Distributed Power System
SD3000 Drive Configuration and Programming

Instruction Manual S-3006-1

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The information in the user's manual is subject to change without notice.

DANGER

ONLY QUALIFIED ELECTRICAL PERSONNEL FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THIS EQUIPMENT AND THE HAZARDS INVOLVED SHOULD INSTALL, ADJUST, OPERATE, OR SERVICE THIS EQUIPMENT. READ AND UNDERSTAND THIS MANUAL AND OTHER APPLICABLE MANUALS IN THEIR ENTIRETY BEFORE PROCEEDING. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

WARNING

THE USER MUST PROVIDE AN EXTERNAL, HARDWIRED EMERGENCY STOP CIRCUIT OUTSIDE OF THE CONTROLLER CIRCUITRY THIS CIRCUIT MUST DISABLE THE SYSTEM IN CASE OF IMPROPER OPERATION. UNCONTROLLED MACHINE OPERATION MAY RESULT IF THIS PROCEDURE IS NOT FOLLOWED. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY INJURY

WARNING

ONLY QUALIFIED RELIANCE PERSONNEL OR OTHER TRAINED PERSONNEL WHO UNDERSTAND THE POTENTIAL HAZARDS INVOLVED MAY MAKE MODIFICATIONS TO THE RACK CONFIGURATION, VARIABLE CONFIGURATION, AND APPLICATION TASKS. ANY MODIFICATIONS MAY RESULT IN UNCONTROLLED MACHINE OPERATION. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN DAMAGE TO EQUIPMENT AND BODILY INJURY.

WARNING

REGISTERS AND BITS IN THE UDC MODULE THAT ARE DESCRIBED AS "READ ONLY" OR FOR "SYSTEM USE ONLY" MUST NOT BE WRITTEN TO BY THE USER. WRITING TO THESE REGISTERS AND BITS MAY RESULT IN IMPROPER SYSTEM OPERATION. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY INJURY

CAUTION: Electronic motor overload protection must be provided for each motor in a Distributed Power drive application to protect the motor against excessive heat caused by high currents. This protection can be provided by either the THERMAL OVERLOAD software block or an external hardware device. Applications in which a single power module is controlling multiple motors cannot use the THERMAL OVERLOAD software block and must use an external hardware device or devices to provide this protection. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

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1 .0 INTRODUCTION

The products described in this manual are manufactured or distributed by Reliance Electric Industrial Company.

Distributed Power System (DPS) drives are controlled through coordination between:

- Tasks written by the programmer for the AutoMax® Processor
- Tasks written by the programmer for the Universal Drive Controller (UDC) module
- The control algorithm and a number of software routines executed by the Power Module Interface PMI

The data and commands required by the PMI operating system to carry out its functions are provided by the programmer through the AutoMax rack configuration and the UDC task. The programmer provides this information by:

- Entering the drive parameters
- Configuring the registers in the UDC module
- Defining the values of the pre-defined local tunables
- Writing the UDC task

This manual describes the configuration and programming necessary to control SD3000 drives. Refer to the publications listed in section 1 .1 for detailed descriptions of the hardware components of an SD3000 drive system.

The AutoMax Programming Executive V3.4 (M/N 57C345, 57C346, 57C395, and 576397) or later is required to support the SD3000 drive. Beginning with V3.5 Executive software, drive regulators are sold separately. The AutoMax Programming Executive instruction manual describes the Programming Executive software in detail.

This instruction manual assumes that you are familiar with the AutoMax Programming Executive software and makes references to it throughout. This manual does not describe specific applications of the standard hardware and software.

> The thick black bar shown at the right-hand margin of this page will be used throughout this instruction manual to signify new or revised text or figures.

1.1 Related Publications

Refer to the following Reliance Electric instruction manuals as needed:

. J-3012 Digital I/O Rail
- J-3606 Remote I/O Communications
- J-3672 2-Channel Analog Voltage Input/Output Rail
- J-3673 Analog Current Input/Output Rail
- J-3675 AutoMax Enhanced BASIC Language
- J-3676 AutoMax Control Block Language
- J-3677 AutoMax Ladder Logic Language
- J-3688 4-Channel Analog Voltage Input Rail
- J-3689 4-Channel Analog Current Input Rail
- J-3694 4-Channel Analog Current Output Rail
- J-3695 4-Channel Analog Voltage Output Rail
- S-3005 Distributed Power System Overview

- S-3007 Distributed Power System Universal Drive Controller Module
- S-3008 Distributed Power System SD3000 Power Module Interface Rack
- S-3009 Distributed Power System Fiber-Optic Cabling
- S-3010 Distributed Power System SD3000 Power Modules
- S-3011 Distributed Power System SD3000 Diagnostics, Troubleshooting, and Startup Guidelines
- S-3012 Distributed Power System SD3000 Information Guide
- J2-3078 AutoMax Programming Executive Version 3.5

2.0 CONFIGURING THE UDC MODULE, REGULATOR TYPE, AND PARAMETERS

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WARNING

ONLY QUALIFIED RELIANCE PERSONNEL OR OTHER TRAINED PERSONNEL WHO UNDERSTAND THE POTENTIAL HAZARDS INVOLVED MAY MAKE MODIFICATIONS TO THE RACK CONFIGURATION. ANY MODIFICATIONS MAY RESULT IN UNCONTROLLED MACHINE OPERATION. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN DAMAGE TO EQUIPMENT AND BODILY INJURY.

The Rack Configurator application in the AutoMax Programming Executive is used to configure the modules in a rack. Using the Rack Configurator, you create a graphical representation of the actual modules in the rack. Refer to of the AutoMax Programming Executive instruction manual for more information on configuring racks.

You can access the Rack Configurator by selecting the Configure Rack option from the Rack menu of the System Configurator. An empty AutoMax rack will be displayed initially.

2.1 Adding a UDC Module

The UDC module may be placed in any slot in an AutoMax rack that contains at least one AutoMax Processor module (M/N 57C430A, 57C431, or 57C435). Note that the UDC module cannot be used in a remote I/O rack. The rack does not require a Common Memory module (M/N 57C413 or 576423) unless more than one AutoMax Processor is being used. A rack may contain up to ten UDC modules.

Some AutoMax modules, e.g., the Common Memory module and the Ethernet" Interface module, may have an effect on the slot allocation in the rack that limits where other modules may be inserted. Refer to the appropriate instruction manual for additional information. A UDC module may also be placed in a rack containing a set of the AutoMax drive controller modules (B/M 57401, 57405, 57406, and 57408).

Use the following procedure to add a UDC module to a rack:

Step 1. Select an empty slot in the rack.

Step 2. Select **Add** from the Configure menu. A dialog box listing the available modules will be displayed on the screen.

Step 3. Select the UDC module.

Step 4. Select a product type and a regulator (control) type for both drive A and drive B. See section 2.1 .1 for regulator selection rules. The remainder of this chapter assumes you have selected an SD3000 drive type.

Step 5. Select OK to add the UDC module to the rack and return to the Rack Configurator screen.

2.1.1 Rules for Configuring/Selecting Drives for the UDC Module

1. Both A and B drives do not have to be used. (You can configure only one.)

2. Your A/B drive type combination is restricted only if you select either an SD3000 (12-Pulse) drive or an SF3000 drive for either drive A or drive B. For these products, you are restricted to the drive type combinations shown in the table below. All other drive type combinations are allowed.

If you choose for Drive A. . .	Then your choices for Drive B are. . .
SD3000 (12-Pulse)	SD3000 12-Pulse Auxiliary
SF3000	No PMI Attached SD3000 (6-Pulse) **SF3000**

2.2 Entering the Drive Parameters

Drive parameters are application-specific data that describe your installation's Power Modules, feedback devices, and motors. This information is loaded to the UDC module, which in turn automatically downloads it to the PMI when the two are first connected over the fiber-optic link. This information is also stored off-line with the Programming Executive. Note that the drive parameters will be retained by the UDC module during a Stop All fault or command in the rack.

Once a UDC module has been added to the rack, use the **Zoom In** command to begin entering the drive parameters. Refer to the AutoMax Programming Executive instruction manual for more information on **Zooming** in and out.

Use the following procedure to enter the drive parameters. Section 2.3 describes how to load the drive parameter files when you are finished. Note that if you enter drive parameter data that is unexpected or out of range, a "warning" or "error" message will appear on the screen. A warning message indicates that the data you have just entered will be accepted by the Programming Executive, and you will be able to generate drive parameter files; however, you may experience degradation of drive performance. An error message indicates that the data you have just entered is unacceptable, and you will not be able to generate drive parameter files.

Step 1. **Zoom** into the UDC module. The Power Module Interface (PMI) screen will be displayed. You can also access this screen directly by double-clicking the UDC module.

This screen shows either one or two PMI diagrams depending upon the information you previously entered. One diagram will be shown for drive A and one for drive B, if used.

Each PMI diagram will show two rail ports (0 and 1) and the analog or digital rails that are connected to the PMI. Initially, no rails are connected.

Only one drive can be selected at a time when two drives are shown on the screen:

- the Drive A option will make drive A the selected drive.
- the Drive B option will make drive B the selected drive.

Entered commands will only affect the selected drive.

Step 2. If a rail is to be connected to the PMI's rail ports, click the appropriate rail port, either 0 or 1. Select **Add** under the Configure menu to add the rail to the rail ports.

You can choose from the following rail devices:

- M/N 45C001 Digital I/O Rail
- M/N 45C630 4-Decade Thumbwheel Switch Input Module
- M/N 45C631 4-Digit LED Output Module
- M/N 61 C345 4-Channel Analog Current Input Rail
- M/N 61 C346 4-Channel Analog Voltage Input Rail
- M/N 61 C350 2-Channel Analog Voltage Input/Output Rail

- M/N 61 C351 2-Channel Analog Current Input/Output Rail
- M/N 61 C365 4-Channel Analog Current Output Rail
- M/N 61C366 4-Channel Analog Voltage Output Rail

Click OK and the device will be added to the screen. If you are adding a digital I/O rail, you will need to configure the I/O modules that the rail contains. Double-click the rail to display the expanded digital I/O rail screen. To add an I/O module, select the module's slot by moving the cursor to it and clicking it. Select the **Add** option from the Configure menu for a list of the available modules. Select the appropriate module and click OK. Zoom out to return to the PMI screen (Rack Configurator).

Note that you cannot attach a Local I/O Head to the PMI's rail ports. You can, however, mix input and output modules in a Digital I/O Rail. You can also mix rail types, i.e., add both a Digital I/O Rail and an Analog Rail (rail mode only) to a PMI.

Select the Configure Variables option from the Configure menu in order to configure the variables for the attached rails. Zoom out to return to the PMI screen.

Step 3. Use the Configure Parameters option to access the Parameter Entry screens. Assuming you are configuring an SD3000 drive, there are four screen displays: Armature Power Module Data, 1 -Phase Field Power Module Data, Speed Feedback Data, and Meter Port Selection. See figure 2.1. Each of these screens is described in detail in the following sections (2.2.1 through 2.2.4).

Note that the AutoMax slot number of the UDC module is shown at the top of the screens. The screens prompt for specific information depending upon the item that is being configured.

Step 4. When you have made entries for the drive parameters on all of the parameter entry screens, you should select the "Verify" option displayed at the bottom of the screen. If any of the values you entered are invalid or out of range, the parameter that is invalid will be highlighted so that you can change the value. When you have finished entering drive parameters, select "Save" to save the values to the database.

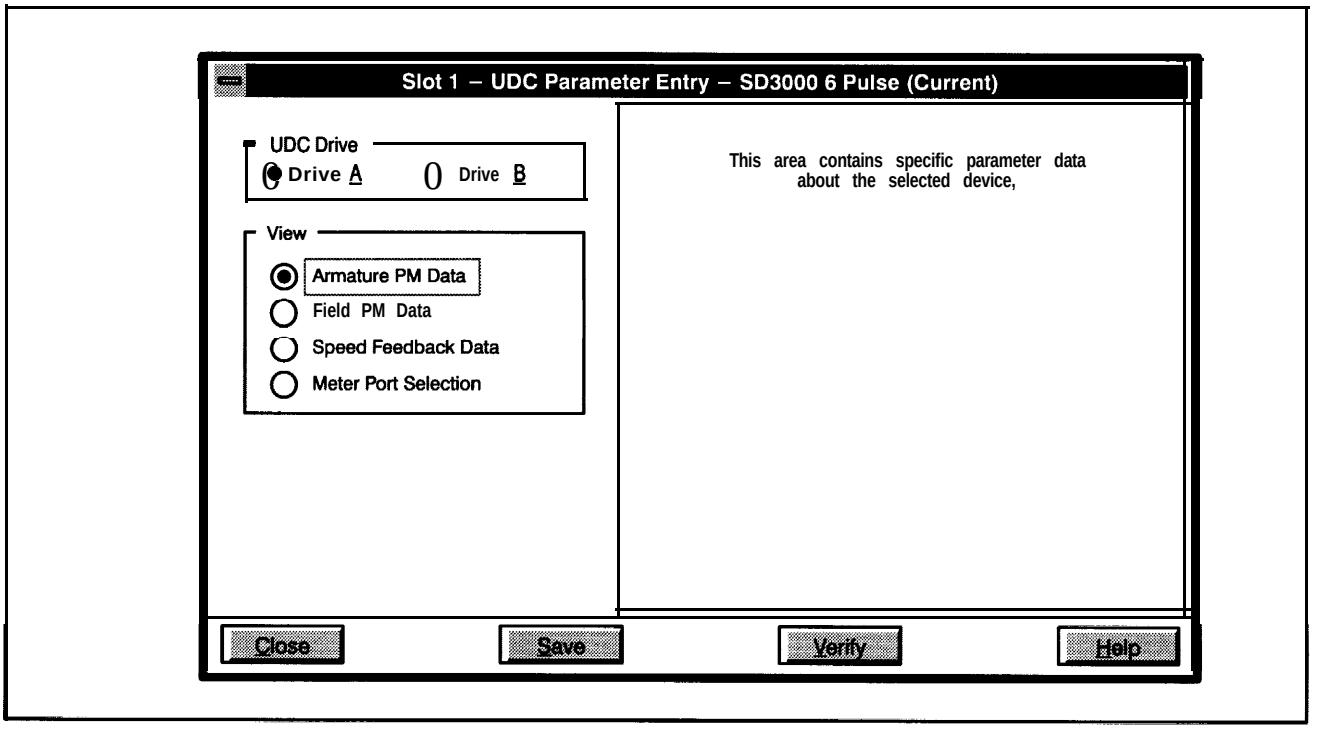

Figure 2.1 - SD3000 Drive Parameter Entry Screen

2.2.1 Armature Power Module Data Screen

The Armature Power Module Data Screen allows you to enter specific information about the Power Module and motor to be used in your application. See figure 2.2.

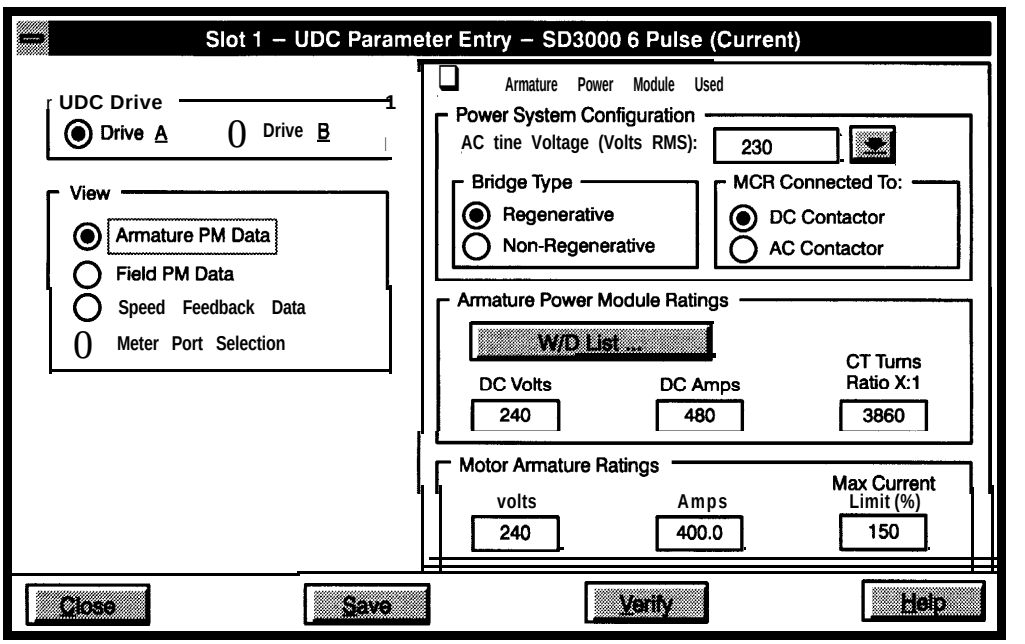

Figure 2.2 - Armature Power Module Parameter Entry Screen

- **Armature Power Module Used**

The default setting is that an Armature Power Module is used. If you are not using an Armature Power Module, de-select this option.

Power System Configuration Selections

- **A-C Line Voltage (Volts RMS)**

Nominal preset voltage values are 230V (default), 380V, 460V, 575V, or 690V You can also enter a custom value (maximum 1 OOOV A-C). Note that the actual A-C line voltage may be up to 10% above the nominal voltage rating.

The A-C line voltage determines which group of Power Modules may be selected from the wiring diagrams (W/D list). This voltage will determine the threshold (15% below this voltage) at which the low A-C line voltage warning will be indicated. This voltage is also used in scaling the field A-C line voltage and to avoid inverting faults.

Note that if the A-C line voltage is greater than 750V A-C, the application requires an external voltage divider and a special phasing transformer in the Power Module.

- **Bridge Type**

Select the type of bridge you are using, either regenerative (default) or non-regenerative.

- **MCR Connected To**

This parameter describes the type of MCR output on the Resolver & Drive I/O module. The default setting is D-C contactor. You must select either an A-C or D-C contactor but not both. If you do have both in your application, the MCR output must be connected to the A-C contactor and the D-C contactor must be controlled by your application program,

Armature Power Module Rating Selections

You can enter Power Module ratings either manually or automatically through the W/D list.

- **W/D List**

  You can choose from a list of wiring diagrams (W/D list) and have the specified default Power Module values entered in automatically. Appendix E lists these values.

- **D-C Volts**

  Enter the maximum output voltage the Power Module will produce. The maximum allowable voltage is A-C line voltage plus 35%. The rated Power Module voltage cannot exceed 135% of the A-C input voltage.

- **D-C Amps**

  Enter the Power Module's 100% output D-C Amp rating. The value can range from IA to the rated armature amperage (100% D-C amp rating) with a maximum of 8000A. This value is found on the Power Module's nameplate and is used in the inverting fault avoidance algorithm. All Reliance Power Module bridges have 150% rating for 1 minute. See Appendix J for precautions on this parameter.

- **CT Turns Ratio X:1**

  The CT turns ratio parameter defines the input to output ratio of the current transformer in the Armature Power Module. The ratio is assumed to be X:1. This parameter is found on the Power Module's nameplate. Refer to Appendix F for additional information on the relationship between the CT turns ratio and the armature current feedback resolution.

  This parameter is also used to setup the D-C Drive Technology module's programmable gain amplifier and to scale armature current feedback into amperes. Refer to Appendix F for additional information on the relationship between the CT turns ratio and the armature current feedback resolution.

Motor Armature Rating Selections

- **Volts**

  There is no default value. The maximum value is the rated D-C output voltage. This value is found on the motor's nameplate. This voltage is used to calculate when field weakening begins. Refer to register 100/1 100, bit 11 for more information. The rated motor armature voltage must be no greater than the **voltage** rating of the Power Module or 120% of the A-C line voltage. Note that if you go above 120% of the A-C line voltage you will not be able to achieve full motor speed.

- **Amps**

  There is no default value. This is the full load current that will be generated by the armature Power Module when the current reference specified by the UDC application task is equal to 100%. This value can range from 0.1 to 999.9 amps or 1000 to 8000 amps. This value must be less than or equal to the Power Module's D-C Amps values.

  Refer to Appendix F for additional information on the relationship between the CT turns ratio and the armature current feedback resolution. Note that if the current is less than 1000A, the current may be entered in tenths of an ampere. If the current is greater than IOOOA, it may be entered in amperes.

  This current value is used to adjust the programmable gain amplifier in the D-C Power Technology module and the instanteous overcurrent (IOC) trip point threshold values. Refer to Appendix I for more information. This value is also used to calculate the IR_DROP.

- **Max Current Limit (%)**

  This is the maximum value in percent of the Amps value that may be used for current reference. This current value is used to adjust the programmable gain amplifier in the D-C Power Technology module and the IOC threshold values. Refer to Appendix I for more information.

This value is also used to scale the current feedback and may range from 100 to 400%. The maximum amps produced by the Power Module can be calculated from the following equation:

Maximum Amps* Produced by the Power Module = Amps x $\frac{\text{Maximum Current Limit}}{100}$

* Must be less than the Power Module's output rating or 8000 amps (maximum).

2.2.2 Field Power Module Data Screen

The Field Power Module Data Screen allows you to enter specific information about the 1 -Phase Field Power Module and motor to be used in your application. See figure 2.3.

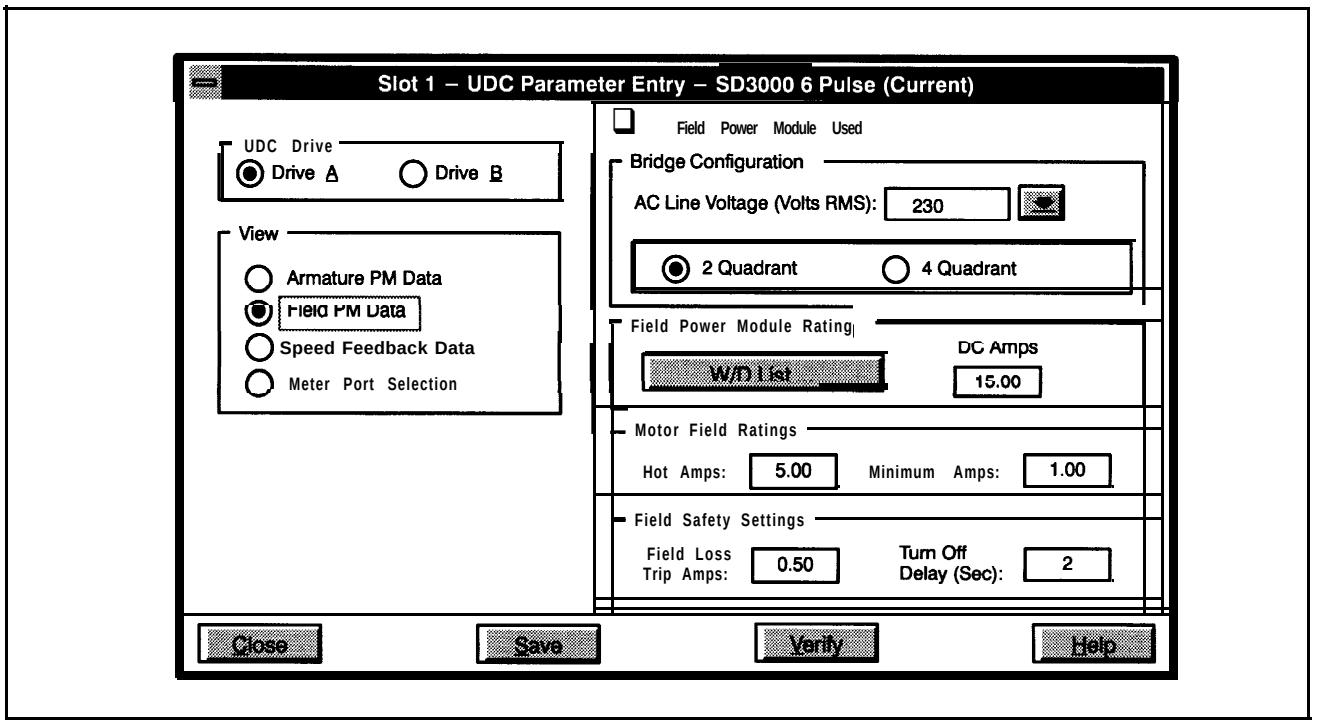

Figure 2.3 - l-Phase Field Power Module Parameter Entry Screen

- **Field Power Module Used**

  The default setting is that a l-Phase Field Power Module is used. If you are not using a l-Phase Field Power Module, de-select this option.

Bridge Confiauration Selections

- **A-C Line Voltage (Volts RMS)**

  Preset voltage values are 230V (default), 380V, or 460V. You can also enter a custom value (maximum 500V A-C). If an isolation transformer is used in the input power line to the Field Power Module, enter the voltage from the secondary of the transformer.

- **2 Quadrant or 4 Quadrant**

  A 2-quadrant, non-regenerative bridge is the default selection. Select the 4-quadrant bridge for regenerative operation.

Field Power Module Selections

You can enter Power Module ratings either manually or automatically through the W/D list.

- **W/D List**

  You can choose from a list of wiring diagrams (W/D list) and have the specified default l-Phase Field Power Module values entered in automatically. Appendix E lists these values.

- **D-C Amps**

  Enter the Field Power Module's D-C Amps output value which can range from 1 to 100 Amps. There is no default value. This value is found on the Power Module's nameplate and is used to scale field current feedback.

Motor Field Ratina Selections

- **Hot Amps**

  There is no default value. This is the current that will be generated by the field power supply when current reference is at maximum. This value is found on the motor's nameplate and can range from 0.01 to 99.99 Amps.

- **Minimum Amps**

  There is no default value. This is the minimum output current that the field power supply will produce when it is enabled. This value is found on the motor's nameplate and can range from 0.01 to 99.99 Amps.

Field Safety Setting Selections

- **Field Loss Trip Amps**

  There is no default value. This parameter is the point at which a field loss will be detected and can range from 0.01 to 99.99 Amps. Refer to register 202/1 202 for more information.

- **Turn Off Delay (Sec)**

  This is the amount of time the field will remain energized after a fault condition. The delay can range from 1 to 300 seconds.

2.2.3 Speed Feedback Data Screen

The Speed Feedback Data Screen allows you to enter specific information about the resolver or analog tachometer that is connected to the Resolver & Drive I/O module in the PMI rack and that is to be monitored for overspeed and tach loss conditions. See figures 2.4 to 2.6. Note that if you choose "No Speed Feedback" the overspeed and tach loss functions will be disabled.

WARNING

THE USER MUST ENSURE THAT THE CORRECT FEEDBACK TYPE HAS BEEN SELECTED DURING CONFIGURATION. IF "NO SPEED FEEDBACK" HAS BEEN SELECTED, THE USER MUST PROVIDE AN INDEPENDENT METHOD OF OF DETECTING OVERSPEED, OTHERWISE, A FEEDBACK LOSS WILL NOT BE DETECTED, RESULTING IN MOTOR OVERSPEED. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY INJURYAND IN DAMAGETO, OR DESTRUCTION OF, THE EQUIPMENT.

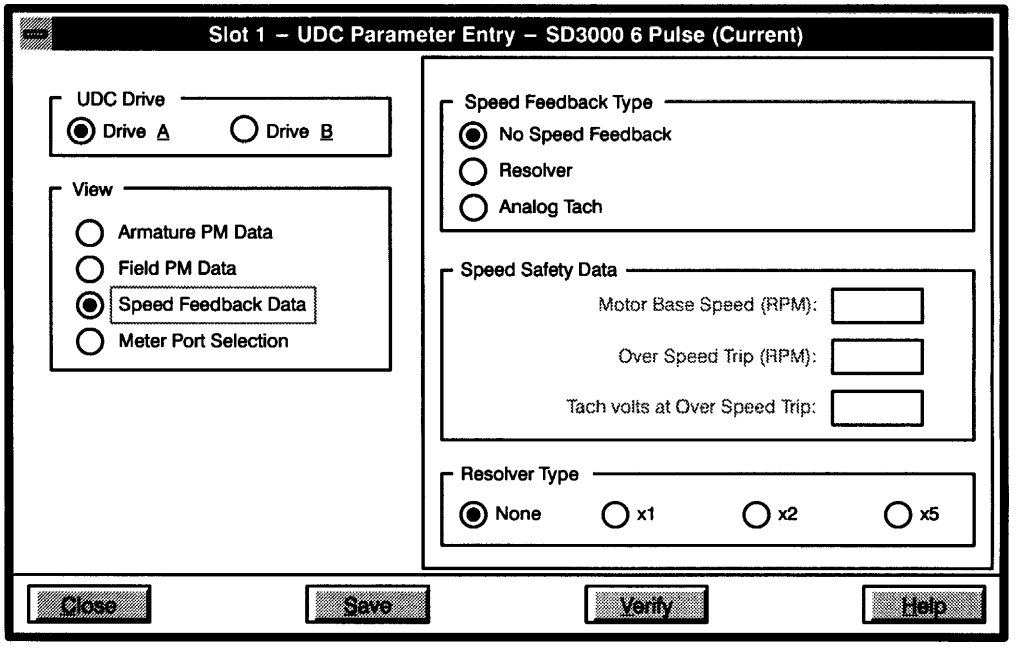

Figure 2.4 · Speed Feedback Parameter Entry Screen With No Feedback Device Selected

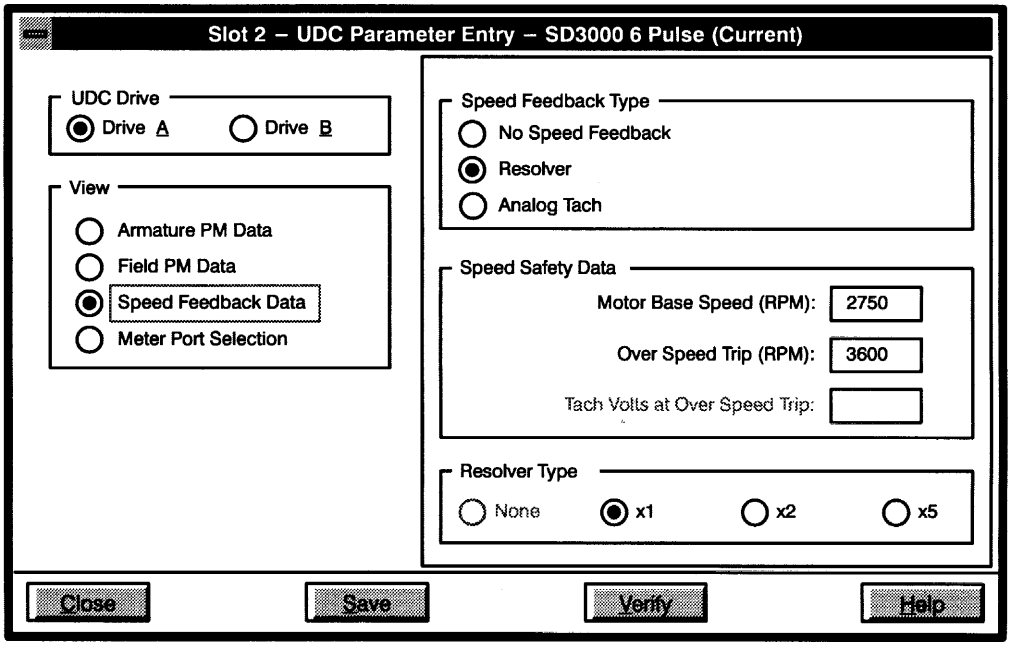

Figure 2.5 · Speed Feedback Parameter Entry Screen With A Resolver Selected

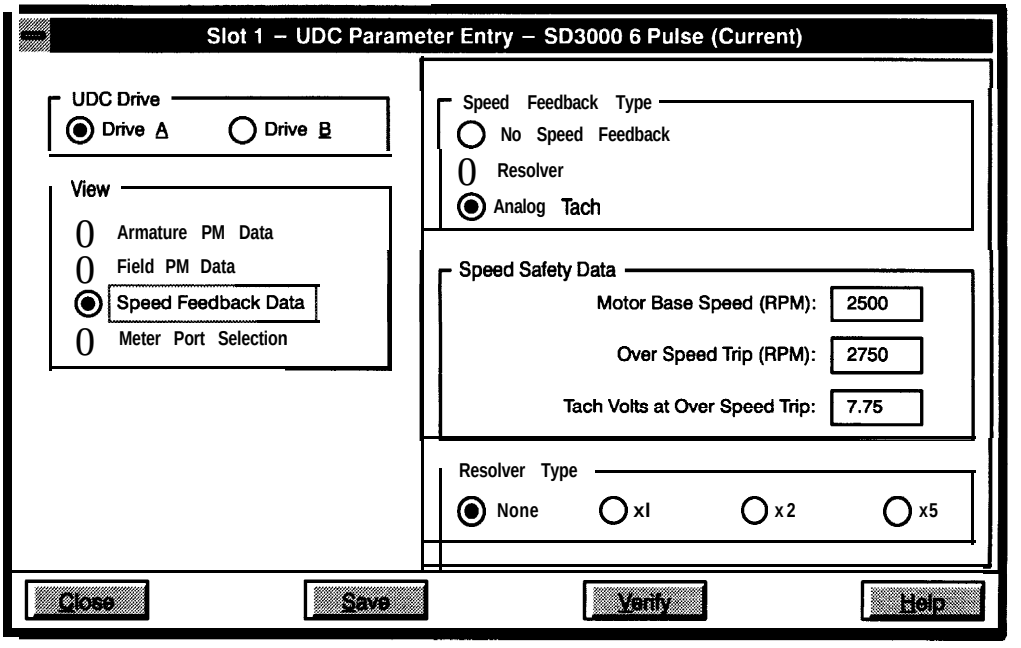

Figure 2.6 - Speed Feedback Parameter Entry Screen With An Analog Tachometer Selected

Speed Feedback Type Selections

WARNING

THE USER MUST ENSURE THAT THE CORRECT FEEDBACK TYPE HAS BEEN SELECTED DURING CONFIGURATION. IF "NO SPEED FEEDBACK" HAS BEEN SELECTED, THE USER MUST PROVIDE AN INDEPENDENT METHOD OF OF DETECTING OVERSPEED, OTHERWISE, A FEEDBACK LOSS WILL NOT BE DETECTED, RESULTING IN MOTOR OVERSPEED. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY INJURYAND IN DAMAGETO, OR DESTRUCTION OF, THE EQUIPMENT.

- **No Speed Feedback**

If you select No Speed Feedback, which is the default, you do not have to enter Motor Base Speed, Overspeed Trip Point, or Tach Volts at Over Speed Trip, however, you can select a resolver for positioning purposes.

Note that if you select No Speed Feedback, the PMI Processor will not perform the Tach Loss and Over Speed Diagnostics. You must provide an independent method of detecting motor overspeed. Note also that automatic field weakening will be disabled if you select No Speed Feedback. Refer to register 100/1 00, bit 11 for more information. Note that when a speed feedback device is used, overspeed detection is active during auto-tuning.

- **Resolver**

  If you select Resolver, you must enter the Resolver Type.

- **Analog Tach**

  If you select Analog Tach, you must enter the Tach Volts at Overspeed Trip Point.

Speed Safety Data Selections

- **Motor Base Speed (RPM)**

  Enter the motor's base speed. This value is the motor's top operating speed under full field and is the speed when field weakening begins. This value is found on the motor's nameplate and can range from 0 to 3600 RPM.

- **Over Speed Trip (RPM)**

  Enter the overspeed trip point. This is the limit to be used for overspeed detection and can range from 0 to 5000 RPM. When an analog tachometer is used, this value is used to scale the analog voltage into RPM. A typical value is 110% of gear-in speed.

- **Tach Volts at Over Speed Trip**

  Enter the tachometer voltage that will be present when the motor is turning at the overspeed trip point RPM. Enter the value as x.xx. The value can range from 5 to 9.75 volts.

Resolver Type Selections

- **None**

  Select this option if a resolver is not being used.

- **X1, X2, X5**

  If a resolver is being used, select which type it is: either Xl, X2, or X5.

2.2.4 Meter Port Selection Screen

The Meter Port Selection parameter screen allows you to enter specific information about what variables are to be output on the four PMI D/A channels (the four "meter" ports on the PMI Processor module). See figure **2.7.**

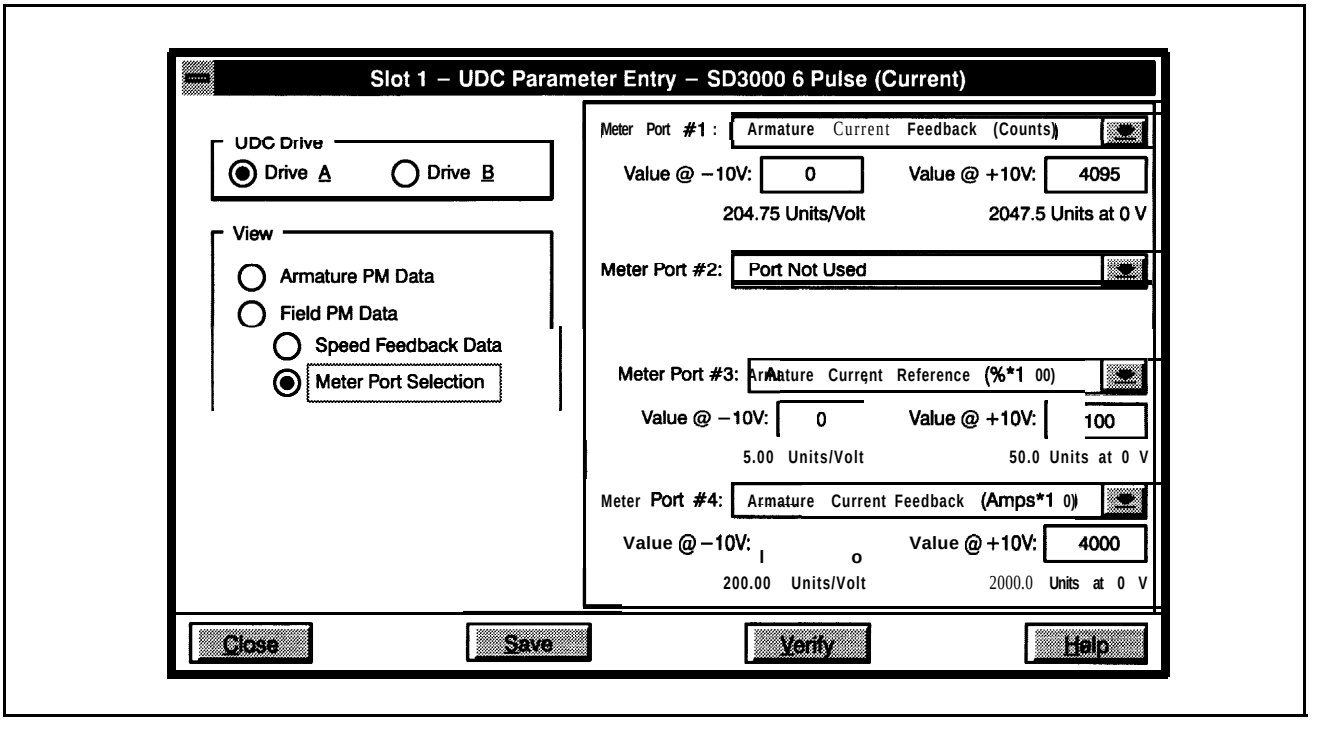

Figure 2.7 - Meter Port Selection Entry Screen

Figure 2.8 shows the values that can be displayed on the PMI meter ports. These values are described in detail in chapter 3. You must enter a Minimum Value and a Maximum Value for each selection except for those marked as Port Not Used. The Minimum Value is the value at which to output -1 0V The Maximum Value is the value at which to output + 1 OV. The system software then places the units per volt on the screen based on the Minimum/Maximum Values. The Minimum Value must not be less than -32768. The Maximum Value must not be greater than 32767. The Minimum Value must be less than the Maximum Value. Note that the PMI meter ports have 8-bit resolution and are updated on the average every 1 .O millisecond. Refer to the Power Module Interface Rack instruction manual for more information about the PMI meter ports. Refer to section 3.6.2.1 for information about resolution of data.

- Port Not Used
- Armature Current Reference (Counts) (4095 = current limit)
- Armature Current Feedback (Counts) (4095 = current limit)
- Armature Current Feedback (Amps x 10)
- Armature Voltage (Volts)
- Armature Maximum Firing Angle (μ Sec)
- Armature Firing Angle (μ Sec)
- Armature Minimum Firing Angle (μ Sec)
- Field Current Reference (Counts) (4095 = current limit)
- Field Current Feedback (Counts) (4095 = current limit)
- Field Current Feedback (Amps x 100)
- Field Voltage (Volts)
- Field Maximum Firing Angle (μ Sec)
- Field Firing Angle (μ Sec)
- Field Minimum Firing Angle (μ Sec)
- Counter EMF Voltage (Volts)
- A-C RMS Line Voltage (Volts)
- User Analog Input (Counts) (- 2048 to + 2047 = +1 -10V)*
- Speed Feedback (RPM)
- Application Data (Units) **
- Rail Port 0 Channel 0 (Counts)
- Rail Port 0 Channel 1 (Counts)
- Rail Port 0 Channel 2 (Counts)
- Rail Port 0 Channel 3 (Counts)
- Rail Port 1 Channel 0 (Counts)
- Rail Port 1 Channel 1 (Counts)
- Rail Port 1 Channel 2 (Counts)
- Rail Port 1 Channel 3 (Counts)

* Analog input from the Resolver and Drive I/O module. Refer to register 214/1 214 for more information.
** Refer to register 106/1 106 for more information.

Figure 2.8 · PMI Meter Port Parameters · SD3000

PMI meter ports can also be set up on-line using the “Setup UDC” selection from the Monitor menu as described in the AutoMax Programming Executive instruction manual. If the meter ports are set up during parameter entry, the information is loaded onto the UDC module in the AutoMax rack along with all other parameter data. The meter port setup can then be changed on-line under “Setup UDC”, but this method would not actually write over the PMI meter port setup that was loaded to the rack. Instead, the new setup would be valid only until there was a Stop All or a power cycle, in which case the original setup would be used to determine what data to send out of the meter ports.

2.3 Generating the Drive Parameter Files and Printing Drive Parameters

When you have completed all of the drive parameter screens, you can select “Close” to leave the Parameter Entry screens and return to the master rack diagram with the UDC module selected. Zoom out or select the Exit command from the Configure menu to return to the System Configurator.

You can generate the drive parameter files by using the steps that follow.

Step 1. From the System Configurator, access the Task Manager by selecting the Manage Tasks command from the Rack menu.

Step 2. Select the Generate Configuration command from the Commands menu.

Step 3. Check the Generate Drive Parameter Files option in the Generate Files dialog box, and then select OK.

A file containing the newly-entered drive parameters will be created. The file will be named PARAMxx.POB, where xx is the slot number of the UDC module. Note that the drive parameter files must be loaded to the rack before (or at the same time) the UDC application tasks are loaded to the rack. Refer to the AutoMax Programming Executive instruction manual for more detailed information.

You can print the drive parameters for a UDC module you specify by using the Print command from the Rack menu in the System Configurator. Refer to the AutoMax Programming Executive instruction manual for step-by-step instructions.