
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPRTOMAX

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Maximum Retransmission Timeout
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCPRTOMIN

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Minimum Retransmission Timeout
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	View Only

Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

TCRNGOPT

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)		
Description	Thermocouple (T/C) Range Option. Specifies whether the normal or extended range table is to be used with the thermocouple sensor type.		
Data Type	Enumeration		
Range	0	NORMAL	Use PVEXEULO's normal range table.
	1	EXTENDED	Use PVEXEUHI's extended range table.
Default	NORMAL (0)		
Config Load	Yes		
Access Lock	Engineer		
Residence	IOM		
Related Parameters			
Remarks	The parameter is only configurable when: • ASSOCIOPTYP is LLAI, LLMUX, or RHMUX, and • SENSRTYP is THERMCPL.		

TEMPMODE

Specific to Block(s)	AIM
Description	Temperature Mode
Data Type	Enumeration of TEMPMODE
Range	Celcius (0) Farenheit (1)
Default	Celcius (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Configurable only on RTD and Thermocouple AIMs.

TESTPAR_BOOLEAN [6]

Specific to Block(s)	Primary/Secondary C300, FIM4 and IOLIM CEEC300, IOLINK
Description	Test Point General Purpose Flags
Data Type	Boolean
Range	0, 1
Default	0
Config Load	No
Access Lock	Intimate User
Residence	C300, FIM4, IOLIM
Related Parameters	
Remarks	For Testing/Debugging purpose

TESTPAR_CONTEXT

Specific to Block(s)	Primary/Secondary C300, FIM4 and IOLIM CEEC300, IOLINK
Description	Point Test Context Parameter
Data Type	UINT8
Range	N/A
Default	0
Config Load	No
Access Lock	Intimate User
Residence	C300, FIM4, IOLIM
Related Parameters	
Remarks	For Testing/Debugging Purpose

TESTPAR_FLOAT64 [6]

Specific to Block(s)	Primary/Secondary C300, FIM4 and IOLIM CEEC300, IOLINK
Description	Point Test General Purpose Floating Points
Data Type	Float64
Range	N/A
Default	0.0

Config Load	No
Access Lock	Intimate User
Residence	C300, FIM4, IOLIM
Related Parameters	
Remarks	For Testing/Debugging Purpose

TESTPAR_UINT32 [6]

Specific to Block(s)	Primary/Secondary C300, FIM4 and IOLIM CEEC300, IOLINK
Description	Point Test General Purpose Integers
Data Type	UINT32
Range	N/A
Default	0
Config Load	No
Access Lock	Intimate User
Residence	C300, FIM4, IOLIM
Related Parameters	
Remarks	For Testing/Debugging Purpose

TF

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	PV FIlter Lag Time, in minutes. Specifies the filtering time lag to be used after the Process Variable (PV) range has been checked.
Data Type	32-Bit Real Number
Range	0.0 to 60.0 minutes
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	A value of 0.0 specifies that PV will not be delayed.

Specific to Block(s)	AGA8GS_94 AGA8DL_94 AGA30M_92

Description	Flowing Temperature
Data Type	FLOAT64
Range	Input
Default	-
Config Load	No
Access Lock	Operator
Residence	No Load
Active Connections	No
Related Parameter	PF HW
Remarks	

TGR

Specific to Block(s)	AGA8GS_94
Description	Gas Relative Density Reference Temperature
Data Type	FLOAT64
Range	Input
Default	15 DegC (EUB Test Case)
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameter	GRB, GRS, GRGR, PGR
Remarks	

TGTAPPCONNID[1..24]

Specific to Block(s)	FTEB
Description	Target Application Connection ID – Identifies the target's application connection ID.
Data Type	16-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

TGTCONNSTATE[1..24]

Specific to Block(s)	FTEB
Description	Target Connection State – Identifies the target's connection state.
Data Type	Enumeration
Range	1 = Closed 2 = Closing 4 = Opening 8 = Open
Default	Closed (1)
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

TGTDATATYPE

Specific to Block(s)	REQNUMARRAY when COMMAND is PLC5TypWrite or CIPWrite
Description	The data type in the target device. The data values will be converted into this type before being written to the target device. The following values are supported for this parameter: • 32-Bit Real Number • 8-Bit Signed Integer • 16-Bit Signed Integer • 32-Bit Signed Integer
Data Type	Enumeration
Range	N/A
Default	32-Bit Real Number
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	

Remarks	

TGTRNGDEF

Specific to Block(s)	SCM
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

TGTRNGDEFOPT

Specific to Block(s)	SCM
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

TGTTCLASS[1..24]

Specific to Block(s)	FTEB
Description	Target Transport Class – Identifies the target's transport class.
Data Type	8-Bit Integer
Range	
Default	0
Config Load	No

Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

THREAD[1..10]

Specific to Block(s)	SCM
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

THRESHOLD

Specific to Block(s)	TypeConvert, Push.
Description	Threshold for converting floating point values to boolean values
Data Type	Real
Range	N/A
Default	0.001
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	IN.FLOAT32, IN.FLOAT64, OUT.BOOLEAN.
Remarks	This is applicable for conversion between floating point and boolean values. If the input value is larger-than or equal-to THRESHOLD, then the OUT is TRUE. Otherwise it is FALSE. If the THRESHOLD = NaN, for any nonzero input value, OUT is TRUE. Otherwise it is FALSE.

TIME

Specific to Block(s)	Step
Description	Current Time in Step
Data Type	32-Bit Integer
Range	0 to 2147483647
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	MAXTIME, MINTIME.
Remarks	TIME contains the number of execution cycles that the step has been active. It is reset to “0” when the step is reentered.

TIME[1..8]

Specific to Block(s)	SCM
Description	Current Time in Handler
Data Type	32-Bit Integer
Range	0 to 2147483647
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	TYPE
Remarks	TIME[i] contains the number of execution cycles since the TYPE i handler was last invoked. It contains “0” if the TYPE i handler is not currently active.

TIMEBASE

Specific to Block(s)	Totalizer
Description	Totalizer Time Base - Defines whether the Process Input Value (P1) input should be sampled every second, minute, or hour.
Data Type	Enumeration TIMEBASE

Range	Seconds (0) Minutes (1) Hours (2)
Default	Minutes (1)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

Specific to Block(s)	Timer
Description	Time Base – Sets the units that are used in the Timer function block.
Data Type	Enumeration TIMEBASE
Range	Seconds (0) Minutes (1) Cycles (2)
Default	Seconds (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	PUSHSP, PV, RV, SP.
Remarks	Start – Timer is started; PV starts incrementing. Stop – Timer is stopped; PV freezes. Reset – Timer is reset; PV is set to 0, and RV is set to SP. Restart - Timer continues from the point it last stopped.

Specific to Block(s)	Pulse Input IOC, Pulse Input w/ Fast Cutoff IOC, Pulse Input Totalizer
Description	Time Base – Used to scale a pulse frequency to Engineering Units. (Units of time used for RATE value calculation.)
Data Type	Enumeration
Range	Seconds (0) Minutes (1) Hours (2)
Default	Seconds (0)

Config Load	Yes
Access Lock	Application Developer Pulse Input Totalizer only: Engineer
Residence	CEE
Related Parameters	
Remarks	

TIMEBASE[0..7]

Specific to Block(s)	Pulse Input IOM
Description	Time Base – Units of time for frequency and pulse length values calculated in Engineering Units.
Data Type	Enumeration
Range	Seconds (0) Minutes (1) Hours (2)
Default	Seconds (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	

TIMELASTSKEW

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Last Skew – Time skew from last synced time.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	

TIMELASTSYNC

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Last Sync Time - Time module time synced with time source.
Data Type	TIME
Range	
Default	
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	

TIMESOURCE

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Time Source – Indicates current time source in use for module time synchronization.
Data Type	Enumeration
Range	SNTP (1) GPS (2)
Default	SNTP
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	GPSENABLE
Remarks	Default is SNTP. If GPS is enabled time source it will show GPS, if GPS is OK. Otherwise the time synchronization will fall back to SNTP.

TIMESYNCSTAT

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Time Sync Status
Data Type	Enumeration
Range	--- (0) ERROR (1)

	SKEWED (2) SYNCED (3)
Default	---
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	

TIMETOFINISH[1..24]

Specific to Block	QIPACTERM
Description	Estimated Time to Complete in Seconds
Data Type	INT32
Range	0-65535
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value in the input assembly for the designated position [1-24].

TIMETOFINISH[1..200]

Specific to Block	QIPACCHAN
Description	Estimated Time to Complete in Seconds
Data Type	FLOAT64
Range	N/A
Default	NAN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value in the input assembly for the designated channel [1-200] in the QiMPACT cluster.

TIMEZONE

Specific to Block(s)	CEEC300, CPM, ACE, SIM_C200
Description	Specifies the time zone in which the Controller is located.
Data Type	Float64
Range	-12.0 to 13.0
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), C200, SIM_C200, ACE,
Related Parameters	DAY, DAYLIGHTTIME, HOUR, MINUTE, MONTH, SECOND, YEAR
Remarks	This parameter specifies the value of the time zone as an offset number relative to the Greenwich Mean Time (GMT). For example, the Eastern time zone of the United States and Canada is identified as a -05.0 or -5.0 value for this parameter. This parameter affects the determination of the Controller's local time.

TIPEERAVGLPS [1...TIPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Average IMRs Per Second - The actual number of peer messages per second received on the total platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.00
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERAVGPPS [1...TIPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Average Parameters Per Second - The actual number of parameters per second received on the total platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.00
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERCONN

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Connections - The current number of peer connections currently opened on total platform.
Data Type	32-Bit Integer

Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERCONNERRCODE [1…N]

Specific to Block(s)	C300, FIM4
Description	Total Peer Initiator Connection Error Codes - Indicates the ICP/ASA error returned on an open connection attempt.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERCONNERRINFO [1…N]

Specific to Block(s)	C300, FIM4
Description	Total Peer Initiator Connection Extended Error Information - Indicates the ICP/ASA extended error information returned on an open connection attempt.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300

platform.

TIPEERCONNMAX

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Connections Maximum - The toal maximum number of peer connections supported in this version of firmware on total platform.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERCONNSTS [1…N]

Specific to Block(s)	C300, FIM4
Description	Totals Peer Initiator Connection Status - Indicates the current ICOA connection status for all connection on the platform.
Data Type	Enumeration
Range	NoState (0) Initialized (1) OpenPending (2) Open (3) ClosePending (4)
Default	NoState (0)
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERMAXLPS [1...TIPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Maximum IMRs Per Second - The total maximum number of peer messages per second received on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.00
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERMAXPPS [1...TIPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Maximum Parameters Per Second - The total maximum number of peer parameters per second received on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.00
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERNAME [1...TIPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Names - The name of the target CPM, ACE, FIM or IOLIM block.
Data Type	BlockId
Range	
Default	Null
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TIPEERPATH [1...TIPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Initiator Peer Paths - The peer initiator's Automation System Architecture (ASA) path.
Data Type	String
Range	Length : 32 Characters
Default	Null
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TMOUTFL

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, Regsummer, and Switch.
Description	Timeout Flag - Indicates if an initializable input has timed-out.
Data Type	Boolean
Range	Off (0): No time-out

	On (1): Input has timed-out
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	TMOUTMODE, TMOUTTIME.
Remarks	

TMOUTMODE

Specific to Block(s)	Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, RemCas, RatioBias, RegCalc, and RegSummer.
Description	Timeout Shed Mode - The mode that a function block sheds to when an initializable input times out.
Data Type	Enumeration REGMODE
Range	None (0): No mode shedding
	Auto (1): Shed to Auto mode
	Man (2): Shed to Manual mode
Default	Man (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	TMOUTFL, TMOUTTIME.
Remarks	

TMOUTTIME

Specific to Block(s)	All RegCtl Blocks: AutoMan, Fanout, IncrSummer, OvrdSel, PID, PIDFF, PosProp, PulseCount, PulseLength, RampSoak, RemCas, RatioBias, RegCalc, RegSummer, and Switch.
Description	Timeout Time - The maximum time between successive updates on an initializable input. If the updates are not received within the specified time, the input is assumed to have timed out.
Data Type	Integer
Range	0 to 1000 seconds
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	TMOUTFL, TMOUTMODE.
Remarks	When the connection for which timeout processing is used (eg. SP on Pid) is from a different controller (peer-to-peer) it is important to note that the timeout time (TMOUTTIME) configured in the RegCtl block is actually in addition to the CDA timeout of the peer connection. The CDA timeout is equal to 4 times the CEE subscription rate. For example, with a CEE subscription rate of 100 milliseconds, and a TMOUTTIME of 5 seconds, the actual time (after data can no longer be fetched) before the RegCtl block executes the timeout action will be at least 5.4 seconds (4 * 100ms + 5s).

TNUMACEINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of ACE Input Connections - Defines number of Application Control Environments (ACEs) for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only

Residence	C300, FIM4
Related Parameters	TNUMACEOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMACEOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of ACE Output Connections - Defines number of originator Application Control Environments.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMACEINCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMC3INCON

Specific to Block(s)	C300, FIM4
Description	Total Number of C300 input Connections - Defines number of C300s for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMC3OUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMC3OUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of C300 Output Connections - Defines number of originator C300s.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMC3INCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMCPMINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of CPM Input Connections - Defines number of CPMs for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMCPMOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMCPMOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of CPM Output Connections - Defines number of originator CPMs.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMCPMINCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMFIMINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of FIM input Connections - Defines number of FIM for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMFIMOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMFIMOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of FIM Output Connections - Defines number of originator FIM.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMFIMINCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMIOLMINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of IOLIM input Connections - Defines number of IOLIM for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMIOLMOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMIOLMOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of IOLIM Output Connections - Defines number of originator IOLIM.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0

Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMIOLMINCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMLIOMINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of LIOM Input Connections - Defines number of LIOM for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMLIOMOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMLIOMOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of LIOM Output Connections - Defines number of originator LIOM.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMLIOMINCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMNTFRQUAVG

Specific to Block(s)	C300, FIM4
Description	Total Notifications Rate – Total Number of Notification Requests per Second Average.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMNTFRQUMAX, STATSRESET
Remarks	Rolling average of notification request throughput. This parameter represents aggregate value for C300 platform.

TNUMNTFRQUMAX

Specific to Block(s)	C300, FIM4
Description	Total Maximum Notifications Rate – Total Number of Notification Requests per Second Maximum.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMNTFRQUAVG, STATSRESET
Remarks	Historical maximum of notification request throughput since last store of STATSRESET. This parameter represents aggregate value for C300 platform.

TNUMSCEINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of SIM_C200 Input Connections - Defines number of SIM_C200 for peer targets.
Data Type	32-Bit Integer

Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMSCEOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMSCEOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of SIM_C200 Output Connections - Defines number of originator SIM_C200.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMSCEINCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMSCFIMINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of Series C FIM Input Connections - Defines number of Series C FIM for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMSCFIMOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMSCFIMOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of Series C FIM Output Connections - Defines number of originator Series C FIM.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMSCFIMINCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMSIOLMINCON

Specific to Block(s)	C300, FIM4
Description	Total Number of SIM IOLIM input Connections - Defines number of SIM IOLIM for peer targets.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMSIOLMOUTCON
Remarks	This parameter represents aggregate value for C300 platform.

TNUMSIOLMOUTCON

Specific to Block(s)	C300, FIM4
Description	Total Number of SIM IOLIM Output Connections - Defines number of originator SIM IOLIM.
Data Type	32-Bit Integer
Range	Greater than or equal to 0

Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	TNUMSIOLMINCON
Remarks	This parameter represents aggregate value for C300 platform.

TOTALMEM

Specific to Block(s)	CEEC300, CPM
Description	Total Memory – Lists total size of CEE user memory pool in bytes.
Data Type	32-Bit Integer
Range	0 to 4194304 Bytes
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300, C200
Related Parameters	FREEMEM, MAXFREEBLKSZ USEDMEM.
Remarks	The difference between TOTALMEM and FREEMEM is equal to USEDMEM.

TOTALMEMINK

Specific to Block(s)	CEEC300, CPM
Description	Total size of CEE user memory pool in bytes.
Data Type	32-Bit Integer
Range	0 to 4194304 Kbytes
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C300, C200
Related Parameters	FREEMEMINK, MAXFREEINK, USEDMEMINK.

Remarks	The difference between TOTALMEMINK and FREEMEMINK is equal to USEDMEMINK.

TOTALTIME[1..50]

Specific to Block(s)	RampSoak
Description	Total (configured) Time for a RampSoak Profile (in Minutes)
Data Type	Real
Range	Greater-than or equal to 0.0
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

TOTCHNERRA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Errors on Channel A. Shows the sum of I/O Link errors on channel A encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNERRA[1…40] PRIIFCHNERRA, SECCHNERRA [1…40], SECIFCHNERRA.
Remarks	Note that this is the same as the IOLCHAER parameter in a TPS system.

TOTCHNERRB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Errors on Channel B. Shows the sum of I/O Link errors on channel B encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNERRB [1…40], PRIIFCHNERRB, SECCHNERRB [1…40], SECIFCHNERRB
Remarks	(Note that this is the same as the IOLCHBER parameter in a TPS system.)

TOTCHNMNA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Channel A- Edges. Shows the sum of I/O Link missed minus edge transitions on channel A encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNMNA [1…40] PRIIFCHNMNA SECCHNMNA [1…40] SECIFCHNMNA
Remarks	

TOTCHNMNB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Channel B- Edges. Shows the sum of I/O Link missed minus edge transitions on channel B encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNMNB [1…40] PRIIFCHNMNB SECCHNMNB [1…40] SECIFCHNMNB
Remarks	

TOTCHNPLA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Channel A+ Edges. Shows the sum of I/O Link missed plus edge transitions on channel A encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNPLA [1…40] PRIIFCHNPLA SECCHNPLA [1…40] SECIFCHNPLA
Remarks	

TOTCHNPLB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Channel B+ Edges. Shows the sum of I/O Link missed plus edge transitions on channel B encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNPLB [1…40] PRIIFCHNPLB SECCHNPLB [1…40] SECIFCHNPLB
Remarks	

TOTCHNSILA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Silences on Channel A. Shows the sum of I/O Link silences on channel A encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNSILA [1…40] PRIIFCHNSILA SECCHNSILA [1…40] SECIFCHNSILA
Remarks	Note that this is the same as the IOLCHASL parameter in a TPS system.

TOTCHNSILB

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Total Silences on Channel B. Shows the sum of I/O Link silences on channel B encountered locally by the primary link interface, the secondary link interface, if one exists; and those encountered by each IOM.
Data Type	16-Bit Unsigned Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	PRICHNSILB [1…40] PRIIFCHNSILB SECCHNSILB [1…40] SECIFCHNSILB
Remarks	Note that this is the same as the IOLCHBSL parameter in a TPS system.

TOTELAPSEDTM

Specific to Block(s)	RampSoak
Description	Total Elapsed Time for current RampSoak Profile (in Minutes)
Data Type	Real
Range	Greater-than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	NETELAPSEDTM
Remarks	

TOTICPNAKS

Specific to Block(s)	CEE, CEEC300, CEEACE, CEESIMC200, IOLIM, FIM, OPC, ICG, GEE FB
Description	Total Integrated Control Protocol (ICP) Not Acknowledgements - The total number of ICP messages

	not acknowledged for all responder connections.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, C200.SIM_C200,ACE,.FIM,IOLIM
Related Parameters	
Remarks	

TOTICPSENDFAIL

Specific to Block(s)	CEE, IOLIM, FIM
Description	Total Integrated Control Protocol (ICP) Send Failures - The total number of Control Data Access (CDA) and ICP retries for all responder connections.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE, IOLIM, FIM
Related Parameters	
Remarks	

TP

Specific to Block(s)	EQ, GE, GT, LE, LT, NE
Description	Trip Point Value
Data Type	64-Bit Real Number
Range	
Default	0.5
Config Load	Yes
Access Lock	Engineer/Program
Residence	CEE
Related Parameters	
Remarks	Used to compare against constant values, when only one

input is configured.

TRACKING

Specific to Block(s)	RemCas, Switch
Description	Input Tracking Option – Allows the selected input to be changed without bumping the output.
Data Type	Boolean
Range	Off (0): Tracking is disabled On (1): Tracking is to be done
Default	On (1)
Config Load	Yes
Access Lock	Engineer/Application Developer
Residence	CEE
Related Parameters	
Remarks	

TRDISPAVGLPS [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Average IMRs Per Second - The total average number of display peer messages per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPAVGLPSCONN [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Average IMRs Per Connection - The total average number of display peer messages per connection sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPAVGPPS [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Average Parameters Per Second - The total average number of display parameters per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPAVGPPSCONN [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Average Parameters Per Connection - The total average number of display parameters per connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPCONN

Specific to Block(s)	C300, FIM4
Description	Total Responder Display Connections - The total number of current display connections on the platform.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPCONNMAX

Specific to Block(s)	C300, FIM4
Description	Total Responder Display Connections Maximum - The total maximum number of display connections supported in this version of firmware.
Data Type	32-Bit Integer

Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPDEGIMRCONN [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Number of Display IMRs Degraded to Request-Response - Indicates the count of display IMRs (Inter-process Message Structure) that have degraded to Request-Response on each connection on the platform.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPMAXLPS [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Maximum IMRs Per Second - The maximum number of display peer messages per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4

Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPMAXLPSCONN [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Maximum IMRs Per Connection - The maximum number of display peer messages per connection sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPMAXPPS [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Maximum Parameters Per Second - The total maximum number of display parameters per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRDISPMAXPPSCONN [1...TRDISPCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Display Maximum Parameters Per Connection - The maximum number of display parameters per connection sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TREEBITMAP

Specific to Block(s)	Most Function Blocks
Description	Monitoring Tree Bitmap – Used to provide the tree bitmap for different states of the function block.
Data Type	BLOB
Range	8000
Default	Bitmap File Name
Config Load	No
Access Lock	View Only
Residence	SR
Related Parameters	ICONSTATE
Remarks	

TREND

Specific to Block(s)	Most Function Blocks
Description	Trend Configuration – The collection of trend information associated with a parameter.
Data Type	STRUCTDATA
Range	N/A
Default	N/A
Config Load	No
Access Lock	Application Developer Only
Residence	Server
Related Parameters	
Remarks	

TRENDINTRVAL

Specific to Block(s)	Step
Description	Step-scope Trend Update Interval
Data Type	Enumeration
Range	(0) 1Min (1) 6MinAvg (2) 1HourAvg (3) 8HourAvg (4) 24HourAvg (5) 5Sec (6) 1Hour (7) 8Hour (8) 24Hour
Default	(5) 5Sec
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR
Related Parameters	CURRDESCREF CURRVALREF, CURRVALTREND
Remarks	Specifies the Trend Update Interval for the built-in Trend display that is part of the SCM Table view. Note that the built-in Trend display is not supported in the pilot release.

TREND.NUMBER

Specific to Block(s)	Most Function Blocks
Description	Trend Number – The trend # (1 to 3000) to be associated with this trend parameter.
Data Type	32-bit Integer
Range	0 … 3000
Default	0
Config Load	Yes
Access Lock	Application Developer Only
Residence	Server
Related Parameters	
Remarks	

TREND.NUMPARAMS

Specific to Block(s)	Most Function Blocks
Description	Trend Number Parameters - Lets you define number of rows to be included in Trend grid.
Data Type	16-Bit Integer
Range	1 to 25
Default	10
Config Load	Yes
Access Lock	Application Developer
Residence	Server
Related Parameters	
Remarks	

TREND.PARAM

Specific to Block(s)	Most Function Blocks
Description	Trend Parameter – Identifies a valid parameter name for a parameter associated with the given point that is configured for trend collection.
Data Type	PARAMID
Range	N/A
Default	N/A
Config Load	Yes
Access Lock	Application Developer Only
Residence	Server
Related Parameters	
Remarks	

TREND.POSITION

Specific to Block(s)	Most Function Blocks
Description	Trend Position – Defines the color of the pen that will be used to trace the assigned parameter on the Station Trend display.
Data Type	Enumeration
Range	1-Cyan (0) 2-White (1) 3-Green (2) 4-Yellow (3) 5-Pink (4) 6-Red (5) 7-Blue (6) 8-Gray (7) None (8)
Default	None
Config Load	Yes
Access Lock	Application Developer Only
Residence	Server
Related Parameters	
Remarks	

TRENDSETNUMBER

Specific to Block(s)	Step
Description	Trend Set Number
Data Type	32-Bit Integer
Range	1 to 3000
Default	1
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	
Remarks	

TRFB

Specific to Block(s)	PIDER
Description	Tracking Reset Feedback (RFB) – Shows the tracking input value.
Data Type	Float64
Range	
Default	
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	PUSHSP, PV, S1, SP, RETRYSCURR, RETRYSTOTAL, RFB.
Remarks	

TRMNTALM.PR

Specific to Block(s)	CAB types
Description	Terminated Alarm Priority. Sets the priority of the alarm notification if a CAB Terminated alarm is reported. Engineer can change this value at run time.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	Enumeration ALPRIOR
Range	NONE, JOURNAL, LOW, HIGH, URGENT
Default	LOW
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CABSTATE
Remarks	

TRMNTALM.SV

Specific to Block(s)	CAB types
Description	Terminated Alarm Severity. Sets the severity of the alarm notification if a CAB Terminated alarm is reported. Engineer can change this value at run time.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	16-Bit Integer
Range	0-15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	CABSTATE
Remarks	

TRPEERAVGLPS [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Average IMRs Per Second - The total average number of peer messages per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERAVGLPSCONN [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Average IMRs Per Connection - The total average number of peer messages per connection sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERAVGPPS [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Average Parameters Per Second - The total average number of parameters per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERAVGPPSCONN [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Average Parameters Per Connection - The total average number of parameters per Connection sent on the wire.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERCONN

Specific to Block(s)	C300, FIM4
Description	Total Responder Peer Connections - The number of peer connections currently open on the platform.
Data Type	32-bit Integer

Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERCONNMAX

Specific to Block(s)	C300, FIM4
Description	Total Responder Peer Connections Maximum - The total maximum number of peer connections supported in this version of firmware.
Data Type	32-bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERDEGIMRCONN [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Number of Peer IMRs Degraded to Request-Response - Indicates the count of peer IMRs that have degraded to Request-Response on each connection.
Data Type	32-bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	

Remarks	This parameter represents aggregate value for C300 platform.

TRPEERMAXLPS [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Maximum IMRs Per Second - The total maximum number of peer messages per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERMAXLPSCONN [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Maximum IMRs Per Connection - The total maximum number of peer messages per connection sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERMAXPPS [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Maximum Parameters Per Second - The total maximum number of parameters per second sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERMAXPPSCONN [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Report By Exception Peer Maximum Parameters Per Connection - The total maximum number of parameters per connection sent on the platform.
Data Type	Float64
Range	Greater than or equal to 0.0
Default	0.0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRPEERNAME [1...TRPEERCONNMAX]

Specific to Block(s)	C300, FIM4
Description	Total Originator's Peer Names - The name of the CPM, ACE, FIM, or IOLIM peer originator block.
Data Type	ENTITYID
Range	16 Characters
Default	Null
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	
Remarks	This parameter represents aggregate value for C300 platform.

TRUNCATEOPT

Specific to Block(s)	TypeConvert, Push.
Description	Choice for truncating or rounding integers.
Data Type	Enumeration TCTRUNCATETYPE
Range	Truncate (0) Round (1)
Default	Truncate (0)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	IN.FLOAT32, IN.FLOAT64, OUT.INT16, OUT.INT32, OUT.UINT 8 OUT.UINT16, OUT.UINT32.
Remarks	Selecting truncate would truncate the numbers, in the case of data type conversion, from floating point to integer. Otherwise the block will round the numbers during type conversion.

TSTS

Specific to Block(s)	FLOWCOMP	
Description	Temperature Input Status – Indicates the current status of temperature input T.	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The PV value was bad and replaced with NaN.
	Uncertain (1):	The status of the PV value is uncertain, stored by a program.
	Normal (2):	The PV value is good.
	Manual (3):	The PV value was manually entered.
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	ACE/C200	
Related Parameters	T	
Remarks		

TV

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Target Value – used by Pulse Input Module for fast cutoff comparison; value is in Engineering Units.
Data Type	64-Bit Real Number
Range	Greater-than or equal-to 0.0
Default	0.0
Config Load	No
Access Lock	Operator
Residence	CEE
Related Parameters	SO
Remarks	

TV[6..7]

Specific to Block(s)	Pulse Input IOM
Description	Target Value – Used for fast cutoff comparison. Value is in Engineering Units.
Data Type	64-Bit Real Number
Range	Greater-than or equal-to 0.0
Default	0.0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	SO[6..7], TVRAW[6..7].
Remarks	This parameter can be set from the Control Builder configuration form. Writing this parameter enables the fast cutoff functionality and overwrites any TV set from the associated PI channel with fast cutoff block. **Note:** After the AV meets or exceeds the TV setting the output, the TV value must be re-written to enable the Fast-Cutoff functionality.

TVPROC

Specific to Block(s)	Pulse Input w/ Fast Cutoff IOC
Description	Target Value Processing Flag. If On, it indicates Pulse Input Module fast cutoff comparison is enabled.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SO, TV.
Remarks	

TVPROC[6..7]

Specific to Block(s)	Pulse Input IOM
Description	Target Value Processing Flag. If On, it indicates Pulse Input Module fast cutoff comparison is enabled.
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SO[6..7], TVRAW[6..7].
Remarks	

TVRAW[6..7]

Specific to Block(s)	Pulse Input IOM
Description	Raw Target Value – used by Pulse Input Module for fast cutoff comparison; corresponds to AVRAW[0..7].
Data Type	32-Bit Integer
Range	Greater-than or equal-to 0.0
Default	0.0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	SO[6..7], TV[6..7].
Remarks	

TYPE

Specific to Block(s)	Handler
Description	Handler Type
Data Type	Enumeration CSCOHANDLERTYPE
Range	Null (0) Edit (1) Main (2) Check (3) Interrupt (4) Restart (5) Hold (6) Stop (7) Abort (8)
Default	Hold (6)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	ACTIVEHANDLR[1..8], ENBHANDLER[1..8], INVCOND[1..8], INVFRMHNDLER[1..8], INVFRMHNDTYP[1..8], INVFROMSTEP[1..8][1..10], SELHANDLER[1..8], TIME[1..8].
Remarks	Contains the TYPE of the currently active handler. For example, if ACTIVELOC.HNDTYPE = 5, then the currently active handler is of type RESTART. The ordinal of the handler TYPE is the index for the listed Related Parameters. For example, to determine if the Hold handler's invoke transition is currently being evaluated, the state of the ENBHANDLER[6] flag would be examined.

TYPEINVALIDA

Specific to Block(s)	All PM I/O Modules and Series C I/O Modules		
Description	I/O Module Type Invalid. Shows that the actual IOM Type on Channel A does not match the configured IOM type.		
Data Type	Boolean		
Range	0	OFF	Ok.
	1	ON	IOM Type Mismatch.
Default	Off (0)		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks			

TYPEINVALIDB

Specific to Block(s)	All IOP Blocks		
Description	I/O Module Type Invalid. Shows that the actual I/O Module (IOM) Type on Channel B does not match the configured IOM type.		
Data Type	Boolean		
Range	0	OFF	Ok.
	1	ON	IOM Type Mismatch.
Default	Off (0)		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks			

U*xxxx* Parameters

UDPINDGRAMS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	User Datagram Protocol (UDP) In Datagrams – Identifies total number of UDP datagrams delivered to UDP users.
Data Type	32-Bit integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

UDPINERRORS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	User Datagram Protocol (UDP) In Errors – Identifies The number of received UDP datagrams that could not be delivered for reasons other than the lack of an application at the destination port.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

UDPLISTENERS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	User Datagram Protocol (UDP) Listeners – Provides a table containing path information for all open ports on the FTE Bridge module.
Data Type	String
Range	22 Characters Maximum
Default	Null
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

UDPNOPORTS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	User Datagram Protocol (UDP) No Ports – Identifies the total number of received UDP datagrams for which there was no application at the destination port.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

UDPNUMLISTENERS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Number of UDP Listeners
Data Type	16-Bit Integer
Default	0
Config Load	No
Access Lock	View Only
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

UDPOUTGRAMS

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	User Datagram Protocol (UDP) Out Grams – Identifies The total number of UDP datagrams sent from this entity.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	

ULCNBMAC

Specific to Block(s)	IOM
Description	Uplink MAC address of the IO rack.
Data Type	32-Bit Integer
Range	0 to indicate local IOM; 1 to 99 are valid CNI Module addresses for remote chassis.
Default	0
Config Load	Yes
Access Lock	Application Developer
Residence	SR
Related Parameters	DLCNBSLOT, IOMSLOT.
Remarks	ULCNBMAC refers to the ControlNet Module address in the remote IO chassis. Upon insertion and power-up, the CNI Module address is displayed in the LCD display with an A# prefix. The CNI Module address is configured or changed by adjusting two rotary dials on top of the CNI Module. The dial for the 1's digit is located towards the back of the module, and the dial for the 10's digit is towards the front of the module. Use a small screwdriver to adjust. If configuring an IOM located in the same chassis as the controller, leave this parameter set to the default value of 0.

Specific to Block(s)	CPM, RM
Description	Uplink MAC address
Data Type	32-Bit Integer
Range	1-99
Default	0
Config Load	No
Access Lock	Engineer
Residence	SR
Related Parameters	ABORTALM.PR
Remarks	For the parameter to be valid, the Default may not be zero.

UNCMDALM.FL

Specific to Block(s)	DevCtl
Description	Uncommanded Change Alarm Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	CMDDISALM.FL, CMDDISALM.PR, CMDDISALM.SV, CMDDISALM.TM[0..2], GOP, GPV, NUMDINPTS, OP, PUSHSP.
Remarks	Illegal if NUMDINPTS = 0, or if NUMDOUTS = 0. UNCMDALM.FL is always enabled, when CMDDISALM.xx is enabled.

UNCMDALM.PR

Specific to Block(s)	DevCtl
Description	Uncommanded Change Alarm Priority
Data Type	Enumeration ALPRIOR
Range	None (0) Journal (1) Low (2) High (3) Urgent (4)
Default	Low (2)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

UNCMDALM.SV

Specific to Block(s)	DevCtl
Description	Uncommanded Change Alarm Severity
Data Type	16-Bit Integer
Range	0 to 255
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

UNCONNSENDERR

Specific to Block(s)	FTEB
Description	Unconnected Send Error – Identifies the unconnected send errors.
Data Type	32-Bit Integer
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	FTEB
Related Parameters	
Remarks	

UNDERRANGE

Specific to Block(s)	AIC
Description	Under Range Alarm Indicator - Indicates that the input value is under the valid hardware input range of the channel. Overrange and Underrange parameters are not supported for the Series A Analog Input Module (TC-FIAH81). When selected, Parameter ID error Err2088 will appear.
Data Type	Boolean
Range	Input is not in an under-range state (0)

	Input is in an under-range state (1)
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OVERRANGE
Remarks	

UNDERRANGE[0..numChans-1]

Specific to Block(s)	AIM
Description	Under Range Alarm Indicator - Indicates that the input value is under the valid hardware input range of the channel.
Data Type	Boolean
Range	Input is not in an under-range state (0) Input is in an under-range state (1)
Default	Input is not in an under-range state (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	OVERRANGE[0..numChans-1]
Remarks	

UNDERTOLRNCE[1..200]

Specific to Block	QIPACCHAN	
Description	Under Tolerance	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Under Tolerance
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters	MATERIALPATH, COMMAND, COMMANDSTATS, MXFERSTATUS, MXFERSTATQ, OVERTOLRNCE, POWERFAIL, DELIVEREDWGT, TARGETERROR, AVGFLOWRATE, AVGSPILL	

Remarks	This is the value of bit 1 of the MXFERSTATQ word in the Command Status Object. This value provides material transfer results and is valid after the material transfer for the designated channel [1..200] in the QiMPACT cluster completes.

UNDERZERO[1..24]

Specific to Block	QIPACTERM	
Description	Scale Under Zero	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Under Zero
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 3 of the Status 1 byte in the input assembly for the designated position [1-24].	

UNDERZERO[1..200]

Specific to Block	QIPACCHAN	
Description	Scale Under Zero	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Under Zero
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 3 of the Status 1 byte in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

UNITTEXT

Specific to Block(s)	CM, SCM
Description	Unit Text
Data Type	String
Range	Length: 2 characters
Default	Null String
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	Unit Text is configurable on the CM configuration form. It associates the Control Module, and all events generated by its contained basic blocks to a Unit.

UPDATEMODEL

Specific to Block(s)	PID-PL
Description	Update Model – Updates the active model in the function block with values stored in model buffer.
Data Type	Boolean
Range	
Default	
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	RESETMODEL
Remarks	To prevent undesired bumps in the controller due to partial model updating, the user-entered model is stored in a buffer until complete model is entered. UPDATEMODEL indicates that the model stored in buffer should be transferred to the active controller; whereas, RESETMODEL resets the buffer with model stored in active controller. Setting this parameter, regardless of its value, forces the update to the active model. Ordinarily, this flag is set on to initiate the update and is switched off, by the function block, during the update. This parameter is applicable only when CTLEQN is set to

Profit Loop PKS, and is ignored in PID control equations.

UPDATOPT

Specific to Block(s)	All IO Channels, IOM, SIFLAGARRCH, SINUMARRCH, SITEXTARRCH
Description	Update Option
Data Type	Integer
Range	N/A
Default	0
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

UPDRESOPT

Specific to Block(s)	Step
Description	Update Resume Address Option
Data Type	Boolean
Range	Off (0) - The first Step of the Main handler should not be set to Off. See warning in Remarks. On (1)
Default	On (1)
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	RESADDR[1..10], RESADDRFUTUR[1..10].
Remarks	WARNING: Always select the Update Restart Address for the first STEP in a Main Handler. This sets the UPDRESOPT parameter On(1) and ensures that the SCM always has somewhere to return to from Exception Handlers. See RESADDRFUTUR[1..10] for additional information on this parameter.

URL

Specific to Block(s)	AICHANNEL, HAICHANNEL (PM I/O) AICHANNEL (Series C I/O)
Description	For AICHANNEL: Upper Range Limit (URL). Specifies the Upper Range Limit for Process Variable (PV) measurement at the Smart Transmitter. The Engineering Units are defined by the STI_EU parameter. For HAICHANNEL: PV Extended High Range. The upper range limit of the PV at the HART device.
Data Type	32-Bit Real Number
Range	N/A
Default	NaN
Config Load	Yes
Access Lock	Engineer
Residence	IOP
Related Parameters	STI_EU (AICHANNEL only)
Remarks	For AICHANNEL: This parameter is exposed only if ASSOCIOPTYP is STI-MV. The Smart Transmitter's Upper Range Limit (URL) and Lower Range Limit (LRL) are set at the factory, according to transmitter type, and cannot be changed. This means the configured value of the URL parameter must match the URL setting in the transmitter. While any URL value can be entered during configuration, a database mismatch will occur when the point is put on-process because the transmitter's URL value and the STI IOP's URL value are not the same. If the values are not the same, the STATE parameter value becomes DBChange and PVSTS becomes Bad. See the Smart Transmitter IOP Operation section in the Control Building Guide for more information. See Table 11, Table 12, and Table 13 for the URL settings for various Smart Transmitter types. For HAICHANNEL: This parameter is exposed only if HENABLE is TRUE. The same value as HTDURL. Two parameters are used in order to show the device limits on two different tabs of the same configuration form.

Table 11 URL Settings for Smart Pressure Transmitters – SENSRTYP SPT_DP, SPT_GP, and SPT_AP

Transmitter Range	URL in InH_2O (39.2 degrees F)
400 inH2O	400.0
600 inH2O	600.0
780 mmHga	400.0
100 PSI	2768.0
200 PSI	5536.13
500 PSI/A	13840.34
1500 PSI	41521.0
2000 PSI	55361.35
3000 PSI	83042.02
6000 PSI	166084.0
10000 PSI	276806.7

Table 12 URL Settings for Smart Temperature Transmitters – SENSRTYP STT

PVCHAR Parameter	URL in Degrees C Except Where Noted
Linear	
0_100_MV	1000 mV
Thermocouples	
Btherm	1820
Etherm	1000
Jtherm	1200
Ktherm	1370
NiNiMoTC	1300
Ntherm	1300
Rtherm	1760
Stherm	1760
Ttherm	400
W5W26TC	2300
W3W25TC	2300

PVCHAR Parameter	URL in Degrees C Except Where Noted
RTDs	
Cu10RTD	250
Cu25RTD	250
DINRTD	850
JISRTD	640
NicklRTD	150
Pt200	850
Pt500	850
RHRad	1800
Ohms	4000 ohms

Table 13 URL Settings for Magnetic Flowmeter Transmitter – SENSRTYP SFM

URL in Cubic Meters per Hour Equals:	
$\pi D^2 / 4 \times 10^6 \times 3600 \times (N + 1)$	
Where:	
D =	The detector diameter in millimeters as follows: 2.5, 5, 10, 15, 25, 40, 50, 80, 100, 150, 200, 300, 350, 400, 500, 600, or 700.
N =	The number of dummy submerged detectors, from 0 to 9.

URV

Specific to Block(s) AICHANNEL, HAICHANNEL (PM I/O)
AICHANNEL (Series C I/O)

Description For AICHANNEL: Upper Range Value. Defines the upper end of the operating range for PVRAW input value. The Engineering Units are defined by the STI_EU parameter.

For HAICHANNEL: PV High Range (20mA). Indicates the upper range limit of the operating range for PVRAW.

Data Type 32-Bit Real Number

Range

Default NaN

Config Load Yes

Access Lock	Engineer
Residence	IOM
Related Parameters	
Remarks	For AICHANNEL: This parameter is exposed only if ASSOCIOPTYP is STI-MV. It is a view-only parameter when the STI point execution state PTEXECST is Active. The following maximum values can be entered for the URV. However, we do not recommend entering values greater than the URL, since accuracy is not guaranteed in such cases. • For a Pressure Transmitter (SPT_DP, SPT_GP, SPT_AP): URVmax = 2.0 x URL • For a Temperature Transmitter (STT): URVmax = 2.0 x URL • For a Magnetic Flowmeter Transmitter (SFM): URVmax = 12.0 x URL For HAICHANNEL: This parameter is exposed only if HENABLE is TRUE. The same value as HPVURV. Two parameters are used in order to show the limits on two different tabs of the same configuration form.

USEDMEM

Specific to Block(s)	CPM, CEEC300
Description	Used Memory – Shows total amount of used memory in CEE user memory pool.
Data Type	32-Bit Integer
Range	0 to 4194304 Bytes
Default	
Config Load	No
Access Lock	ViewOnly
Residence	C200, C300
Related Parameters	FRCREQ, FRCSEL, FREEMEM, TOTALMEM, MAXFREEBLKSZ.
Remarks	The used memory increases as blocks are loaded and decreases as blocks are unloaded. The difference between TOTALMEM and USEDMEM is equal to FREEMEM.

USEDMEMINK

Specific to Block(s)	CPM, CEEC300
Description	Total amount of used memory in CEE user memory pool.
Data Type	32-Bit Integer
Range	0 to 4194304 Kbytes
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	C200, C300
Related Parameters	MAXFREEINK, TOTALMEMINK, FREEMEMINK.
Remarks	This parameter publishes total amount of used memory in the user memory pool. Used memory increases as blocks are loaded and decreases as blocks are unloaded. The difference between TOTALMEMINK and USEDMEMINK is equal to FREEMEMINK.

USEDXLREQSINIT

Specific to Block(s)	CEEC300, CEEACE, OPC, ICG
Description	X-tra Large Requests In Use on Initiator.
Data Type	INT32
Range	
Default	
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300), C200(CEE)
Related Parameters	
Remarks	

USEDXLREQSRESP

Specific to Block(s)	CEEC300, CEEACE, OPC, ICG
Description	X-tra Large Requests In Use on Responder.
Data Type	INT32
Range	
Default	
Config Load	No
Access Lock	View Only
Residence	C300(CEEC300), C200(CEE)
Related Parameters	
Remarks	

USERDEFRANGE[0..7]

Specific to Block(s)	HART AI IOM (Chassis Only)
Description	User Defined Range – Lets you define the PV range to be used for the analog input channel.
Data Type	Enumeration
Range	USER (0) DEVICE (1) USERWITHSQRT (2)
Default	User (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	LOWENG[0..7], HIGHENG[0..7]
Remarks	• If **USER** is the selection, you configure the desired low and high Engineering Units to define the PV range. The parameter is initialized to this value. • If **DEVICE** is the selection, the low and high Engineering Units are fixed to 0 and 100, respectively. This ensures that the PV shown depends on the range from the transmitter. • If **USERWITHSQRT** is the selection, ensures that the PV shown is after taking its square root.

USERLCKTOIDLE

Specific to Block(s)	CEEC300, CEE, CEESIMC200, CEEACE
Description	User Lock for CEE Idle - Determines the user lock to command CEEIDLE.
Data Type	Enumeration of CeeFbCntlLck
Range	
Default	SUPERVISOR
Config Load	Yes
Access Lock	Application Developer Only
Residence	CEE
Related Parameters	USERLCKTORUN, PROGLCKTORUN, PROGLCKTOIDLE.
Remarks	

USERLCKTORUN

Specific to Block(s)	CEEC300, CEE, CEESIMC200, CEEACE
Description	User Lock for CEE Run - Determines the user lock to command COLDSTART & WARMSTART
Data Type	Enumeration of CeeFbCntlLck
Range	
Default	OPERATOR
Config Load	Yes
Access Lock	Application Developer Only
Residence	CEE
Related Parameters	USERLCKTOIDLE, PROGLCKTORUN, PROGLCKTOIDLE.
Remarks	

USESIM

Specific to Block(s)	CPM
Description	Simulate CEE on NT
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Application Developer
Residence	SR
Related Parameters	ABORTALM.PR
Remarks	

V*xxxx* Parameters

V3TIMESFLOW

Specific to Block(s)	QIPACCHAN
Description	Three Times Average Flow
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VALVETRAVELRDCT

Specific to Block(s)	PID-PL	
Description	Valve Travel Reduction Filter Factor – Defines the level of noise filtering applied to model bias. Reducing this noise level leads to a reduction in valve travel with fewer valve reversals.	
Data Type	Enumeration PLCUSHIONFILTER	
Range	Normal(0):	No additional filtering is applied.
	Moderate(1):	Some additional filtering is applied.
	Full(2):	Additional filtering is fully applied.
Default	Normal	
Config Load	Yes	
Access Lock	Engineer	
Residence	CEE	
Related Parameters	P1FILTTIME	
Remarks	Profit Loop PKS uses a proprietary adaptive filter to eliminate random measurement noise with little impact on the responsiveness of the control algorithm to fast disturbances.	
	The valve travel reduction filter complements the PV filter on the data acquisition block.	

This parameter is applicable only when CTLEQN is set to Profit Loop PKS, and is ignored in PID control equations.

VAVGFLOWRATE

Specific to Block(s)	QIPACCHAN
Description	Average Flow Rate
Data Type	FLOAT32
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VAVGSPILL

Specific to Block(s)	QIPACCHAN
Description	Average Spill
Data Type	FLOAT32
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VAWAITINGACK

Specific to Block(s)	QIPACCHAN
Description	Waiting for controller to acknowledge last material transfer/hand add complete.
Data Type	BOOLEAN
Range	0 – OFF 1 - ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VCOMINTEGRTY

Specific to Block(s)	QIPACCHAN
Description	Communications data integrity
Data Type	BOOLEAN
Range	0 – OFF 1 - ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VCOMMAND

Specific to Block(s)	QIPACCHAN
Description	Command Number
Data Type	ENUM
Range	0 – NONE 1 - START_MX 2 - START_MX_GR 3 - START_HAND 4 - ACK_COMPLETE 5 - ABORT_MX 6 - RES_SS_TIMER 7 - START_MANUAL 8 - FCE_ON_MAN 9 - FCE_OFF_MAN 10 - RESTART_AUTO 11 - COMPL_IN_MAN 12 - MST_RES_CHAN 13 - REP_LAST_STS 14 - MST_RES_CLUS 15 - VAL_AGSEC_FD 99 - VAL_DATA_INT
Default	NONE
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VCOMMANDSTAT

Specific to Block(s)	QIPACCHAN
Description	Command Status from Q.iMPACT
Data Type	ENUM
Range	0 - 0_SUCCESS 1 - 1_SUCCESS 2 - 2_SUCCESS 3 - 3_SUCCESS 4 - 4_SUCCESS 5 - 5_SUCCESS 6 - 6_CMD_NOTCMP 7 - 7_ERROR 8 - 8_ERROR … 34 - 34_ERROR
Default	0_SUCCESS
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VCOMMERROR

Specific to Block(s)	QIPACCHAN
Description	Communication Error
Data Type	BOOLEAN
Range	0 – OFF 1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VCYCLEACTIVE

Specific to Block(s)	QIPACCHAN
Description	Material Transfer Cycle Active
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VDATAOK

Specific to Block(s)	QIPACCHAN
Description	Instrument Data Integrity OK
Data Type	BOOLEAN
Range	0 – OFF
	1 - ON
Default	OFF
Config Load	NO
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VDELAYPRIMRY

Specific to Block(s)	QIPACCHAN
Description	Waiting to Start Primary Overlapped Feed
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VDELIVEREDWT

Specific to Block(s)	QIPACCHAN
Description	Delivered Weight
Data Type	FLOAT32
Range	n/a
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VENDOR

Specific to Block(s)	All IOM Function Blocks
Description	Numeric code representing I/O vendor identity.
Data Type	32-Bit Integer
Range	
Default	3 Note that this parameter is not currently set with specific default values for different IO vendors.
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	Although loaded, this parameter is not exposed on any configuration form.

VENDORID

Specific to Block(s)	RM
Description	Vendor Identification Code.
Data Type	16-Bit Unsigned Integer
Range	0 to 65535
Default	0
Config Load	No
Access Lock	ViewOnly RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

VERIFYLOST

Specific to Block(s)	DOC
Description	Output Verify – Indicates that the actual state of the output does not match the commanded state.
Data Type	Boolean
Range	Output matches the commanded state: (0) Output does not match the commanded state: (1)
Default	Output matches the commanded state: (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	EVERIFY[0..numChans-1]
Remarks	

VERIFYLOST[0..numChans-1]

Specific to Block(s)	DOM
Description	Output Verify – Indicates that the actual state of the output does not match the commanded state.
Data Type	Boolean
Range	Output matches the commanded state: (0)

	Output does not match the commanded state: (1)
Default	Output matches the commanded state: (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	EVERIFY[0..numChans-1]
Remarks	

VERRATICFLOW

Specific to Block(s)	QIPACCHAN
Description	Too High or Too Low Flow
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VERSION

Specific to Block(s)	All Tagged Blocks
Description	Version Descriptor
Data Type	String
Range	String Length: 7 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer
Residence	Server
Related Parameters	
Remarks	Descriptor that can be used to document a version for the block.

VERSIONDATE

Specific to Block(s)	All Tagged Blocks, Server, Asset, Alarm Group
Description	Date last modified – Shows date and time last modification was made to block's configuration
Data Type	String
Range	Limit: 5 characters
Default	
Config Load	Yes
Access Lock	Application Developer
Residence	Server
Related Parameters	
Remarks	If this block is in Version Control System, modification date and time applies to last version of block.

VERSIONNUM

Specific to Block(s)	All tagged blocks
Description	Version Number
Data Type	Float32
Range	Greater than or equal to 0
Default	0.0
Config Load	Yes
Access Lock	Application Developer
Residence	Server
Related Parameters	
Remarks	

VERYUNSTABLE[1..24]

Specific to Block	QIPACTERM	
Description	Very Unstable Device	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Very Unstable
Default	Off	
Config Load	No	

Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This is the value of bit 8 of the Status 2 word in the input assembly for the designated position [1-24].

VERYUNSTABLE[1..200]

Specific to Block	QIPACCHAN	
Description	Very Unstable Device	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Very Unstable
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 8 of the Status 2 word in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

VFCE_OUTPUT

Specific to Block(s)	QIPACCHAN
Description	Final Control Element Output
Data Type	BOOLEAN
Range	0 – OFF
	1 - ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VFEEDFAILED

Specific to Block(s)	QIPACCHAN
Description	Feed Failed
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VFEEDOVERRDE

Specific to Block(s)	QIPACCHAN
Description	Feed Override Active
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VFEEDTYPE

Specific to Block(s)	QIPACCHAN
Description	Feed Type
Data Type	ENUM
Range	0 - GAIN_IN_WGT
	1 - LOSS_IN_WGT
	2 - FLOW_METER
	3 - HAND_ADD

Default	GAIN_IN_WGT
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VFEEDWEIGHT

Specific to Block(s)	QIPACCHAN
Description	Feed Weight
Data Type	FLOAT32
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VGROSSWEIGHT

Specific to Block(s)	QIPACCHAN
Description	Gross Weight
Data Type	FLOAT32
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VGROSSWGTFED

Specific to Block(s)	QIPACCHAN
Description	Gross Weight Feed
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VMANUALMODE

Specific to Block(s)	QIPACCHAN
Description	Manual-Not Auto-Mode
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VMATERIALPTH

Specific to Block(s)	QIPACCHAN
Description	Material Path Index
Data Type	UINT16
Range	
Default	0
Config Load	No
Access Lock	ViewOnly

Residence	CEE
Related Parameters	
Remarks	

VMSGSEQNUMBR

Specific to Block(s)	QIPACCHAN
Description	Message Sequence Number
Data Type	UINT8
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	This parameter is not displayed on the Channel Data tab.

VMXCHANNEL

Specific to Block(s)	QIPACCHAN
Description	Channel Number
Data Type	UINT32
Range	
Default	0
Config Load	NO
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VMXCOMMAND

Specific to Block(s)	QIPACCHAN
Description	Command Number
Data Type	ENUM
Range	0 – OK
	1 - ERROR
Default	OK
Config Load	NO
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VMXFERSTATQ

Specific to Block(s)	QIPACCHAN
Description	Material Transfer Status Qualifiers Integer Representation
Data Type	UINT16
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VMXFERSTATUS

Specific to Block(s)	QIPACCHAN
Description	Material Transfer Status from Q.iMPACT
Data Type	ENUM
Range	0_SUCCESS
	1_SUCCESS
	2_SUCCESS
	3_SUCCESS
	4_COMPLETE

	5_COMPLETE
	6_COMPLETE
	7_FAILED
	8_FAILED
	9_FAILED
	10_FAILED
	11_FAILED
	12_FAILED
	13_FAILED
	14_FAILED
	15_FAILED
	16_FAILED
	17_FAILED
	18_FAILED
	19_FAILED
	20_FAILED
	21_FAILED
	22_FAILED
	23_FAILED
	24_FAILED
	25_FAILED
	26_RUNNING
Default	0_SUCCESS
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VMXGROUPNUM

Specific to Block(s)	QIPACCHAN
Description	Group Number for Start Material Transfer Command
Data Type	INT32
Range	
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VMXMATPATH

Specific to Block(s)	QIPACCHAN
Description	Material Path Index
Data Type	INT32
Range	
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VMXNEGTOLER

Specific to Block(s)	QIPACCHAN
Description	Tolerance -
Data Type	FLOAT64
Range	
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	

Remarks	

VMXOVRLAPNUM

Specific to Block(s)	QIPACCHAN
Description	Number of Overlap Secondary Feeds
Data Type	INT32
Range	
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VMXPOSTOLER

Specific to Block(s)	QIPACCHAN
Description	Tolerance +
Data Type	FLOAT64
Range	
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VMXTARGETWGT

Specific to Block(s)	QIPACCHAN
Description	Target Weight
Data Type	FLOAT64
Range	
Default	0
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VMXTRANID

Specific to Block(s)	QIPACCHAN
Description	Material Transfer ID
Data Type	STRING
Range	0-40
Default	
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VOLTAGE

Specific to Block(s)	Pulse Input IOC, Pulse Input w/ Fast Cutoff IOC	
Description	Input Voltage Threshold – specifies level of input.	
Data Type	Enumeration	
Range	Low (0):	Signals with a voltage lower than 2 volts are considered to be “low voltage” while signals with a voltage equal-to or highter-than 2 volts are considered to be “high voltage”

	High (1):	Signals with a voltage lower than 8 volts are considered to be “low voltage” while signals with a voltage equal-to or highter-than 8 volts are considered to be “high voltage”
Default	2Volts (0)	
Config Load	Yes	
Access Lock	Application Developer	
Residence	CEE	
Related Parameters		
Remarks	This value determines whether the actual screw-terminal-input is “high voltage” or “low voltage”.	

VOLTAGE[0..7]

Specific to Block(s)	Pulse Input IOM
Description	Input Voltage Threshold – specifies level of input.
Data Type	Enumeration
Range	Low (0) High (1)
Default	2V (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	This value determines whether the actual screw-terminal-input is “high voltage” or “low voltage”.

VOTED

Specific to Block(s)	nooN
Description	Voted output value
Data Type	Boolean
Range	Off (0) On (1)
Default	Off(0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE

Related Parameters	
Remarks	

VOVERCAPACTY

Specific to Block(s)	QIPACCHAN
Description	Scale Over Capacity
Data Type	BOOLEAN
Range	0 – OFF
	1 - ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VOVERTOLRNCE

Specific to Block(s)	QIPACCHAN
Description	Over Tolerance
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VPOWERFAIL

Specific to Block(s)	QIPACCHAN
Description	Power Failure
Data Type	BOOLEAN

Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VPRIMOVERLAP

Specific to Block(s)	QIPACCHAN
Description	Primary Overlapped Feed in Progress
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VRATE

Specific to Block(s)	QIPACCHAN
Description	Rate of Change of Weight
Data Type	FLOAT32
Range	n/a
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VRATEALARM

Specific to Block(s)	QIPACCHAN
Description	Fast Feed Rate Alarm
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VSCALEMOTION

Specific to Block(s)	QIPACCHAN
Description	Scale Motion
Data Type	BOOLEAN
Range	0 – OFF
	1 - ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VSECOVERLAP

Specific to Block(s)	QIPACCHAN
Description	Secondary Overlapped Feed in Progress
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No

Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VSEL_CHANNEL

Specific to Block(s)	QIPACCHAN
Description	Selected Channel
Data Type	UINT16
Range	n/a
Default	0
Config Load	NO
Access Lock	Engineer
Residence	CEE
Related Parameters	
Remarks	

VSLOWSTEPTMR

Specific to Block(s)	QIPACCHAN
Description	Time Until Slow Step Timer Expires in Seconds
Data Type	UINT16
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VTARGETERROR

Specific to Block(s)	QIPACCHAN
Description	Deviation Error from Target Weight
Data Type	FLOAT32
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VTIMETOFINSH

Specific to Block(s)	QIPACCHAN
Description	Estimated Time to Complete in Seconds
Data Type	UINT16
Range	
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VUNDERTOLRNC

Specific to Block(s)	QIPACCHAN
Description	Under Tolerance
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly

Residence	CEE
Related Parameters	
Remarks	

VUNDERZERO

Specific to Block(s)	QIPACCHAN
Description	Scale Under Zero
Data Type	BOOLEAN
Range	0 – OFF
	1 - ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VVERYUNSTBLE

Specific to Block(s)	QIPACCHAN
Description	Very Unstable Device
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VWAITOVLPREQ

Specific to Block(s)	QIPACCHAN
Description	Wait for all Overlap Requests
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

VWGTUNSTABLE

Specific to Block(s)	QIPACCHAN
Description	Device Stability Warning
Data Type	BOOLEAN
Range	0 – OFF
	1 – ON
Default	OFF
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

W*xxxx* Parameters

WAITOVLPREQ[1..24]

Specific to Block	QIPACTERM	
Description	Wait for All Overlap Requests	
Data Type	BOOLEAN	
Range	Off(0)	Not Waiting
	On(1)	Waiting
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 12 of the Status 2 word in the input assembly for the designated position [1-24].	

WAITOVLPREQ[1..200]

Specific to Block	QIPACCHAN	
Description	Wait for All Overlap Requests	
Data Type	BOOLEAN	
Range	Off(0)	Not Waiting
	On(1)	Waiting
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 12 of the Status 2 word in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

WAITSTABLE[1..200]

Specific to Block	QIPACCHAN	
Description	Device Stability Warning	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Warning
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 7 of the Status 2 word in the input assembly for the designated channel [1-200] in the QiMPACT cluster.	

WARMSTRTA

Specific to Block(s)	All IOMs		
Description	Warm Start Flag. Shows the last startup type used for the associated channel A I/O Module (IOM).		
Data Type	Boolean		
Range	0	Off	Cold start executed.
	1	On	Warm start executed.
Default	Off (0)		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks			

WARMSTRTB

Specific to Block(s)	All IOMs
Description	Warm Start Flag. Shows the last startup type used for the associated channel B I/O Module (IOM).
Data Type	Boolean

Range	0	Off	Cold start executed.
	1	On	Warm start executed.
Default	Off (0)		
Config Load	No		
Access Lock	ViewOnly		
Residence	IOM		
Related Parameters			
Remarks			

WARMTIMEOUT

Specific to Block(s)	CEE, CEEC300, CPM
Description	RAM Retention Restart Warm Timeout
Data Type	UINT16
Range	0 to 60 mins. 0 = Disable
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), C200(CEE, CPM)
Related Parameters	RRRCEESTATE
Remarks	When RRRCEESTATE = LASTTIMEOUT and last CEESTATE was Run, if power down duration was less than WARMTIMEOUT then CEE executes a warm restart, otherwise CEE executes a cold restart.

WARNING

Specific to Block(s)	Step
Description	Step Warning
Data Type	BigString
Range	Maximum length of 20,000 characters
Default	“”
Config Load	Yes
Access Lock	AppDeveloper Only
Residence	SR

Related Parameters	NOTE
Remarks	Contains raw HTML for configured Step Warning. User does not have to be aware of or do anything with this parameter.

WCTCLKTIME

Specific to Block(s)	RM
Description	Clock Time
Data Type	TIME
Range	N/A
Default	0
Config Load	No
Access Lock	Operator RM only: Requests to read or store to any RM parameter must come from the Supervisory platform (through Control Builder or Server).
Residence	Not Loaded
Related Parameters	
Remarks	

WDTHWFAIL

Specific to Block(s)	Primary/Secondary C300, FIM4
Description	WatchDog Timer Hardware Failure
Data Type	Boolean
Range	ON, OFF
Default	OFF
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	SOFTFAIL
Remarks	This flag is set to ON, indicating a Softfail condition if: • WDT is set not to start (S/W). • WDT_INB switch is ON in the development board. • the WDT ISR is not invoked when the WDT is forced to timeout (by either refreshing it too soon, or not refreshing it within the upper window limit. The WDT should be

refreshed only within a 75-120 millisecond window)

- the WDT does not timeout instantly when it is refreshed before the lower window limit.
- the WDT times out before 115 msec or after 125 msec when the WDT is refreshed within the window.

WDTHWFAIL

Specific to Block(s)	Primary/Secondary C300, FIM4
Description	WatchDog Timer Software Failure
Data Type	Boolean
Range	ON, OFF
Default	OFF
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	SOFTFAIL
Remarks	When set to ON, indicates a Softfail condition, the refresh of the WDT does not occur within the range of 90-110 msec.

WDTREFRESHMAX

Specific to Block(s)	Primary/Secondary C300 and FIM4 FBs
Description	Maximum WDT Refresh Interval. Maximum Watchdog Timer refresh interval stored by C300 Kernel, in milliseconds.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	WDTREFRESHMIN, STATSRESET
Remarks	

WDTREFRESHMIN

Specific to Block(s)	Primary/Secondary C300and FIM4 FBs
Description	Minimum WDT Refresh Interval. Minimum Watchdog Timer refresh interval stored by C300 Kernel, in milliseconds.
Data Type	32-Bit Integer
Range	Greater than or equal to 0
Default	0
Config Load	No
Access Lock	View Only
Residence	C300, FIM4
Related Parameters	WDTREFRESHMAX, STATSRESET
Remarks	

WEEKDAY

Specific to Block(s)	CEEC300, ACE, CPM, SIM_C200
Description	Week Day - Defines the current day of the week based on the Controller's local time. (The Setting for the WEEKDAYFMT parameter determines whether the first day of the week is Sunday (1SUNDAY) or Monday (1MONDAY).)
Data Type	32-Bit Integer
Range	1 to 7
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300), ACE, C200, SIM_C200
Related Parameters	DAYLIGHTTIME, TIMEZONE, WEEKDAYFMT.
Remarks	

WEEKDAYFMT

Specific to Block(s)	CEEC300, ACE, CPM, SIM_C200
Description	Week Day Format - Specifies whether the WEEKDAY

	parameter uses Sunday (1SUNDAY) or Monday (1MONDAY) as the first day of the week.
Data Type	Enumeration
Range	1SUNDAY (0) 1MONDAY (1)
Default	1SUNDAY
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), ACE, C200, SIM_C200
Related Parameters	DAYLIGHTTIME, TIMEZONE, WEEKDAY.
Remarks	If this parameter value is 1SUNDAY, the WEEKDAY parameter numbers the days of the week starting with Sunday as number 1. If this parameter value is 1MONDAY, the WEEKDAY parameter numbers the days of the week starting with Monday as number 1.

WGTUNSTABLE[1..24]

Specific to Block	QIPACTERM	
Description	Device Stability Warning	
Data Type	BOOLEAN	
Range	Off(0)	OK
	On(1)	Warning
Default	Off	
Config Load	No	
Access Lock	ViewOnly	
Residence	CEE	
Related Parameters		
Remarks	This is the value of bit 7 of the Status 2 word in the input assembly for the designated position [1-24].	

WIREOFF

Specific to Block(s)	DIC
Description	Indicates the absence of a field wire (sensor / actuator) or the break in field wiring.
Data Type	Boolean
Range	Wire-off condition not detected (0) Wire-off condition detected (1)
Default	Wire-off condition not detected (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	EWIREOFF[0..numChans-1]
Remarks	

WIREOFF[0..numChans-1]

Specific to Block(s)	DIM
Description	Indicates the absence of a field wire (sensor / actuator) or the break in field wiring.
Data Type	Boolean
Range	Wire-off condition not detected (0) Wire-off condition detected (1)
Default	Wire-off condition not detected (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	EWIREOFF[0..numChans-1]
Remarks	

WIREOFF[0..7]

Specific to Block(s)	AOM (TC-OAV081)
Description	Detects when current flow is not present at any channel. TheTC-OAV081 module must be configured to current mode (4-20mA) operation to use this feature.
Data Type	Boolean
Range	Open Wire Fault not detected (0)

	Open Wire Fault detected (1)
Default	Open Wire Fault not detected (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	EWIREOFF[0..numChans-1]
Remarks	It is OFF when the configuration is Voltage or the module is Inactive. At least 0.1mA of current must be flowing from the output for detection to occur.

WITHBIAS[1..40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	With Bias. Shows whether or not the preferred primary is really the acting primary with physical bias state, where the index of this array corresponds to the number of the IOM.
Data Type	Boolean
Range	Off (0): The preferred primary is not the acting primary. On (1): The preferred primary is the acting primary.
Default	On (1)
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	
Remarks	Applies to primary IOM only. For PMIO types such as HLAI and DI that do not have hardware bias, the status of On is always returned. This parameter does not appear on the IOLINK block form. Note that this is the same as the WITHBIAS parameter in a TPS system.

WITHBIASENM[1..40]

Specific to Block(s)	C200 IOLINK, C300 IOLINK	
Description	I/O Module Physical Bias State. Shows whether or not the preferred primary is really the acting primary with normal bias, where the index of the array corresponds to the number of the IOM.	
Data Type	Enumeration	
Range	AGAINST_BIAS (0):	The preferred primary is not the acting primary.
	NORMAL_BIAS (1):	The preferred primary is the acting primary.
	--- (2):	Not applicable to this module type.
Default	NORMAL_BIAS (1)	
Config Load	No	
Access Lock	ViewOnly	
Residence	IOLINK	
Related Parameters		
Remarks	Applies to primary IOM only.	
	For PMIO types such as HLAI and DI that do not have hardware bias, the status of --- is always returned.	

WRFIFORATEA

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Average Write FIFO Access Rate. Shows the average number of parameters accessed through Write FIFO per second.
Data Type	32-Bit Real Number
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	
Remarks	

WRFIFORATEM

Specific to Block(s)	C200 IOLINK, C300 IOLINK
Description	Maximum Write FIFO Access Rate. Shows the maximum number of parameters accessed through Write FIFO per second.
Data Type	32-Bit Real Number
Range	N/A
Default	0
Config Load	No
Access Lock	ViewOnly
Residence	IOLINK
Related Parameters	
Remarks	

WRITEERROPT

Specific to Block(s)	CAB types
Description	Write Error Option. CEs assign the instance default of parameter WRITEERROPT at the time of creating a CAB type. WRITEERROPT controls whether or not the block reports an event in response to parameter write errors. If WRITEERROPT = Event, then an event is reported whenever WRITESTATUS <> OK.
Modification of Definition	The Attribute Instance Default may be modified at type creation time.
Data Type	Enumeration CABERROPT
Range	NoEvent, Event
Default	Assigned by CE on the type definition. See Note.
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	READERROPT, READSTATUS, WRITESTATUS
Remarks	**Note**—When a CAB type is first created, the value of NoEvent is assigned as instance default of WRITEERROPT. CEs can then change the instance default to Event if desired. The value of

	WRITEERROPT cannot be changed on CAB instances.

WRITEOPT

Specific to Block(s)	SIFLAGARRCH, SINUMARRCH, SITEXTARRCH
Description	Write Option – specifies how the Array Channel block will handle writes to its "data" parameter – PVFL[] for the SIFLAGARRCH block, PV[] for the SINUMARRCH block, and STR[] for the SITEXTARRCH block. The Array Channel block will forward a write to its data parameter to the SIM IOM block (and ultimately to the device through the SIM), under the following conditions, based on which one of the following WRITEOPT selections is chosen: • WriteOnDiff –write is forwarded to the SIM IOM block when the value being written is different from the current value being read back from the SIM • WriteAlways – write is always forwarded to the SIM IOM block • WriteOnChg – write is forwarded to the SIM IOM block when the value being written is changed from the last value that was written
Data Type	Enumeration
Range	WriteOnDiff (0), WriteAlways (1), WriteOnChg (2)
Default	WriteOnDiff (0)
Config Load	Yes
Access Lock	Application Developer
Residence	CEE
Related Parameters	
Remarks	

WRITESTATUS

Specific to Block(s)	CAB types
Description	Write Status. WRITESTATUS indicates whether or not an error has occurred in write processing associated with the parameter references of a CAB program. Normally, WRITESTATUS shows OK.

	When an error occurs, its value provides information about the nature of the error. WRITESTATUS automatically reverts to OK after the error goes away.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	Enumeration CABACCSTATUS
Range	OK = 0, Bad = 10, RightsViol = 11, AccLevelViol = 12, IllegalValue = 13, RangeLimExc = 14, IndexLimExc = 15, ConfigMsmtc = 16, CommFail = 17, WritePending = 18, WriteRejected = 19
Default	OK
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	READERROPT, READSTATUS, WRITEERROPT
Remarks	

WRTERRALM.PR

Specific to Block(s)	CAB types
Description	Write Error Alarm.Priority. Sets the priority of the alarm notification if a write error alarm is reported. Engineer can change this value at run time.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	Enumeration ALPRIOR
Range	NONE, JOURNAL, LOW, HIGH, URGENT
Default	JOURNAL
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	WRITESTATUS, WRITEERROPT

Remarks

WRTERRALM.SV

Specific to Block(s)	CAB types
Description	Write Effor Alarm.Severity. Sets the severity of the alarm notification if a write error alarm is reported. Engineer can change this value at run time.
Modification of Definition	Definition of this parameter cannot be modified.
Data Type	16-Bit Integer
Range	0-15
Default	0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	READSTATUS, READERROPT
Remarks	

X*xxxx* Parameters

X

Specific to Block(s)	FLOWCOMP
Description	Steam Compressibility Input - Defines the value of the steam compressibility.
Data Type	Real
Range	Greater than or equal to 0
Default	1.0
Config Load	No
Access Lock	Other Function Block
Residence	ACE/C200
Related Parameters	
Remarks	

X[0..4]

Specific to Block(s)	AGA8GS_94
Description	On-line Gas Analyser Values
Data Type	FLOAT64
Range	0-1
Default	Input
Config Load	No
Access Lock	Operator
Residence	No Load
Related Parameter	C1, C2, C3, C4, APPLY, ANALYSER, OVRD
Remarks	

X[1..4]

Specific to Block(s)	OvrdSe, RegSummer, IncrSummer
Description	X-input Values for function blocks with Multiple Inputs
Data Type	64-Bit Real Number
Range	XEULO to xXEUHI
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	Not Loaded
Related Parameters	
Remarks	X[1..4] are initializable inputs for the OvrdSel and IncrSummer function blocks. X[1..6] are for RegCalc, only X[1] is an initializable input. X[1..8] are initializable inputs for the Switch function block. X1is an initializable input for all other function blocks.

X[1..6]

Specific to Block(s)	RegCalc
Description	X-input Values for function blocks with Multiple Inputs
Data Type	64-Bit Real Number
Range	XEULO to XEUHI
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	Not Loaded
Related Parameters	
Remarks	X[1..4] are initializable inputs for the OvrdSel function block. X[1..6] for RegCalc, only X[1] is initializable input. X[1..8] are initializable inputs for the Switch function block. X1 is an initializable input for all other function blocks.

X[1..8]

Specific to Block(s)	Switch, Ovrdsel, and RegCalc
Description	X-input Values for function blocks with Multiple Inputs

Data Type	64-Bit Real Number
Range	XEULO to XEUHI
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	Not Loaded
Related Parameters	
Remarks	X[1..4] are initializable inputs for the OvrdSel function block. X[1..6] for RegCalc, only X[1] is initializable input. X[1..8] are initializable inputs for the Switch function block. X1 is an initializable input for all other function blocks.

X[1..10]

Specific to Block(s)	ENHREGCALC
Description	X-input Values for general purpose inputs.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	XSTS[1..10]
Remarks	

X1

Specific to Block(s)	RatioBias, RatioCtl, RemCas, Fanout, AutoMan
Description	The X1 Input Value, in Engineering Units.
Data Type	64-Bit Real Number
Range	XEULO to XEUHI
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	X1 is an initializable input for all function blocks except

	RATIOCTL block.

X1BACKCALOUT

Specific to Block(s)	RemCas, RatioBias, RegCalc
Description	Back Calculation Data from Secondary Block - Secondary Data structure associated with Remote Cascade (REMCAS) Block X1 input. Contains Control Variable (CV) limits, initailization, and data windup status, etc. X1BACKCALOUT is associated with the primary block. Connecting BACKCALCIN to it's X1BACKCALOUT "partner" is required in order to establish the initialization path between the two blocks.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	BACKCALCIN, BACKCALCIN[1..8].
Remarks	X1BACKCALOUT establishes the initialization, override, and windup propagation between connected Remote Cascade (REMCAS) and Regulatory Control Blocks. This is one half of the BACKCALCIN/X1BACKCALOUT connection. Applicable to the REMCAS block.

X1BIAS

Specific to Block(s)	RATIOCTL
Description	X1 Bias – Specifies bias value for X1 controlled input.
Data Type	Float64
Range	N/A
Default	0.0
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	
Remarks	

X1CONN

Specific to Block(s)	AutoMan, Fanout, RemCas
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

X1P

Specific to Block(s)	Fanout, AutoMan
Description	The X Input Value in Percent
Data Type	64-Bit Real Number
Range	0 to 100
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

X1KB

Specific to Block(s)	RATIOCTL
Description	The X1 input after gain and bias are included
Data Type	64-Bit Real Number
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	

Remarks

X1SECDATA

Specific to Block(s)	RatioBias, RemCas, Fanout, and AutoMan
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

X1STS

Specific to Block(s)	Fanout, AutoMan, RatioCtl
Description	The X1 Input Status
Data Type	Enumeration PVSTS
Range	Bad (0) Uncertn (1) Normal (2) Manual (3)
Default	Bad (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

X2

Specific to Block(s)	RemCas, RatioCtl
Description	The X2 Input Value
Data Type	64-Bit Real Number
Range	XEULO to XEUHI

Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	X2 is an initializable input for the REMCAS function block.

X2BACKCALOUT

Specific to Block(s)	RemCas
Description	Back Calculation Data from secondary block - Secondary Data structure associated with Remote Cascade (RemCas) block X2 input. Contains Control Variable (CV) limits, initialization, and data windup status, etc. X2BACKCALOUT is associated with the primary block. Connecting BACKCALCIN to it's X2BACKCALOUT "partner" is required in order to establish the initialization path between the two blocks.
Data Type	Structure
Range	N/A
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	BACKCALCOUT, BACKCALCOUT[1..8].
Remarks	X2BACKCALOUT establishes the initialization, override, and windup propagation between connected Remote Cascade (RemCas) and Regulatory Control (RegCtl) blocks. This is one half of the BACKCALCIN/X2BACKCALOUT connection.

X2BIAS

Specific to Block(s)	RATIOCTL
Description	X2 Bias – Specifies bias value for X2 uncontrolled input.
Data Type	Float64
Range	N/A
Default	0.0
Config Load	Yes
Access Lock	Supervisor
Residence	CEE
Related Parameters	X2
Remarks	

X2CONN

Specific to Block(s)	RemCas
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

X2KB

Specific to Block(s)	RATIOCTL
Description	The X2 input after gain and bias are included
Data Type	64-Bit Real Number
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	

Remarks

X2SECDATA

Specific to Block(s)	RemCas
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

X2STS

Specific to Block(s)	RatioCtl
Description	The X2 Input Status
Data Type	Enumeration PVSTS
Range	Bad (0) Uncertn (1) Normal (2) Manual (3)
Default	Bad (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	
Remarks	

XB[1..6]

Specific to Block(s)	RegCalc
Description	Individual biases for input X[1] through X[6].
Data Type	Real
Range	N/A
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	X[1..6], XK[1..6], XKB[1..6].

Remarks

XB[1..10]

Specific to Block(s)	ENHREGCALC
Description	Individual biases for input X[1] through X[10].
Data Type	Real
Range	
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	X[1..10],

Remarks

XCONN[1..4]

Specific to Block(s)	Switch, IncrSummer, RegSummer
Description	This holds the connector of each X-input parameter.
Data Type	INCONN
Range	N/A
Default	N/A
Config Load	No
Access Lock	AppDevOnly

Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	X[1...4]
Remarks	

XCONN[1..8]

Specific to Block(s)	OvrdSel, Switch
Description	This is an internal parameter for system use only.
Data Type	
Range	
Default	
Config Load	
Access Lock	
Residence	
Related Parameters	
Remarks	

XCONN[1..10]

Specific to Block(s)	ENHREGCALC
Description	X-Input Connection - Holds the connector of each X-input parameter.
Data Type	INCONN
Range	
Default	
Config Load	No
Access Lock	Application Developer Only
Residence	CEE
Related Parameters	X[1..10]
Remarks	

XDESC[1..2]

Specific to Block(s)	RemCas.
Description	The X-Input Descriptors
Data Type	String
Range	Length - 15 characters
Default	Null String
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	
Remarks	

XDESC[1..4]

Specific to Block(s)	OvrdSel, RegSummer, IncrSummer, EnhRegCalc
Description	X-input Description.
Data Type	String
Range	0-23 Characters
Default	NULL
Config Load	Yes
Access Lock	AppDevOnly
Residence	SR
Related Parameters	X[1..4]
Remarks	

XDESC[1..8]

Specific to Block(s)	Switch
Description	The X-Input Descriptors
Data Type	String
Range	Length - 15 characters
Default	Null String
Config Load	Yes
Access Lock	Operator
Residence	CEE
Related Parameters	

Remarks

XDESC[1..10]

Specific to Block(s)	ENHREGCALC
Description	The X-Input Descriptors
Data Type	String
Range	Length – 132 characters
Default	Null String
Config Load	Yes
Access Lock	Application Developer Only
Residence	SR
Related Parameters	X[1..10]
Remarks	

XENABLE[1..10]

Specific to Block(s)	ENHREGCALC
Description	X-Input Enable – Determines whether corresponding X-input is enabled or not.
Data Type	Boolean
Range	Disable (0) Enable (1)
Default	Enable
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	X[1..10], PX[1..10]
Remarks	

XEUHI

Specific to Block(s)	RegCtl Blocks with X-inputs: RemCas, RatioBias, RatioCtl, RegCalc, Fanout, Switch, AutoMan, IncrSummer, RegSummer, and OvrdSel.
Description	The X-Input High Range (in Engineering Units)
Data Type	64-Bit Real Number
Range	Greater than or equal to XEULO
Default	100.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	X1 X2
Remarks	

XEULO

Specific to Block(s)	RegCtl Blocks with x-inputs: RemCas, RatioBias, RatioCtl, RegCalc, Fanout, Switch, AutoMan,IncrSummer, RegSummer, and OvrdSel.
Description	The X-Input Low Range (in Engineering Units)
Data Type	64-Bit Real Number
Range	Less than or equal to XEUHI
Default	0.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	X1 X2
Remarks	

XK[1..4]

Specific to Block(s)	RegSummer
Description	Scaling factors for X1 to X4 inputs respectively
Data Type	FLOAT64
Range	

Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), C200(CEE), ACE(CEEACE).
Related Parameters	
Remarks	

XK[1..6]

Specific to Block(s)	RegCalc
Description	Individual gains for input X[1] through X[6]
Data Type	Real
Range	N/A
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	X[1..6], XB[1..6], XKB[1..6].
Remarks	

XK[1..10]

Specific to Block(s)	ENHREGCALC
Description	Individual gains for input X[1] through X[10]
Data Type	Real
Range	
Default	1.0
Config Load	Yes
Access Lock	Engineer
Residence	CEE
Related Parameters	X[1..10], XB[1..10].
Remarks	

XKB[1..6]

Specific to Block(s)	RegCalc
Description	Individual input values after individual biases and gains have been applied to X[1] through X[6].
Data Type	Real
Range	N/A
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	X[1..6], XB[1..6] XK[1..6].
Remarks	

XKB[1..10]

Specific to Block(s)	ENHREGCALC
Description	X-Input Gain (K) and Bias (B) - Individual input values after individual biases and gains have been applied to corresponding X[1] through X[10] inputs.
Data Type	Real
Range	
Default	NaN
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	X[1..10], XB[1..10] XK[1..10].
Remarks	

XOVERFAILED

Specific to Block(s)	Primary/Secondary FTEB, FIM4 and C300 FBs
Description	Crossover Cable Failed – Provides status indicator for crossover cable.
Data Type	Boolean

Range	Not Failed (0) Failed (1)
Default	Not Failed
Config Load	No
Access Lock	View Only
Residence	FTEB, FIM4, C300
Related Parameters	
Remarks	If this indicator is ON, it means that the crossover cable has failed.

XSTS

Specific to Block(s)	FLOWCOMP	
Description	Steam Compressibility Input Status - Indicates the current status of the steam compressibility input (X).	
Data Type	Enumeration PVVALSTS	
Range	Bad (0):	The PV value was bad and replaced with NaN.
	Uncertain (1):	The status of the PV value is uncertain, stored by a program.
	Normal (2):	The PV value is good.
	Manual (3):	The PV value was manually entered.
Default	0	
Config Load	No	
Access Lock	ViewOnly	
Residence	ACE/C200	
Related Parameters	X	
Remarks		

XSTS[0..5]

Specific to Block(s)	RegCalc
Description	X Input Status
Data Type	Integer
Range	N/A
Default	0
Config Load	
Access Lock	ViewOnly
Residence	
Related Parameters	
Remarks	

XSTS[1..4]

Specific to Block(s)	RegSummer, IncrSummer
Description	The status of the X input values.
Data Type	ENUMERATION
Range	N/A
Default	Bad(0)
Config Load	No
Access Lock	Control
Residence	C300 (CEEC300), C200 (CEE), ACE (CEEACE).
Related Parameters	X[1...4]
Remarks	

XSTS[1..6]

Specific to Block(s)	RegCalc
Description	X Input Status
Data Type	Integer
Range	N/A
Default	0
Config Load	
Access Lock	ViewOnly
Residence	

Related Parameters	
Remarks	

XSTS[1..10]

Specific to Block(s)	ENHREGCALC
Description	X Input Status – Shows status of corresponding X input.
Data Type	Enumeration
Range	Bad (0) Uncertain (1) Normal (2)
Default	Bad (0)
Config Load	No
Access Lock	ViewOnly
Residence	CEE
Related Parameters	X[1..10]
Remarks	

XSUB[1..10]

Specific to Block(s)	ENHREGCALC
Description	Process Input Substitute - Defines the substitute value to be used in place of the given disabled input (X[]/PX[]) parameter.
Data Type	Float64
Range	
Default	NaN
Config Load	No
Access Lock	Engineer
Residence	CEE
Related Parameters	X[1..10], PX[1..10].
Remarks	

XWHIFL

Specific to Block(s)	RegCalc
Description	X input “windup high” flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	XWLOFL
Remarks	

XWLOFL

Specific to Block(s)	RegCalc
Description	X input “windup low” flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	Other Function Block
Residence	CEE
Related Parameters	XSTS[1..6], XWHIFL
Remarks	

Y*xxxx* Parameters

YEAR

Specific to Block(s)	CEEC300, ACE, CPM, SIM_C200
Description	Defines the year component of the Controller's local time.
Data Type	32-Bit Integer
Range	00 to 99 - If YEARFMT parameter setting is YY 1972 and later - If YEARFMT parameter setting is YYYY
Default	N/A
Config Load	No
Access Lock	ViewOnly
Residence	C300(CEEC300), ACE, C200, SIM_C200
Related Parameters	DAYLIGHTTIME, TIMEZONE, YEARFMT.
Remarks	

YEARFMT

Specific to Block(s)	CEEC300, ACE, CPM, SIM_C200
Description	Year Format - Specifies the year format to be used for the YEAR component of the Controller's local time.
Data Type	ENUMERATION
Range	- YYYY (0) - YY (1)
Default	YYYY
Config Load	Yes
Access Lock	Engineer
Residence	C300(CEEC300), ACE, C200, SIM_C200
Related Parameters	
Remarks	

Z*xxxx* Parameters

ZB

Specific to Block(s)	AGA8GS_94 AGA8DL_94
Description	Gas Compressibilty at Base (Contract) Conditions
Data Type	FLOAT64
Range	Output
Default	-
Config Load	No
Residence	No Load
Related Parameter	ZS, ZF
Remarks	

ZF

Specific to Block(s)	AGA8GS_94 AGA8DL_94
Description	Gas Compressibilty at Flowing Conditions
Data Type	FLOAT64
Range	Output
Default	-
Config Load	No
Access Lock	Operator
Residence	No Load
Related Parameter	ZS, ZB
Remarks	

ZS

Specific to Block(s)	AGA8GS_94 AGA8DL_94
Description	Gas Compressibilty at Standard Conditions (Internally fixed at 60 DegF, 14.73 PSI)
Data Type	FLOAT64
Range	Output
Default	-
Config Load	No
Access Lock	Operator
Residence	No Load
Related Parameter	ZF, ZB
Remarks	

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