Honeywell

Application Module Form Instructions

AM12-500

Implementation
Application Module - 1

Application Module Form Instructions

AM12-500
Release 500
11/95

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Revision 02- November 2, 1995

About This Publication

This publication contains general instructions on how to fill out the *Application Module Forms,* that are in the *Implementation/Configuration Forms* binder.

Before using this publication, you should be familiar with the information in the following publications: *System Control Functions*, and the *Configuration Data Collection Guide*, both in the *Implementation/Startup & Reconfiguration - 2* binder, and the *Application Module Control Functions*, in the *Implementation/Application Module - 1* binder.

This publication supports software release 510.

Change bars are used to indicate paragraphs, tables, or illustrations containing changes that have been made to this manual effective with release 510. Pages revised only to correct minor typographical errors contain no change bars.

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FORM INSTRUCTIONS
Section 1

1.1 FORMS

Application Module Form Instructions in the *Implementation/Application Module - 1* binder contains configuration forms for regulatory and nonregulatory AM data points as follows:

Regulatory
- PV Algorithms
- Control Algorithms

Nonregulatory
- Counter
- CL Switch (for Regulatory Data Points)
- Custom
- Flag
- Numeric
- Switch
- Timer

A separate form is provided for each PV and control algorithm that can be configured for a regulatory data point.

1.2 LINE NUMBERS

The AM forms have been designed so that they are in a one-to-one correspondence with the Parameter Entry Displays (PEDs) at the Universal Station, which will subsequently be used to enter the information from the form into the system. The lines on each form are consecutively numbered within each PED. In some cases, the line numbers may contain asterisks, which are used to denote brief/full disclosure and expose/append disclosure. Brief/full disclosure and expose/append disclosure are described in the following paragraphs. The significance of the asterisks is described in paragraphs 1.2.1 and 1.2.2.

Brief/full disclosure determines whether you fill in a maximum number of lines, or a minimum number of lines when configuring a data point. This type of disclosure is determined by the POINT DISCLOSURE (PTDISCL) line on the form. If FULL is entered for this line, the maximum number of lines are to be configured. If BRIEF is entered, the minimum number of lines are to be configured.

Expose/append disclosure are two types of disclosures. "Expose" indicates that if you make a certain entry on a line, you must fill in an additional line or lines on the form. "Append" indicates that if you make a certain entry on a line, you must fill in an additional page or an additional configuration form.

1.2.1 Line Numbers with One Asterisk (*)

A single asterisk following a line number indicates that the line on the form has to be filled in when FULL is entered for the POINT DISCLOSURE (PTDISCL) line, as shown in Figure 1-1. If BRIEF is selected, you do not have to fill in the line numbers marked with a single asterisk.

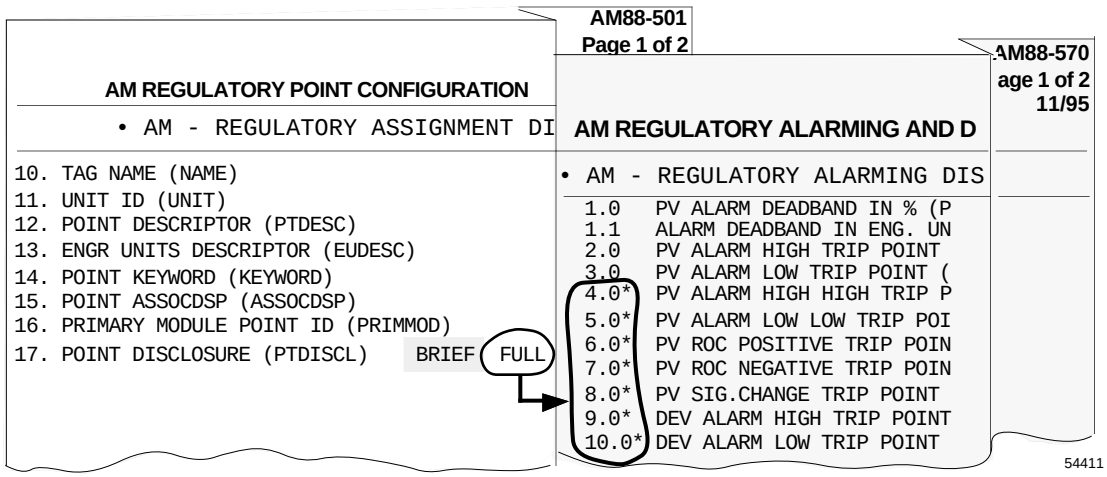


Figure 1-1 — Lines with a Single Asterisk Indicating Full Disclosure

1.2.2 Line Numbers with Two (**) and Three (***) Asterisks

A line number with two asterisks (**) indicates that if you select one of the options in this line, the additional lines that are marked with three asterisks must be filled in on the configuration form.

Figures 1-2 and 1-3 contain examples of the use of two and three asterisks for expose/append disclosure. Figure 1-2 is an example of append disclosure. In this figure, entering a "2" in line 1.0** requires you to fill in two lines that are numbered 2.1 and 2.2 under the line 2.0*** INPUT CONNECTIONS heading.

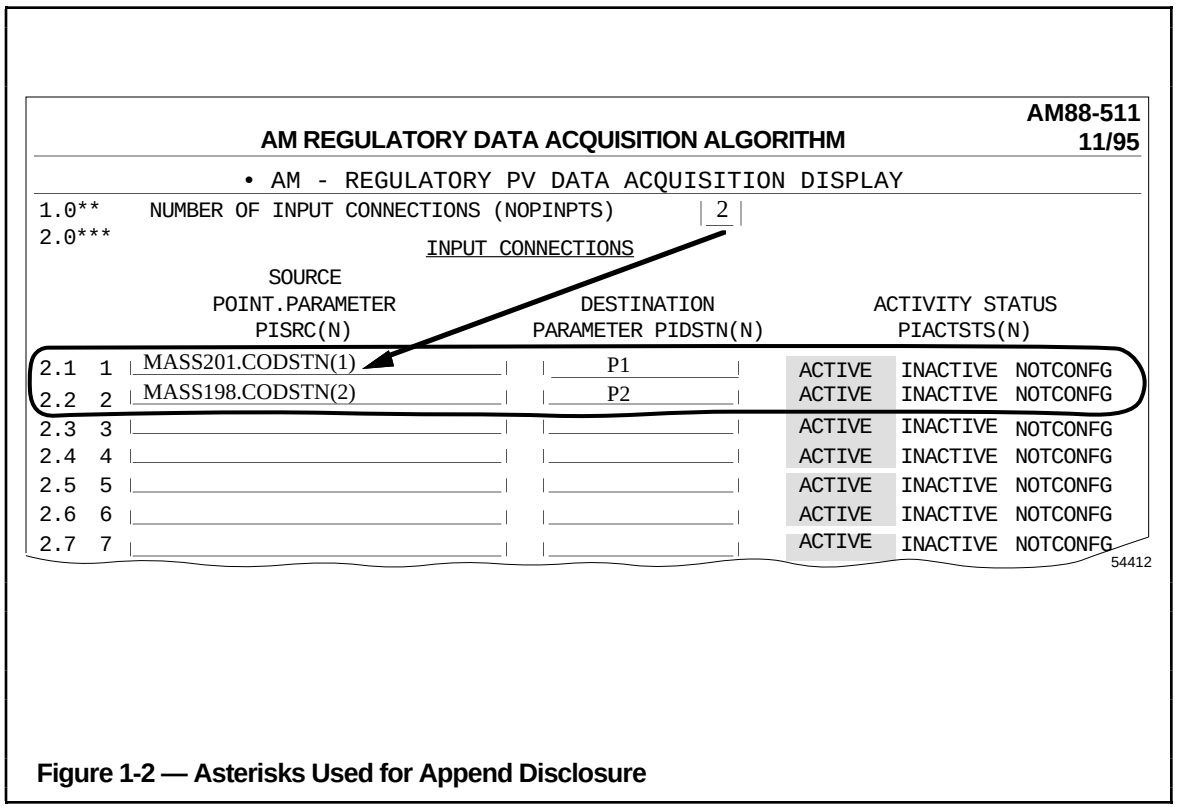


Figure 1-2 — Asterisks Used for Append Disclosure

Figure 1-3 is an example of expose disclosure. In this figure, selecting ALL** in line 7, requires the user to fill out line 8, which contains three asterisks.

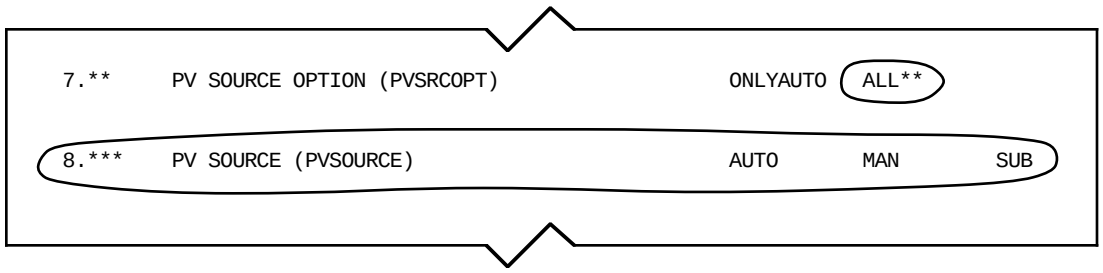


Figure 1-3 — Asterisks Used for Expose Disclosure 3691

1.3 USER ENTRIES

There are two types of entries that you can make on the configuration forms as shown in Figure 1-4. Some parameters require that you write in a numeric value or alphanumeric character string in the spaces provided on the form. Other parameters require that you make a selection from the complete range of possible selections for the parameter, as if in a menu. To make a selection from this menu of choices, you can use a pencil or pen to circle the selection.

Definitions of the BEFAFT and BEFAFTID parameters shown on the form in Figure 1-4 (and for all other parameters on all other AM forms) are in the *Application Module Parameter Reference Dictionary*, in the *Implementation/Application Module - 1* binder.

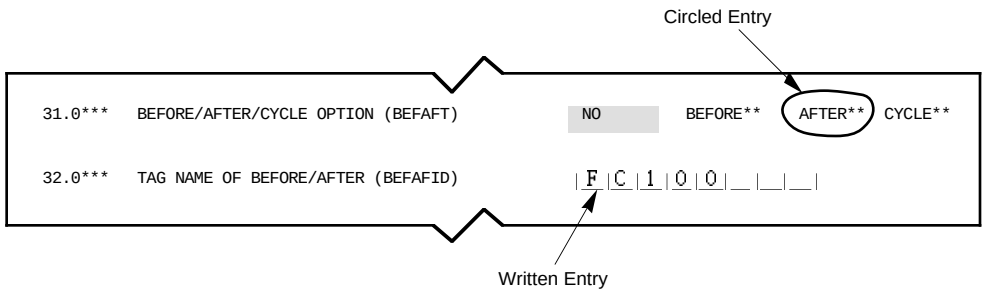


Figure 1-4 — User Entries 3692

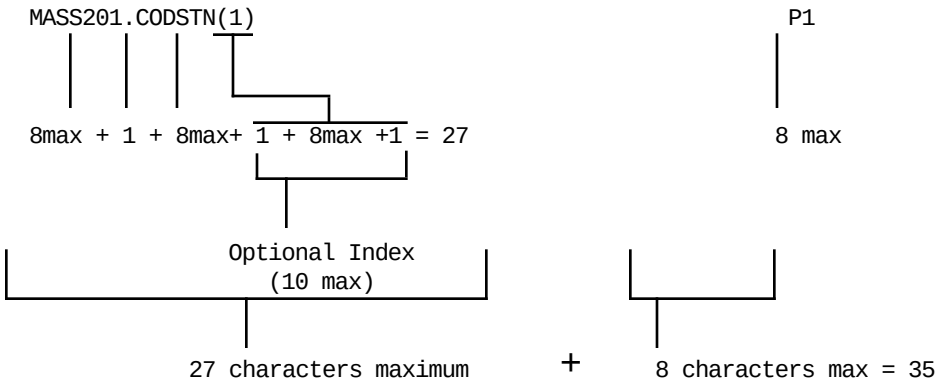
1.4 INPUT/OUTPUT CONNECTIONS

The AM allows you to fill in any of the necessary five types of input/output connections. To do this, use the Point.Parameter conventions described in the following paragraphs.

1.4.1 PV and Control Input Connections

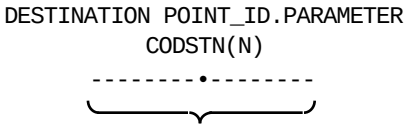
This class of Point.Parameter input connection can be as long as 35 characters, and has the following format:

Example:



1.4.2 Control Output Connections

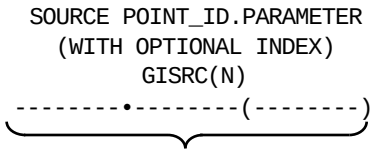
This class of Point.Parameter control output connection can be as long as 17 characters, and has the following format:

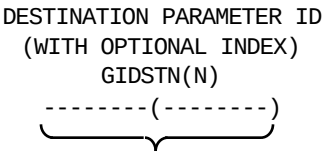


Example:

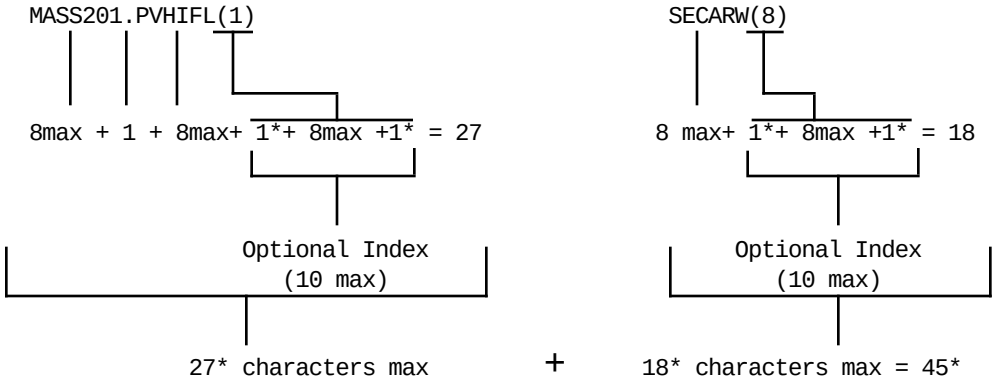
1.4.3 General Input Connections

This class of Point.Parameter general input connection can be as long as 45 characters, and has the following format:





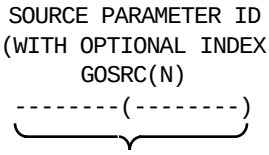
Example:

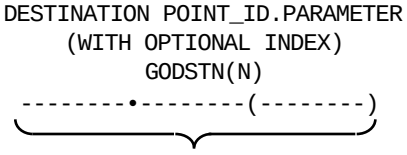


*Include parentheses [()] in character count for all I/O connections

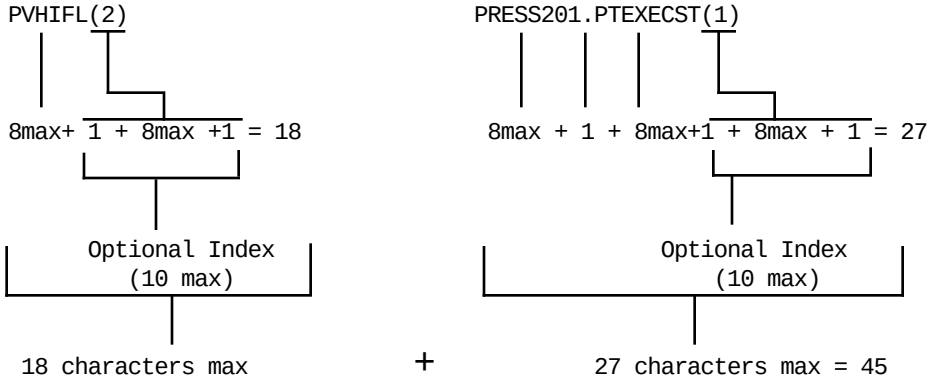
1.4.4 General Output Connections

This class of Point.Parameter general output connection can be as long as 45 characters, and has the following format:



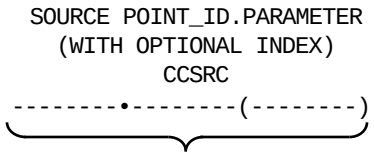


Example:

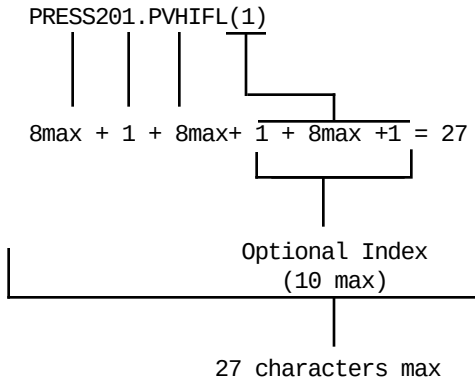


1.4.5 Alarm Cutout Connections

This class of Point.Parameter alarm cutout connection can be as long as 27 characters, and has the following format:



Example:



1.5 REDUNDANT INPUT CONNECTIONS

1.5.1 Input Connections

At least one input connection is specified for each PV and control algorithm input parameter; however, redundant input connections can be configured. Or, more than one input source can be configured, but only one input can be ACTIVE. This back-up connection is made at a later time, using the Universal Station.

1.5.2 General Input Connections

These connections are optional. More than one such input connection can be made to any parameter; however, only one is active. The last connection made is always active and the previously active connection is automatically made inactive.

For example, a configured data point needs one input ABC.PV and you circle ACTIVE as the activity status. A second back-up input XZY.PV can be configured as a redundant input, but you circle INACTIVE as the activity status.

1.6 NOTCONFG CONNECTION CONSTRAINT

For all connection-activity status, you can configure (select) only ACTIVE or INACTIVE.

This applies to all the AM Connections:

PIACTSTS
CIACTSTS
COACTSTS
GIACTSTS
GOACTSTS
CCACTSTS

Selecting NOTCONFG at configuration time causes an error during Data Point Load time, and does not get entered at configuration time.

The NOTCONFG Activity Status is reserved for the internal Point Configuration to mark an incomplete Point.Parameter designation (- - - - - - - - -.PV).

1.7 NaN AND NULL ENTITY ID NOTATION

NaN (Not-a-Number) is 3 or more dashes and may be a possible entry or default value. As a result, NaN is indicated by |-__|-__|-__|-__|-__|-__|__|__| on the appropriate configuration forms.

Null Entity ID is a notation that is indicated by all underbars (you provide the necessary ID). When provided as a default condition, all underbars (- - - - - - - - -) indicate the null entity parameter name.

NOTES

1. SP data entries on Form AM88-441 are not required for the following CTL algorithms: INCRSUM, AUTOMAN, ORSEL, and SWITCH.

2. Enter SP data entries on Form AM88-441 for the following CTL algorithms: PID, PID W/ERFB, PID W/FF, LEAD/LAG, SUMMER, MUL/DIV, RATIO, RAMPSOAK, and CL.

3. For CL (Control Language) configuration processing, refer to the *Control Language/ Application Module Reference Manual*, in the *Implementation/Application Module - 2* binder.

4. At the Data Entity Builder (DEB), selecting Brief as the entry for the POINT DISCLOSURE (PTDISCL) parameter instead of Full, causes default values to be entered for those parameters not displayed by the DEB, and these values cannot be changed. Therefore, you should always select Full for the PTDISCL parameter for those data points where you may decide to change the default value at a later time.

5. Custom data parameters in the class of PV coefficients and CTL tuning have the following limitations on the detail displays at the Universal Stations as follows:

   Parameters of type number, enumeration, and logical are fully supported on the display. Parameters of type time, strings, data point, and arrays of any type are not fully supported. Parameters of type string provide only the first eight characters. There is a maximum of 28 PV coefficients with 26 CTL timing parameters that can appear on the detail display for a data point.

6. A batch history prototype data point cannot be built by the DEB.

1.8 REFERENCES

Each AM form contains a reference to the *Application Module Parameter Reference Dictionary, AM09-540*, in the *Implementation/Application Module - 2* binder and to the *Data Entity Builder Manual, SW11-511*, in the *Implementation/Engineering Operations - 1* binder . Other publications that contain useful information that you may need when filling out the forms are as follows:

Title	Publication No.	Binder
Engineer's Reference Manual	SW09-505	Implementation/Startup & Reconfiguration - 2
System Control Functions	SW09-501	Implementation/Startup & Reconfiguration - 2
Application Module Control Functions	AM09-502	Implementation/Application Module - 1
Hiway Gateway Control Functions	HG09-501	Implementation/Hiway Gateway - 1
Configuration Data Collection Guide	SW12-500	Implementation/Startup & Reconfiguration - 2
Application Module Algorithm Engineering Data	AM09-501	Implementation/Application Module - 1
Control Language/Application Module Overview	SW27-500	Implementation/Application Module - 3
Control Language/Application Module Reference Manual	AM27-510	Implementation/Application Module - 3
Control Language/Application Module Data Entry	AM11-585	Implementation/Application Module - 3

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Title of Publication: **Application Module Form Instructions** Issue Date: **11/95**

Publication Number: **AM12-500**

Writer: **Maria Nelson**

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