

**Safety Manager Module
Configuration Forms**
for use with the Triconex TRICON
Version 8 systems

SM88-500

Implementation
Safety Manager

Safety Manager Module Configuration Forms

**for use with the Triconex TRICON
Version 8 systems**

SM88-500
4/96

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About This Publication

This publication provides the configuration forms for the Safety Manager in TDC 3000^X Release 500 series for the Triconex TRICON system - Version 8. These forms should be used to assist you in configuring the SMM data points at the Universal Station.

The user should be familiar with the Safety Manager system control functions described in *SMM Control Functions for the Triconex TRICON System - Version 8* and the *Implementation/Startup & Reconfiguration - 2* binder (LCN) bookset before using this publication.

All references in this manual to “Safety Manager” or “Safety Manager Module” pertain only for use with the Triconex TRICON Version 8 systems.

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Safety Manager Form Instructions

FILLING OUT PAPER FORMS

Where To Find Parameter and Data Point Help Information

Refer to the *Safety Manager Module Parameter Reference Dictionary* and to the *Safety Manager Module Control Functions* publications in the *Implementation Safety Manager* binder.

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SM Analog Input Data Point

SM Analog In Data Point	Engineer: _____	Date: _____
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Point Assignment Display

NAME
Tag Name _____ *range = Not applicable*
default = Blank

PNTFORM
Point Form _____ *Full* Point is fully displayed and alarmed
Componnt Pt. is partially displayed but not alarmed

N/A if PNTFORM = Componnt.

PTDESC
Point Descriptor _____ *range = Not applicable*
default = Blank

EUDESC
Engineering Units Descriptor _____ *range = Not applicable*
default = Blank

KEYWORD
Point Keyword Descriptor _____ *range = Not applicable*
default = Blank

N/A if PNTFORM = Componnt.

PVSRCOPT **OnlyAuto**
PV Source Option _____

PVSOURCE **Auto**
PV Source _____ **Applies when PVSRCOPT = All.**
Man Field wiring or memory fetch supplies PV.
Sub PV is supplied by Operator or program.
A value is substituted by a CL program.

Alarming Display

N/A if PNTFORM = Componnt.

PVHITP
PV High Alarm Trip Point _____ *range = PVLOTP - PVHHTP, & NaN*
default = NaN

PVHPR PV High Alarm Priority	Noaction	Journal	Low	High	Emergency
--	----------	---------	------------	------	-----------

PVLOTP
PV Low Alarm Trip Point _____ *range = PVLLTP - PVHITP, & NaN*
default = NaN

PVLOPR PV Low Alarm Priority	Noaction	Journal	Low	High	Emergency
--	----------	---------	------------	------	-----------

PVHHTP
PV Hi Hi Alarm Trip Point _____ *range = PVHITP to PVEUHI, & NaN*
default = NaN

PVHHR PV High High Alarm Priority	Noaction	Journal	Low	High	Emergency
---	----------	---------	------------	------	-----------

PVLLTP
PV Low Low ALarm Trip Point _____ *range = PVEULO - PVLOTP, & NaN*
default = NaN

Universal Station's configuration display where values and parameter options that have been written on the form will be keyed in and/or selected respectively.

If parameters within a box do not apply when some other parameter option is selected, that box is indicated by **N/A if** or **ONLY if**.

Text in **bold** indicates what parameter/s or parameter-option/s apply when an option is selected for a previous parameter.

Lower-level alarm trip points must have a value specified before higher-level alarm trip points display. For example, the PVHHTP (PV Hi Hi Alarm) parameter line displays after a value is entered in the PVHITP (PV High Alarm) parameter.

FORMS

ENTERING DATA FROM THE FORMS INTO THE SYSTEM

Select **NETWORK INTERFACE MODULE** from Engr's Main Menu to get NIM BUILD TYPE SELECT MENU.

UCN NODE CONFIGURATION Form SM88-500A	LM NODE SPECIFIC CONFIGURATION Form SM88-500A.2	PROCESS POINT BUILDING Form SM88-500B-J
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Select a point type from this POINT BUILT SELECT MENU

Analog In/Out	Dig In/Out	DigComp	Safety	Numeric	Flag	Timer
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SM UCN Node Configuration

SM UCN Node Configuration	Engineer:	Date:
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UCN Node Configuration Display

NOTE

This form is intended primarily for use in configuring each SM on your system by selecting **SM** for **NODETYP** below. This same form can be used to configure each NIM on your system by selecting **NIM** for **NODETYP** (some different targets will appear as shown). If your system has other UCN devices (PM, APM), the NIMs can also be configured using the forms contained in the documentation for those devices.

NTWKNUM NIM's UCN that SM is connected to (Process Network Number)	_._.	range = 1 to 20 default = Not applicable
NODENUM SMM's or NIM's Address on the UCN	_._.	range = 1 to 64 default = Not applicable
NODETYP Type of Node on the UCN	NotConfig Nim PM APM SM	This NIM or SM not configured on UCN Network Interface Module Process Manager Module Advanced Process Manager Module Safety Manager Module
SMPLTFM Type of Safety Control Platform	TRICON FSC	Safety Manager is using TRICON Controller Safety Manager is using FSC Controller
NODEASSN	ThisNim RemotNim	NIM assigned to report alarms and perform checkpointing for network specified in NTWKNUM Additional NIM on a network that already has "ThisNIM" defined
LOADSCOP Load Scope	NimOnly NimAndPm	Applicable only if NODETYP = Nim Configured data goes to the NIM only Configured data goes to NIM and SM
NMSGTXT Number of Message Text Items	_._.	range = 0 to 15 default = 0

DIGITAL COMPOSITE PV STATE TEXT

MOVPVTTX Moving Text	Moving	Individual point configuration specifies which input state is associated with this moving text. If NODENUM is even, this parameter is hidden.
BADPVTTX Bad Text	Bad	Individual point configuration specifies which input state is associated with the bad text. If NODENUM is even, this parameter is hidden.

SM UCN Node Configuration

SM UCN Node Configuration	Engineer:	Date:
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Status Message Text Configuration Display

N/A if NMSGTXT = 0

MSGTXT(1) Status Message Text #1	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(2) Status Message Text #2	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(3) Status Message Text #3	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(4) Status Message Text #4	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(5) Status Message Text #5	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(6) Status Message Text #6	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(7) Status Message Text #7	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(8) Status Message Text #8	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(9) Status Message Text #9	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(10) Status Message Text #10	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(11) Status Message Text #11	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(12) Status Message Text #12	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(13) Status Message Text #13	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(14) Status Message Text #14	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank
MSGTXT(15) Status Message Text #15	_._._._._._._.__	<i>range =</i> Eight Character String <i>default =</i> Blank

SM Node Specific Configuration

PVFLTOPT *range:* 1 = integer
Enumeration of the TRICON Data Format for the Numeric Points 2 = real
The value for this Parameter will be determined by NNLSBA. *default* = Not Configured

NFLAG |_.| *range* = 0 to 2000
of Flags *default* = 0
The Range check for this Parameter will be dependent on the FLLSBA. SMM will perform Range checking.

FLLSBA _. <i>range</i> = 0, 2001 to 4000, or 10001 to 14000 Starting Alias Address of the Flag Array <i>default</i> = 0 (Not Configured)
--

The Range check for this Parameter will be dependent on the NFLAG value. SMM will perform Range checking.

NTIMER |_.| *range* = 0 to 1500
of Timers *default* = 0
The actual Range check will be calculated on the PU count for each Point type and the mix of configured Points desired. The 0.5 second scan rates will tend to lower the maximum range value. SMM will perform Range checking.

SCANRATE *range:* 0 = Null
SMM's Scan Rate in Times per Second 1 = AR1DT2
2 = AR2DT2
3 = AR1DT1
default = AR2DT2

SM Analog Input Data Point

SM AnalogIn Data Point	Engineer:	Date:
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Point Assignment Display

NAME Tag Name	<i>range =</i> Not applicable <i>default =</i> Blank
NODE TYP Node Type	PM APM SM	<i>range =</i> Not applicable <i>default =</i> PM
SMPLTFM Type of Safety Control Platform	TRICON FSC	Safety Manager is using TRICON Controller Safety Manager is using FSC Controller
PNTFORM Point Form	Full Compoint	Point is fully displayed and alarmed Point is partially displayed but not alarmed
PTDESC Point Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
EUDESC Engineering Unit Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
KEYWORD Point Keyword Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
ASSOCDSP Associated Display	<i>range =</i> Alphanumeric <i>default =</i> Blank
UNIT Process Unit Point is Assigned to	..	<i>range =</i> Alphanumeric <i>default =</i> Not applicable
NTWKNUM NIM's UCN that Contains This Point	..	<i>range =</i> 1 to 20 <i>default =</i> Not applicable
NODENUM SMM's Address on the UCN	..	<i>range =</i> 1 to 64 <i>default =</i> Not applicable
SLOTNUM Point Slot Number	<i>range =</i> 0 to 1000 <i>default =</i> Not applicable
PLCADDR LC Source Address	<i>range =</i> 0, 30001 to 31382, or 40001 to 40632 (integer) 32001 to 32120, 33001 to 34000, or 41001 to 42000 (real) <i>default =</i> 0 (Not Configured)

SM Analog Input Data Point

NIM/PV Configuration Display

PVCHAR *range:* 0 = LINEAR
Enumeration of the PV Characterization 15 = SQROOT
15 = TC_RTD
default = Linear

N/A if PVCHAR = TC_RTD

PVRAW HI	<i>default</i> = 1.0	<i>range</i> =	≥ PVRAW LO
PVRAW LO	<i>default</i> = 0.0	<i>range</i> =	< PVRAW HI

N/A if PVCHAR = Linear, SqRoot

PVTEMP	DegreesF	DegreesC	F = Fahrenheit; C = Celsius;
Thermal EUs for PV	DegreesR	DegreesK	R = Rankin; K = Kelvin

Only if PVCHAR = Linear, SqRoot

INPTDIR	Direct	Highest energy from sensor = 100% PV
Analog Input Direction	Reverse	Highest energy from sensor = 0% PV

PVEUHI |.....| *range* = PVEULO to PVEUHI
PV High Range in EUs *default* = 100.0

PVEULO |.....| *range* = PVEUULO to PVEUHI
PV Low Range in EUs *default* = 0.0

PVFLTOPT *range:* 1 = Integer
Enumeration of the TRICON data type 2 = Real
The value for this Parameter will be determined by PLCADDR. *default* = Not Configured

PVFORMAT D0 D2 D0 = 9999o D2 = 99o99
PV Decimal Point Format **D1** D3 D1 = 999o9 D3 = 9o999

PVCLAMP **NoClamp** No clamping of the PV value
PV Clamping Option Clamp Clamp PV value at range extension limit

Only if PVCHAR = Linear, SqRoot

LOCUTOFF	<i>range</i> = PVEULO to PVEUHI and NaN
Low Signal Cutoff for Flow Inputs		<i>default</i> = NaN

N/A if PNTFORM = Componnt

PVSRCOPT	OnlyAuto	PV source selection is not available and field wiring or memory fetch supplies PV.
PV Source Option	All	Selection from PVSOURCE is available and Operator/CL-program may supply PV.

SM Analog Input Data Point

NIM/PV Configuration Display (continued)

PVSOURCE PV Source	Auto Man Sub	Applies when PVSRCOPT = All. Field wiring or memory fetch supplies PV. PV is supplied by Operator or program. A value is substituted by a CL program.
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TF |_____| *range = 0.0 to 60.0 (minutes)*
PV Filter Lag Time in Minutes *default = 0.0 (PV will not be delayed)*

PVTV PV Target Value in EUs	_____	<i>range = PVEULO to PVEUHI, and NaN</i> <i>default = NaN</i>
OVERVAL Overview Display Value	_____	<i>range = 0 to 100</i> <i>default = 25</i>

N/A if PNTFORM = Compoint

Alarming Display

N/A if PNTFORM = Compoint

The following two example parameters represent the typical format of alarm trip points and priorities. Please refer to these as you are entering trip points and alarm priorities that follow this information. **NOTE:** If you do not enter a trip point value for a given pair of trip points and alarm priorities, do not circle an alarm priority option for that pair (i.e., no trip point, no alarm priority).

PVLOTP |_____| *range = PVLLTP to PVHITP, and NaN*
PV Low Alarm Trip Point *default = NaN*

BADPVPR BAD PV Alarm Priority	Emergency High Low Journal NoAction	Reported to all Alarm Summary displays Reported to Area and Unit Alarm Summary Reported to Unit Alarm Summary display Logged but not reported to Op Stations Alarm is not reported to the system
---	--	--

N/A if PNTFORM = Compoint

PVALDB PV Alarm Deadband in %	Half (of 1%) Four	One Five	Two EU	Three
---	----------------------	--------------------	-----------	-------

N/A if PNTFORM = Compoint, Only if PVALDB = EU

PVALDBEU |_____| *range = ≥0*
PV Alarm Deadband in EU *default = 1.0*

N/A if PNTFORM = Compoint

PVHITP PV High Alarm Trip Point	_____	<i>range = PVLOTP to PVHITP, and NaN</i> <i>default = NaN</i>
PVHIPR PV High Alarm Priority	Noaction Journal	Low High Emergency
PVLOTP PV Low Alarm Trip Point	_____	<i>range = PVLLTP to PVHITP, and NaN</i> <i>default = NaN</i>

SM Analog Input Data Point

NIM/PV Configuration Display (continued)

PVLOPR PV Low Alarm Priority	Noaction	Journal	Low	High	Emergency
BADPVPR Bad PV Alarm Priority	Noaction	Journal	Low	High	Emergency

N/A if PNTFORM = Componnt

ALENBST Point Alarm Enable Status		<u>Displayed</u>	<u>Logged</u>	<u>Reported to EIP</u>
	Enable	Yes	Yes	Yes
	Disable	No	Yes	Yes
	Inhibit	No	No	No
PRIMMOD Primary Module ID	_._._._._._._._._._	<i>range = Not applicable</i> <i>default = Null</i>		
CCSRC Target Alias Address in the TRICON for the Contact Cutout Flag	_._._._._._._._	<i>range = 0, 1 to 4000, 10001 to 14000</i> <i>default = 0 (Not configured/UCN Access allowed for CONTCUT)</i>		
Applies only if ALMOPT = OFFNORML or CHNGOST and PNTFORM = Full				

SM Analog Output Data Point

SM AnalogOut Data Point	Engineer:	Date:
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Point Assignment Display

NAME Tag Name	<i>range =</i> Not applicable <i>default =</i> Blank
NODETYP Node Type	PM APM SM	<i>range =</i> Not applicable <i>default =</i> PM
SMPLTFM Type of Safety Control Platform	TRICON FSC	Safety Manager is using TRICON Controller Safety Manager is using FSC Controller
PNTFORM Point Form	Full Compoint	Point is fully displayed and alarmed Point is partially displayed but not alarmed
PTDESC Point Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
EUDESC Engineering Units Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
KEYWORD Keyword Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
ASSOCDSP Associated Display	<i>range =</i> Alphanumeric <i>default =</i> Blank
UNIT Process Unit Point is Assigned to	..	<i>range =</i> Alphanumeric <i>default =</i> Not applicable
NTWKNUM NIM's UCN that Contains This Point	..	<i>range =</i> 1 to 20 <i>default =</i> Not applicable
NODENUM SMM's Address on the UCN	..	<i>range =</i> 1 to 64 <i>default =</i> Not applicable
SLOTNUM Point Slot Number	..	<i>range =</i> 0 to 500 <i>default =</i> Not applicable
The actual Range check will be calculated on the PU count for each Point type and the mix of configured Points desired.		
PLCADDR LC Source Address	<i>range =</i> 0, 40251 to 40632 (Integer) 41001 to 42000 (Real) <i>default =</i> 0 (Not Configured)
OPFINHI	<i>range =</i> >OPFINLO <i>default =</i> 4095.0
OPFINLO	<i>range =</i> <OPFINHI <i>default =</i> 0.0

SM Analog Output Data Point

Operating Configuration Display

OPTDIR (AnalogOut)	Direct	For final OP: 0% = >4 mA; 100% = >20 mA
AO Direct/Reverse Action	Reverse	For final OP: 0% = >20 mA; 100% = >4 mA

PVFLTOPT	<input type="checkbox"/>	<i>range:</i> 1 =Integer 2 = Real
Enumeration of the TRICON data type		<i>default:</i> Not Configured
The value for this Parameter will be determined by PLCADDR.		

WRITPROT	<input type="checkbox"/>	<i>range:</i> 0 = READWRIT 1 = READONLY
Write Protect (Read Only) status of the AO point.		<i>default:</i> READONLY
Based on the status of the TRICON-resident SM Write Protect parameter.		

Mode Configuration Display

RCASOPT	None	N/A if PNTFORM = Compoint
Remote Cascade Option	Ddc	No cascade mode of any type is allowed In Cas, AM point controls this point's OP
NMODE	None	None, Man applies when RCASOPT = None.
Analog Output Point's Normal Mode	Man Cas	None, Man, Cas applies when RCASOPT = Ddc. No configured "normal" operating mode. Manual is the configured "normal" mode. If RCASOPT equals Ddc, Cascade may be configured as the "normal" mode.

NMODATTR	None	N/A if NMODE = None, or if PNTFORM = Compoint
Normal Mode Attribute	Operator Program	Parameter NMODE sets "normal" mode Operator sets "normal" operating mode Program sets "normal" operating mode
MODEPERM	Permit	Operator can change this point's mode
Mode Permissive	NotPerm	Operator cannot change this point's mode

SM Digital Composite Data Point

SM AnalgOut Data Point	Engineer:	Date:
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Point Assignment Display

NAME		<i>range =</i> Not applicable
Tag Name	<i>default =</i> Blank
NODE Typ		<i>range =</i> Not applicable
Node Type	PM APM SM	<i>default =</i> PM
SMPLTFM		
Type of Safety Control Platform	TRICON FSC	Safety Manager is using TRICON Controller Safety Manager is using FSC Controller
PNTFORM		
Point Form	Full Componnt	Point is fully displayed and alarmed Point is partially displayed but not alarmed
PTDESC		<i>range =</i> Not applicable
Point Descriptor	<i>default =</i> Blank
EUDESC	<i>range =</i> Not applicable
Engineering Units Descriptor		<i>default =</i> Blank
KEYWORD	<i>range =</i> Not applicable
Keyword Descriptor		<i>default =</i> Blank
ASSOCDSP	<i>range =</i> Alphanumeric
Associated Display		<i>default =</i> Blank
UNIT	..	<i>range =</i> Alphanumeric
Process Unit Point is Assigned to		<i>default =</i> Not applicable
NTWKNUM	..	<i>range =</i> 1 to 20
NIM's UCN that Contains This Point		<i>default =</i> Not applicable
NODENUM	..	<i>range =</i> 1 to 64
SMM's Address on the UCN		<i>default =</i> Not applicable
SLOTNUM	...	<i>range =</i> 0 to 652
Point Slot Number		<i>default =</i> Not applicable
The actual Range check will be calculated on the PU count for each Point type and the mix of configured Points desired.		
NOSTATES	2	2 digital switch states can be configured
Number of Digital States	3	3 digital switch states can be configured
NODINPTS	0	0 digin connections can be configured
Number of Digital Input Connections	1	1 digin connection can be configured
	2	2 digin connections can be configured
NODOPTS	0	0 digout connections can be configured
Number of Digital Output Connections	1	1 digout connection can be configured
	2	2 digout connections can be configured
	3	3 digout connections can be configured

SM Digital Composite Data Point

State Configuration Display

N/A if PNTFORM = Componnt

- (1) = First active state
- (0) = Inactive state
- (2) = Second active state

STATETXT (1)

State 1 Descriptor (1) |.....| *range =* Not applicable
default = On

STATETXT (0)

State 0 Descriptor (0)|.....| *range =* Not applicable
default = Off

STATETXT (2)

State 2 Descriptor (2)|.....| *range =* Not applicable
default = "State2"

BOXCLR (1)

State 1 Box Color Red **Green** (Middle box default) White Black
Cyan Yellow Blue Magenta

BOXCLR (0)

State 0 Box Color Red Green White Black
Cyan **Yellow** (Middle box default) Blue Magenta

BOXCLR (2)

State 2 Box Color **Red** (Lower box default) Green White Black
Cyan Yellow Blue Magenta

N/A if NODOPTS = 0

MOMSTATE

Momentary Output States **None** No momentary output states
Mom_0 State 0 is valid if (NOSTATES = 2)
Mom_1 State 1 is valid if (NOSTATES = 2 or 3)
Mom_2 State 2 is valid if (NOSTATES = 3)
Mom_1_2 State 1 or 2 is valid if (NOSTATES = 3)

N/A if PNTFORM = Componnt

LOGICSRC

Logical Input Connection Source |.....|

DISRC(1-2)

Target Alias Addresses in the TRICON for the DI Source

Input

Source Point.Parameter

D1 |.....•.....|

D2 |.....•.....|

SM Digital Composite Data Point

PV/Input Configuration Display

Applies if NODINPTS = to 1		
D1_1 D1_One PV State	PVState1 PVState0	Use and display contents of STATETXT1 Use and display contents of STATETXT0

N/A if NODINPTS = 1		
D2D1_00 D2D1 Zero_Zero PV State	PVState1 PVState0 PVState2 BadPV MovPV	Use and display contents of STATETXT1 Use and display contents of STATETXT0 Use and display contents of STATETXT2 Use and display contents of BADPVTXT Use and display contents of MOVVPTXT
D2D1_01 D2D1 Zero_One PV State	PVState1 PVState0 PVState2 BadPV MovPV	Use and display contents of STATETXT1 Use and display contents of STATETXT0 Use and display contents of STATETXT2 Use and display contents of BADPVTXT Use and display contents of MOVVPTXT
D2D1_10 D2D1 One_Zero PV State	PVState1 PVState0 PVState2 BadPV MovPV	Use and display contents of STATETXT1 Use and display contents of STATETXT0 Use and display contents of STATETXT2 Use and display contents of BADPVTXT Use and display contents of MOVVPTXT
D2D1_11 D2D1 One_One PV State	PVState1 PVState0 PVState2 MovPV BadPV	Use and display contents of STATETXT1 Use and display contents of STATETXT0 Use and display contents of STATETXT2 Use and display contents of MOVVPTXT Use and display contents of BADPVTXT

N/A if PNTFORM = Componnt, or if NODINPTS = 0		
PVSRCOPT PV Source Option	OnlyAuto All	PV source selection is not available and field wiring or memory fetch supplies PV. Selection from PVSOURCE is available and Operator/CL-program may supply PV.
PVSOURCE PV Source	Auto Man Sub Track	Applies when PVSRCOPT = All. Field wiring or memory fetch supplies PV. PV is supplied by Operator or program. A value is substituted by a CL-program. PV tracks the output.

Output Configuration Display

N/A if NODOPTS < 2		
NONECONF None State Configuration	On Off	

SM Digital Composite Data Point

Output Configuration Display (continued)

	N/A if NODOPTS = 0		
STATE1	<u>OUTPUT 1</u>	<u>OUTPUT 2</u>	<u>OUTPUT 3</u>
ST1_OP1 (NODOPTS = 1) State 1 – Output 1	<i>Off</i> ON	Not applicable	Not applicable
ST1_OP2 (NODOPTS = 2) State 1 – Output 2	<i>Off</i> On	<i>Off</i> On	Not applicable
ST1_OP3 (NODOPTS = 3) State 1 – Output 3	<i>Off</i> On	<i>Off</i> On	<i>Off</i> On
STATE0			
ST0_OP1 (NODOPTS = 1) State 0 – Output 1	<i>Off</i> On	Not applicable	Not applicable
ST0_OP2 (NODOPTS = 2) State 0 – Output 2	<i>Off</i> On	<i>Off</i> On	Not applicable
ST0_OP3 (NODOPTS = 3) State 0 – Output 3	<i>Off</i> On	<i>Off</i> On	<i>Off</i> On
STATE 2			
ST2_OP1 (NODOPTS = 1) State 2 – Output 1	<i>Off</i> On	Not applicable	Not applicable
ST2_OP2 (NODOPTS = 2) State 2 – Output 2	<i>Off</i> On	<i>Off</i> On	Not applicable
ST2_OP3 (NODOPTS = 3) State 2 – Output 3	<i>Off</i> On	<i>Off</i> On	<i>Off</i> On
NONE_OPx	N/A if NONECONF = OFF		

DODSTN

Target Alias Addresses in the TRICON for the DO destination

Output

D1

Source Point.Parameter

|.....|

D2

|.....|

D3

|.....|

PISRC (1 - 3)

Target Alias Addresses in the TRICON for Permissive Interlock Source

|.....|

range = 0, 1 to 4000, or 10001 to 14000

default = 0 (Not Configured)

OISRC (1 - 3)

Target Alias Addresses in the TRICON for Override Interlock Source

|.....|

range = 0, 1 to 4000, or 10001 to 14000

default = 0 (Not Configured)

SM Digital Composite Data Point

Output Configuration Display (continued)

LMSRC Target Alias Addresses in the TRICON for Local/Manual Source	_._._._._	range = 0, 1 to 4000, or 10001 to 14000 default = 0 (Not Configured)
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Mode Configuration Display

		N/A if NODOPTS = 0
NMODATTR Normal Mode Attribute	None Operator Program	Parameter NMODE sets "normal" mode Operator sets "normal" operating mode Program sets "normal" operating mode
MODEPERM Mode Permissive	Permit NotPerm	Operator can change this point's mode Operator cannot change this point's mode
OROPT Interlock Bypass Option	Off On	
BYPASS Interlock Bypass State	Off On	Applies when OROPT = On.

Alarming Display

		N/A if PNTFORM = Componnt, or if NODINPTS = 0
ALMOPT Alarming Option	None Cmddis Offnorml	No affect Alarm if field device did not respond within configured feedback time duration. Alarm if PV and PVNORMAL differs.
FBTIME Feedback Time in Seconds	_._._._._	Applies when ALMOP = Cmddis. range = 1 to 1000 default = 1000
PVNORMAL PV Value's Normal State Text	Off	Applies when ALMOPT = Offnorml. range = STATETXT(0) – STATETXT(2)
ALENBST Point Alarm Enable Status		Applies when ALMOP = Offnorml, Cmddis.
		<u>Displayed</u> <u>Logged</u> <u>Reported to EIP</u>
	Enable	Yes Yes Yes
	Disable	No Yes Yes
	Inhibit	No No No

SM Digital Input Data Point

SM DigIn Data Point	Engineer:	Date:
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Point Assignment Display

NAME Tag Name	<i>range =</i> Not applicable <i>default =</i> Blank
NODE TYP Node Type	PM APM SM	<i>range =</i> Not applicable <i>default =</i> PM
SMPLTFM Type of Safety Control Platform	TRICON FSC	Safety Manager is using TRICON Controller Safety Manager is using FSC Controller
PNTFORM Point Form	Full Compoint	Point is fully displayed and alarmed Point is partially displayed but not alarmed
PTDESC Point Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
EUDESC Engineering Units Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
KEYWORD Keyword Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
ASSOCDSP Associated Display	<i>range =</i> Alphanumeric <i>default =</i> Blank
UNIT Process Unit Point is Assigned to	..	<i>range =</i> Alphanumeric <i>default =</i> Not applicable
NTWKNUM NIM's UCN that This Point Is In	..	<i>range =</i> 1 to 20 <i>default =</i> Not applicable
NODENUM SMM's Address on the UCN	..	<i>range =</i> 1 to 64 <i>default =</i> Not applicable
SLOTNUM Point Slot Number	<i>range =</i> 0 to 2000 <i>default =</i> Not applicable
PLCADDR Target Alias Address in TRICON for the PVRAW input.	<i>range =</i> 0, 1 to 4000, or 10001 to 14000 <i>default =</i> 0 (Not Configured)
DITYPE Digital Input Type	Status	Status input (open/closed contacts)

SM Digital Input Data Point

Operating Configuration Display

N/A if PNTFORM = Component

STATETXT (1) State 1 Description Text	(1) _.	<i>range =</i> Not applicable <i>default =</i> "On"		
STATETXT (0) State 0 Description Text	(0) _.	<i>range =</i> Not applicable <i>default =</i> "Off"		
BOXCLR (1) State 1 Box Color	Red Cyan	Green (Upper box default) Yellow	White Blue	Black Magenta
BOXCLR (0) State 0 Box Color	Red Cyan	Green Yellow (Lower box default)	White Blue	Black Magenta
INPTDIR Digital Input Direction		Direct Reverse	Open = > pvraw = off; Closed = > pvraw = on Closed = > pvraw = off; Open = > pvraw = on	
PVSRCOPT PV Source Option		OnlyAuto All	PV source selection is not available and field wiring or memory fetch supplies PV. Selection from PVSOURCE is available and Operator/CL-program may supply PV.	
PVSOURCE PV Source		Auto Man Sub	Applies when PVSRCOPT = All. Field wiring or memory fetch supplies PV. PV is supplied by Operator or program. A value is substituted by a CL program.	

SM Digital Input Data Point

Alarming Display

Applies only if PNTFORM = Full

ALMOPT
Alarming Option

|_|

0 = None
1 = Offnorml
3 = Chngofst

PVNORMAL

PV Value's Normal State Text |_.|

Applies when ALMOPT = Offnorml.

range = STATETXT(0) – STATETXT(1)
default = Text equal to "Off"

DLYTIME

Alarm Delay in Seconds |_.|

Applies when ALMOPT = Offnorml.

range = 0 to 60
default = 5 (seconds)

ALPRIOR

Alarm Priority

NoAction
Journal
Low
High
Emergency

Applies when ALMOPT = Offnorml.

Alarm is not reported to the system.
Logged but not reported to Op Stations.
Reported to Unit Alarm Summary display.
Reported to Area and Unit Alarm Summary.
Reported to all Alarm Summary displays.

ALENBST

Point Alarm Enable Status

Enable
Disable
Inhibit

Applies when ALMOPT = Offnorml.

<u>Displayed</u>	<u>Logged</u>	<u>Reported to EIP</u>
Yes	Yes	Yes
No	Yes	Yes
No	No	No

EVTOPT

Event Reporting Option |_|

Applies only if ALMOPT = Offnorml or Chngofst.

0 = None
1 = Eip - Event Initiated Processing
2 = EipSoe - Event Initiated Proc. and Sequence of Events
3 = Soe - Sequence of Events

PVCHGDLY

Preset in seconds for the PV Change Delay function which throttles timestamped event collection. Refer to PVCHTMR. |_.|

N/A if EVTOPT ≠ SOE or EIP_SOE
range = 0 to 60
default = 0

EIPPCODE

Event Init. Proc. Destination |_.|

Applies when EVTOPT = Eip.

range = Not applicable
default = Null
N/A if ALMOPT = None.

PRIMMOD

Primary Module ID |_.|

Applies when ALMOPT = Offnorml.

range = Not applicable
default = Null

SM Digital Input Data Point

Alarming Display

Applies only if PNTFORM = Full

CCSRC

Target Alias Address in the TRICON
for the Contact Cutout Flag

|_._._._._|

Applies only if ALMOPT = Offnorml or Chngofst.

range = 0, 1 to 4000, or 10001 to 14000

default = 0 (Not Configured/UCN Access allowed for CONTCUT)

SM Digital Output Data Point

SM DigOut Data Point	Engineer:	Date:
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Point Assignment Display

NAME Tag Name	<i>range =</i> Not applicable <i>default =</i> Blank
NODE TYP Node Type	PM APM SM	<i>range =</i> Not applicable <i>default =</i> PM
SMPLTFM Type of Safety Control Platform	TRICON FSC	Safety Manager is using TRICON Controller Safety Manager is using FSC Controller
PNTFORM Point Form	Full Componnt	Point is fully displayed and alarmed Point is partially displayed but not alarmed
PTDESC Point Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
EUDESC Engineering Units Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
KEYWORD Point Keyword Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
ASSOCDSP Associated Display	<i>range =</i> Alphanumeric <i>default =</i> Blank
UNIT Process Unit Point is Assigned to	..	<i>range =</i> Alphanumeric <i>default =</i> Not applicable
NTWKNUM NIM's UCN that Contains This Point	..	<i>range =</i> 1 to 20 <i>default =</i> Not applicable
NODENUM SMM's Address on the UCN	..	<i>range =</i> 1 to 64 <i>default =</i> Not applicable
SLOTNUM Point Slot Number	<i>range =</i> 0 to 2000 <i>default =</i> Not applicable
PLCADDR LC Source Address	<i>range =</i> 0, or 2001 to 4000 <i>default =</i> 0 (Not Configured)
DOTYPE Digital Output Type	Status	Status input output Pulse Width Modulated type output

SM Digital Output Data Point

Operating Configuration Display

N/A if PNTFORM = Componnt

STATETXT (1) State 1 Description Text	(1) _.	<i>range =</i> Not applicable <i>default =</i> "On"		
STATETXT (0) State 0 Description Text	(0) _.	<i>range =</i> Not applicable <i>default =</i> "Off"		
BOXCLR (1) State 1 Box Color	Red Cyan	Green (Upper box default) Yellow	White Blue	Black Magenta
BOXCLR (0) State 0 Box Color	Red Cyan	Green Yellow (Lower box default)	White Blue	Black Magenta
NMODATTR Normal Mode Attribute		None Operator Program	Parameter NMODE sets "normal" mode Operator sets "normal" operating mode Program sets "normal" operating mode	
MODEPERM Mode Permissive		Permit NotPerm	Operator can change this point's mode Operator cannot change this point's mode	

SM Logic Data Point

SM Logic Data Point	Engineer:	Date:
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Point Assignment Display

NAME Tag Name	<i>range =</i> Not applicable <i>default =</i> Blank
NODE TYP Node Type	PM APM SM	<i>range =</i> Not applicable <i>default =</i> PM
SMPLTFM Type of Safety Control Platform	TRICON FSC	Safety Manager is using TRICON Controller Safety Manager is using FSC Controller
PNTFORM Point Form	Full Compoint	Point is fully displayed and alarmed Point is partially displayed but not alarmed
PTDESC Point Descriptor	<i>range =</i> Not applicable <i>default =</i> Blank
ASSOCDSP Associated Display	<i>range =</i> Alphanumeric <i>default =</i> Blank
UNIT Process Unit Point is Assigned to	..	<i>range =</i> Alphanumeric <i>default =</i> Not applicable
NTWKNUM NIM's UCN that This Point Is In	..	<i>range =</i> 1 to 20 <i>default =</i> Not applicable
NODENUM SMM's Address on the UCN	..	<i>range =</i> 1 to 64 <i>default =</i> Not applicable
SLOTNUM Point Slot Number	..	<i>range =</i> 0 to 30 <i>default =</i> Not applicable
Actual Range check will be calculated on the PU count for each Point type and the mix of configured Points desired.		
LOGMIX Logic Mix	12_0_12	12 inputs 0 logic blocks 12 outputs

SM Logic Data Point

NIM Input Connections Display

LISRC
 Target Alias Addresses in the TRICON for the Logic Input

<u>Input</u>	<u>Source Point.Parameter</u>
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
L12

LIBADOPT
 Logic Bad Input Handling Option

Off
 On
Hold

"Off" state is substituted for bad input.
 "On" state is substituted for bad input.
 Last good value is substituted for bad input.

LODSTN
 Target Alias Addresses in the TRICON for the Logic output

<u>Output</u>	<u>Source Point.Parameter</u>
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
L12

SM Logic Data Point

NIM Input Connections Display (continued)

LOENBL

|_._._._._|

NIM Logic Descriptors Display

N/A if PNTFORM = Componnt

NODESC

Number of Generic Descriptors

|_._|

range = 0 to 12

default = 0

<u>Descr#</u>	<u>Generic Descriptors (defaults = blanks)</u>
1	GENDESC(1) _._._._._
2	GENDESC(2) _._._._._
3	GENDESC(3) _._._._._
4	GENDESC(4) _._._._._
5	GENDESC(5) _._._._._
6	GENDESC(6) _._._._._
7	GENDESC(7) _._._._._
8	GENDESC(8) _._._._._
9	GENDESC(9) _._._._._
10	GENDESC(10) _._._._._
11	GENDESC(11) _._._._._
12	GENDESC(12) _._._._._

SM Flag Point

SM Flag Data Point	Engineer:	Date:
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Point Assignment Display

NAME		<i>range =</i> Not applicable
Tag Name	<i>default =</i> Blank
NODE Typ	PM	<i>range =</i> Not applicable
Node Type	APM	<i>default =</i> PM
	SM	
SMP LTFM	TRICON	Safety Manager is using TRICON Controller
Type of Safety Control Platform	FSC	Safety Manager is using FSC Controller
PNTFORM	Full	Point is fully displayed and alarmed
Point Form	Componnt	Point is partially displayed but not alarmed
PTDESC		<i>range =</i> Not applicable
Point Descriptor	<i>default =</i> Blank
EUDESC	<i>range =</i> Not applicable
Engineering Units Descriptor		<i>default =</i> Blank
KEYWORD	<i>range =</i> Not applicable
Point Keyword		<i>default =</i> Blank
ASSOC DSP	<i>range =</i> Alphanumeric
Associated Display		<i>default =</i> Blank
UNIT	..	<i>range =</i> Alphanumeric
Process Unit Point is Assigned to		<i>default =</i> Not applicable
NTWKNUM	..	<i>range =</i> 1 to 20
NIM's UCN that This Point Is In		<i>default =</i> Not applicable
NODENUM	..	<i>range =</i> 1 to 64
SMM's Address on the UCN		<i>default =</i> Not applicable
SLOTNUM	<i>range =</i> 0 to 2000
Point Slot Number		<i>default =</i> Not applicable

The actual Range check will be calculated on the PU count for each Point type and the mix of configured Points desired.

Operating Configuration Display

N/A if PNTFORM = Componnt

STATETXT (1)		<i>range =</i> Not applicable		
State 1 Descriptor	<i>default =</i> ON		
STATETXT (0)	<i>range =</i> Not applicable		
State 0 Descriptor		<i>default =</i> OFF		
BOXCLR (1)	Red	Green	White	Black
State 1 Box Color	Cyan	Yellow	Blue	Magenta
BOXCLR (0)	Red	Green	White	Black
State 0 Box Color	Cyan	Yellow	Blue	Magenta

SM Flag Point

Alarming Display

N/A if PNTFORM = Componnt

OFFNRMPR	NoAction Journal Low High Emergency	Alarm is not reported to the system. Logged but not reported to Operator Stations. Reported to Unit Alarm Summary display. Reported to Area and Unit Alarm Summary. Reported to all Alarm Summary displays.
ALENBST Alarm Enable State	Enable Disable Inhibit	<i>default = Enable</i>
EIPPCODE EIP Point ID	_.	<i>range = Not applicable</i> <i>default = Blank</i>
PRIMMOD Primary Module ID	_.	<i>range = Not applicable</i> <i>default = Null</i>
CCSRC Contact Cutout Source	_. . . .	<i>range = -1 to 8191</i> <i>default = -1</i>

SM Timer Point

SM Timer Data Point	Engineer:	Date:
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Point Assignment Display

NAME *range = Not applicable*
Tag Name |.....| *default = Blank*

NODE Typ *range = Not applicable*
Node Type PM *default = PM*
APM
SM

SMPLTFM **TRICON** Safety Manager is using TRICON Controller
Type of Safety Control Platform FSC Safety Manager is using FSC Controller

PNTFORM **Full** Point is fully displayed and alarmed
Point Form Componnt Point is partially displayed but not alarmed

PTDESC *range = Not applicable*
Point Descriptor *default = Blank*
|.....|

EUDESC |.....| *range = Not applicable*
Engineering Units Descriptor *default = Blank*

KEYWORD |.....| *range = Not applicable*
Keyword Descriptor *default = Blank*

ASSOCDSP |.....| *range = Alphanumeric*
Associated Display *default = Blank*

UNIT |..| *range = Alphanumeric*
Process Unit Point is Assigned to *default = Not applicable*

NTWKNUM |..| *range = 1 to 20*
NIM's UCN that Contains This Point *default = Not applicable*

NODENUM |..| *range = 1 to 64*
SMM's Address on the UCN *default = Not applicable*

SLOTNUM |.....| *range = 0 to 1500*
Point Slot Number *default = Not applicable*

The actual Range check will be calculated on the PU count for each Point type and the mix of configured Points desired.

PLCADDR |.....| *range = 0, 2001 to 4000, or 10001 to 14000*
Target Alias Address in the TRICON for the Run/Stop Contact *default = 0 (Not Configured)*

PVSLTSRC |.....| *range = 0, 31001 to 31382, or 40251 to 40632 (Integer)*
Target Alias Address in the TRICON for the Accumulator Value *default = 0 (Not Configured)*

SPSLTSRC |.....| *range = 31001 to 31382, or 40251 to 40632 (Integer)*
Target Alias Address in the TRICON for the Preset Value *default = 0 (Not Configured)*

The Preset value is not necessarily adjacent to the Accumulator.

SM Timer Point

NIM Operating Configuration Display

TIMEBASE

Timer Base Period

SECONDS

MINUTES

range = Seconds/Minutes

default = Seconds

PVFORMAT

PV Decimal Format

D0

D1

D2

SM Numeric Point

SM Numeric Data Point	Engineer:	Date:
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Point Assignment Display

NAME *range = Not applicable*
Tag Name |.....| *default = Blank*

NODE TYP *range = Not applicable*
Node Type PM *default = PM*
APM
SM

SMPLTFM **TRICON** Safety Manager is using TRICON Controller
Type of Safety Control Platform FSC Safety Manager is using FSC Controller

PNTFORM **Full** Point is fully displayed and alarmed
Point Form Componnt Point is partially displayed but not alarmed

PTDESC *range = Not applicable*
Point Descriptor *default = Blank*

|.....|

EUDESC |.....| *range = Not applicable*
Engineering Units Descriptor *default = Blank*

KEYWORD |.....| *range = Not applicable*
Keyword Descriptor *default = Blank*

ASSOCDSP |.....| *range = Alphanumeric*
Associated Display *default = Blank*

UNIT |..| *range = Alphanumeric*
Process Unit Point is Assigned to *default = Not applicable*

NTWKNUM |..| *range = 1 to 20*
NIM's UCN that Contains This Point *default = Not applicable*

NODENUM |..| *range = 1 to 64*
SMM's Address on the UCN *default = Not applicable*

SLOTNUM |.....| *range = 0 to 1000*
Point Slot Number *default = Not applicable*

The actual Range check will be calculated on the PU count for each Point type and the mix of configured Points desired.

SM Numeric Point

PVFORMAT

|_._| *range:* D0 (XXXX.)
 D1 (XXX.X)
 D2 (XX.XX)
 D3 (X.XXX)
default: D0 — PVFLTOPT = Integer
 D2 — PVFLTOPT = Floating

WRITPROT

Write Protect (Read Only) status of the Numeric Point

|_| *range:* 0 = READWRIT
 1 = READONLY
default = READONLY

Based on the status of the TRICON-resident SM Write Protect parameter.

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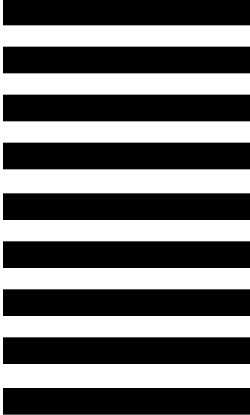
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