

**EMR-3000
Quick Start Guide****IB02602010E
Rev. A****Contents**

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The purpose of this Quick Start Guide is to guide the User through the essential steps required to commission an EMR-3000. This Quick Start Guide is not a replacement for the complete manual that can be found on the CD shipped with the EMR-3000. For wiring instructions and complete descriptions of the protective functions, please consult the complete instruction manual.

Quick Start Guide

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Section 1: Navigation

1.1 Basic Navigation

Navigation through the EMR-3000 menus and settings is easily accomplished using the soft keys on the EMR-3000 control panel and their corresponding functions that appear near the bottom of the LED display (see Figure 1).

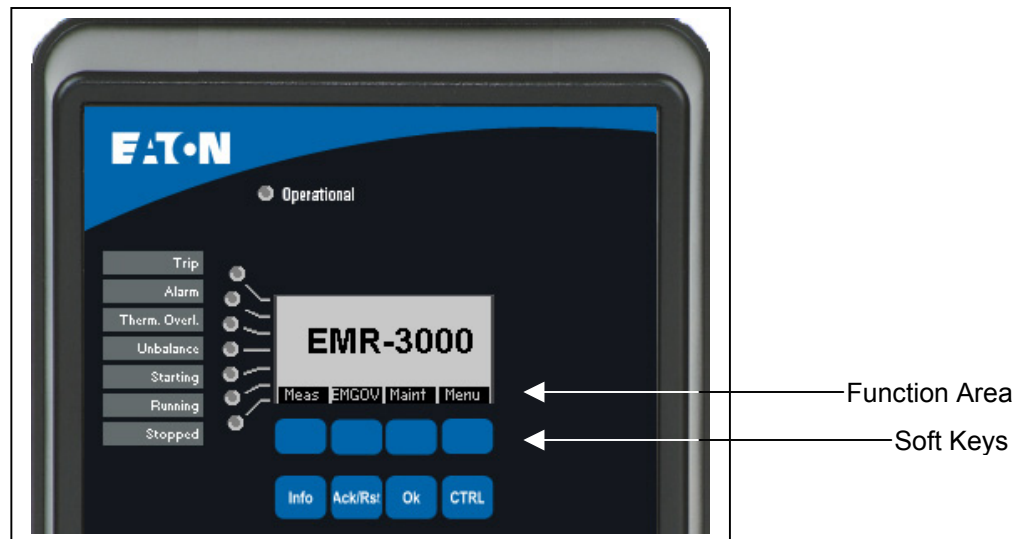


Figure 1. EMR-3000 Basic Navigation.

To select a function that appears in the function area, press the soft key that is directly under that function.

Once the Menu soft key is pressed, the EMR-3000 utilizes arrows and tools that appear in the function area of the display and correspond to the soft keys directly below (see Figure 2). Table 1 gives a summary of the arrows and tools that may appear in the function area and a brief description of each.

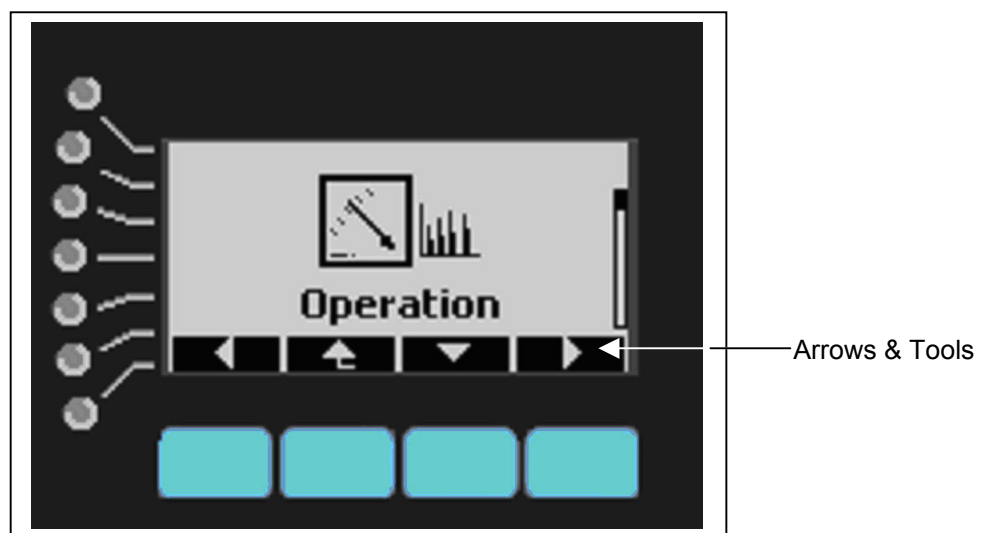


Figure 2. Arrows and Tools in the Function Area.

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Table 1. Arrows and Tools That Can Appear in the Function Area of the Display.

Arrow/Tool	Description
	The “Up” arrow scrolls up through the current menu.
	The “Down” arrow scrolls down through the current menu.
	The “Left” arrow takes the User one step back to the previous menu.
	The “Right” arrow takes the User to the next sub-menu.
	The “Top of List” arrow takes the User directly to the top of the current menu list.
	The “Bottom of List” arrow takes the User directly to the bottom of the current menu list.
	The “Increase” icon will increase the active digit by one.
	The “Decrease” icon will decrease the active digit by one.
	The “Left Movement” arrow will take the User one digit to the left in a value.
	The “Right Movement” arrow will take the User one digit to the right in a value.
	The “Wrench” icon will give the User access to the parameter setting mode for a function.
	The “Delete” icon allows the User to delete data or a value.

1.2 Password Entry

Before any parameter of the EMR-3000 can be changed, the User must enter a valid password using the soft keys on the control panel. A password must be a user-defined, four digit combination of the numbers 1, 2, 3, and 4 (examples: 1224 or 2341).

Note: A default password (1234) was set at the factory. If the password has been changed, contact your System Administrator for the new password.

To enter the password, simply press the soft keys corresponding with the numbers appearing in the function area near the bottom of the LED display. An asterisk (*) will appear in the display as each number is entered.

Press the “OK” soft key after the password has been entered.

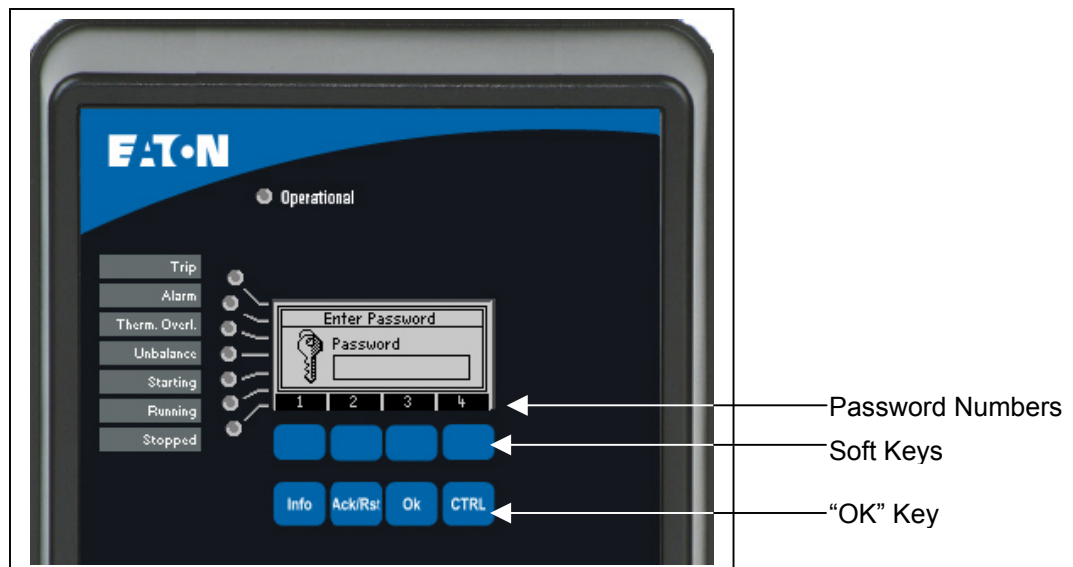


Figure 3. Entering the Password.

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Section 2: Saving Parameters

When the User makes changes to the parameters, the EMR-3000 DOES NOT automatically save the changes. Changes MUST BE explicitly saved by the User. There are two ways changes can be saved: saving individual changes or saving multiple changes.

2.1 Making and Saving Parameter Changes

1. Use the soft keys under the display to access the parameter to be changed.
2. Press the soft key under the wrench icon then enter the password.

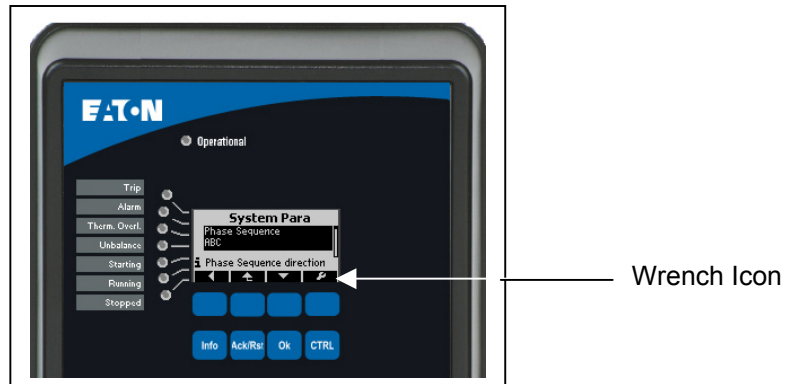


Figure 4. The Wrench Icon.

3. Use the soft keys to change the parameter then press the soft key under "OK". An asterisk appears in the display indicating a parameter has been changed.

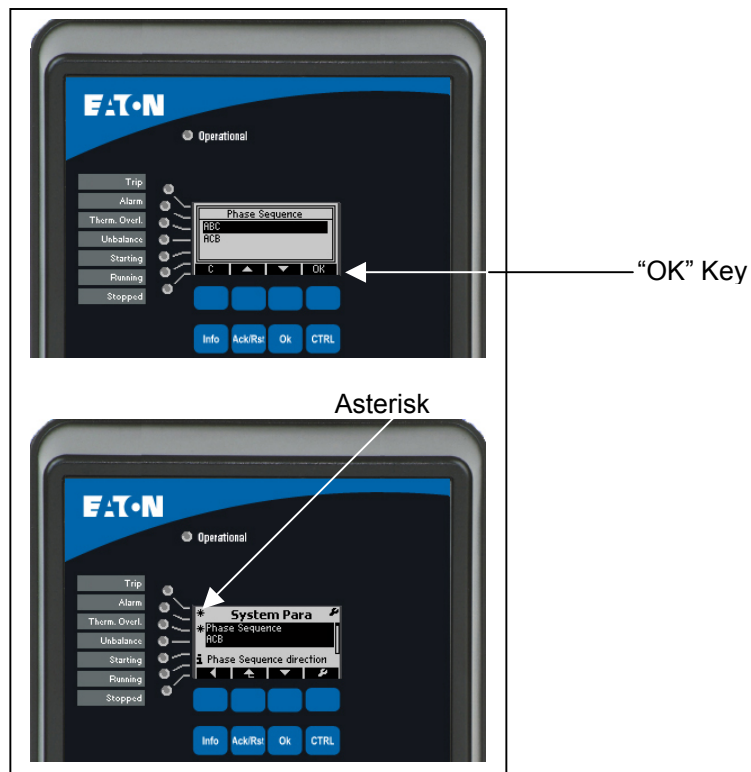


Figure 5. The "OK" Soft Key and the Asterisk Denoting a Parameter Change.

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Note: If the User wishes to change multiple parameters, please skip to Step 5. If the User wishes to save the individual parameter made at this time, complete Step 4 then end the process.

4. Press the “Ok” key. Then press the soft key under “Yes” to save the new value.

To Make and Save Multiple Parameter Changes

Note: The EMR-3000 utilizes a timeout function. If the timeout time has expired, the User may be asked to re-enter the password.

5. Use the soft keys to access and change the other parameters to be changed then press the soft key under “OK” after each change. An asterisk appears in the display indicating a parameter has been changed but not saved. Likewise, an asterisk next to a higher-level parameter menu implies that one of its constituent parameters has been modified but not saved.
6. Once all the parameters have been changed, press the “Ok” key. Then press the soft key under “Yes” to save the new values.

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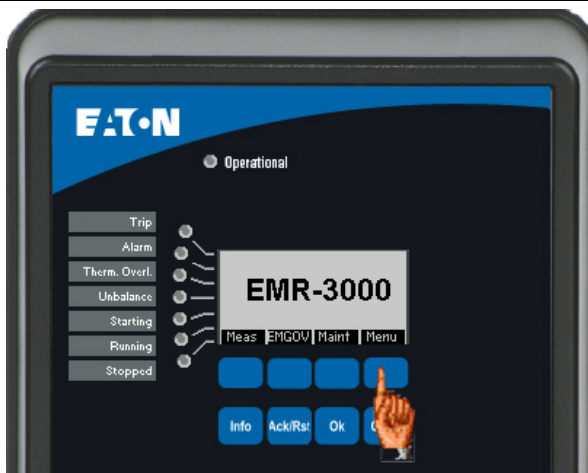
Section 3: Device Setup Using the Front Panel Soft Keys



When the EMR-3000 is first powered up, the default protective elements are enabled in each setting group.

To fully program the EMR-3000, the following information from the motor will be needed:

- Full Load Amps;
- Locked Rotor Current;
- Locked Rotor Time; and
- Service Factor.



Press the soft key under "Menu" to access the "Operation" screen.



From within the "Operation" screen, press the soft key under the down arrow to access the next parameter screen "System Para" (System Parameters).

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From the “System Para” screen, press the soft key under the right arrow to access the “System Para” menu.



To edit any parameter, press the soft key under the wrench icon. To edit parameters, the User must enter a valid password (see Section 1: Password Entry).



Enter the four-digit password as described in Section 1: Password Entry. After the password has been entered, press the “Ok” soft key.

Note: The EMR-3000 utilizes a timeout function. If the timeout time has expired, the User may be asked to re-enter the password.

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Select the System Parameter that you wish to change using the soft keys under the up and down arrows. The System Parameters that can be changed are:

- Phase Sequence;
- f;
- CT com;
- CT pri;
- CT sec;
- CT dir;
- XCT pri;
- XCT sec;
- XCT dir;
- Reversing;
- FLA;
- LRC;
- LRTC;
- UTC; and
- STPC

Note: Information about programming each System Parameter scrolls along the bottom of the LED screen for the Parameter selected.



Select the desired Phase Sequence parameter setting using the soft keys under the up and down arrows. Press the soft key under "Ok". Save the selected parameter (see Section 2 – Saving Parameters).

Note: If the time limit is exceeded, the User may need to re-enter the password.

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The User may change the frequency or, if the frequency is correct, use the soft keys under the up or down arrows to access additional system parameters.



Enter the desired CT con setting using the soft keys. When the appropriate setting is displayed, follow the same procedure to change the setting:

wrench ->
select/change value
-> soft key under "Ok".

Press the "Ok" key. Save the selected parameter (see Section 2 – Saving Parameters).

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To change the Ultimate Trip Current (UTC) setting, use the soft keys under “+” and “-” to raise or lower the UTC value.

Press the soft key under “Ok”. Save the selected parameter (see Section 2 – Saving Parameters).

Note: If the time limit is exceeded, the User may need to re-enter the password.

The User may follow the same procedures to access and set additional System Parameters.



When all the settings have been selected and saved, use the soft key under the left arrow to return to the “System Para” level.

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Select the soft key under the down arrow key to reach the “Protection Para” (Protection Parameter) screen.



To set the protection parameters, use the soft key under the right arrow to enter the “Protection Para” menu.

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The Protection Parameter that you wish to change may be selected using the soft keys under the up and down arrows. The Protection Parameters that can be changed are:

- Global Prot Para;
- PSet-Switch;
- Set 1;
- Set 2;
- Set 3; and
- Set 4.

Note: Information about programming each System Parameter scrolls along the bottom of the LED screen for the Parameter selected.



Select the Global Prot Para (Protection Parameters) using the soft key under the right.

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Use the soft key under the down arrow to select /highlight Start-Motor Start.

Use the soft key under the right arrow to enter the Start-Motor Start setting group.



Use the soft key under the down arrow to select /highlight Start Delay Timer.

Use the soft key under the right arrow to enter the Start Delay Timer setting group.

Note: If the time limit is exceeded, the User may need to re-enter the password.



The Start Delay Timer allows the User to program:

- t-Blo-GOC;
- t-Blo Underload;
- t-Blo IUnbalance;
- t-Blo JAM; and
- t-Blo Generic 1 through 5.

Note: Information about programming each Protection Parameter scrolls along the bottom of the LED screen for the Parameter selected.

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	Use the soft key under the down arrow to select /highlight f-Blo Underload. Use the soft key under the wrench icon to select t-Blo Underload. <i>Note: If the time limit is exceeded, the User may need to re-enter the password.</i>
	To change the t-Blo Underload setting, use the soft keys under "+" and "-" to raise or lower the UTC value. Press the soft key under "Ok". Save the selected parameter (see Section 2 – Saving Parameters). <i>Note: If the time limit is exceeded, the User may need to re-enter the password.</i>
	Return to the Protection Parameters menu by using the soft keys under the up and down arrows. Use the soft key under the down arrow to select /highlight Set 1. Use the soft key under the right arrow to enter the Set 1 setting group.

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Use the soft key under the down arrow to select /highlight 49-Thermal Model. Use the soft key under the right arrow to enter the 49-Thermal Model setting group.



Use the soft keys under the up or down arrows to select /highlight 49 Trip Function.

Use the soft key under the wrench icon to set the 49 Trip Function to "Active".

Note: If the time limit is exceeded, the User may need to re-enter the password.

Once the 49 Trip Function has been set to "Active", press the "OK" soft key. The User can now set the Thermal Trip threshold and delay following the same procedure.

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Use the soft keys under the up or down arrows to select /highlight 49 Alarm Function.

Use the soft key under the wrench icon to set the 49 Alarm Function to "Active".

Note: If the time limit is exceeded, the User may need to re-enter the password.

Once the 49 Alarm Function has been set to "Active", press the "OK" soft key. The User can now set the Alarm Trip threshold and delay following the same procedure.

The User may follow the same procedures to access and set additional Protection.

The process detailed for setting the t-Blo Underload [37] delay and Thermal Model threshold and alarm [49] can be used to program all the Protective Parameters of the EMR-3000 including:

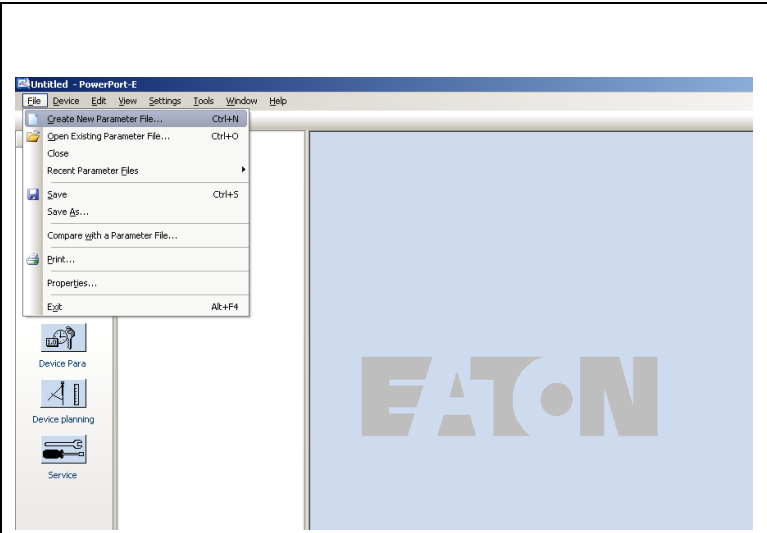
Delay	Alarm
• 37	37[2];
• 46	46[2];
• 50P	50P[2];
• 51P	51P[2];
• 50X	50X[2];
• 51X	51X[2];
• 50R	50R[2];
• 51R	51R[2];
• 50J	50J[2].

Programming the EMR-3000 is now complete if you have followed the standard control schemes contained in the EMR-3000 User Manual.

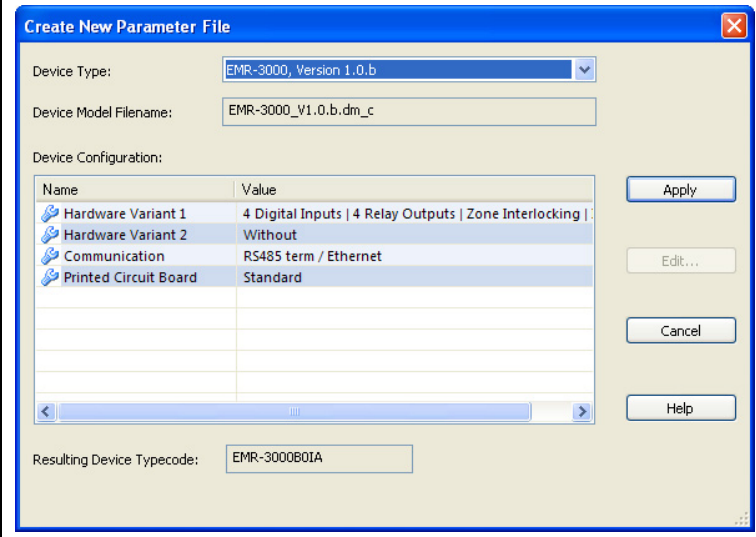
Congratulations! You have successfully setup the device using the front panel soft keys.

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Section 4: Device Setup Using PowerPort-E

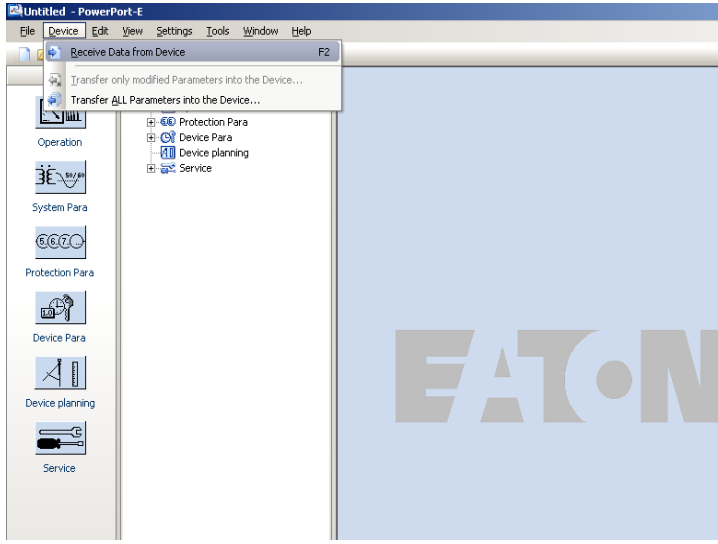
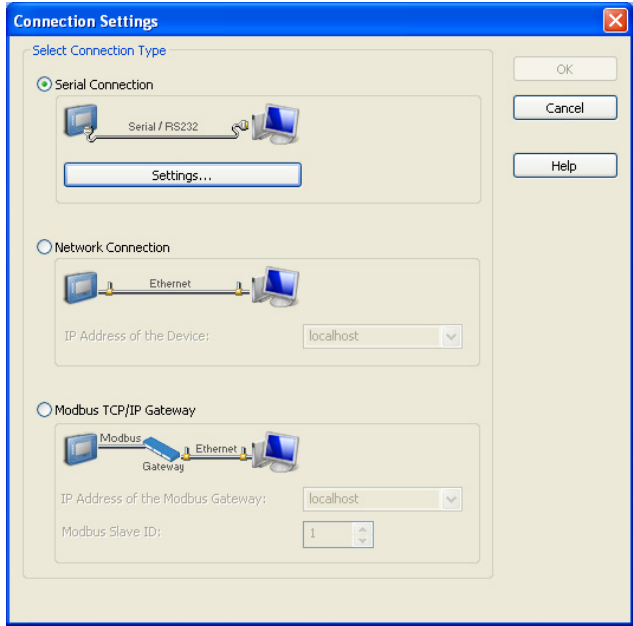
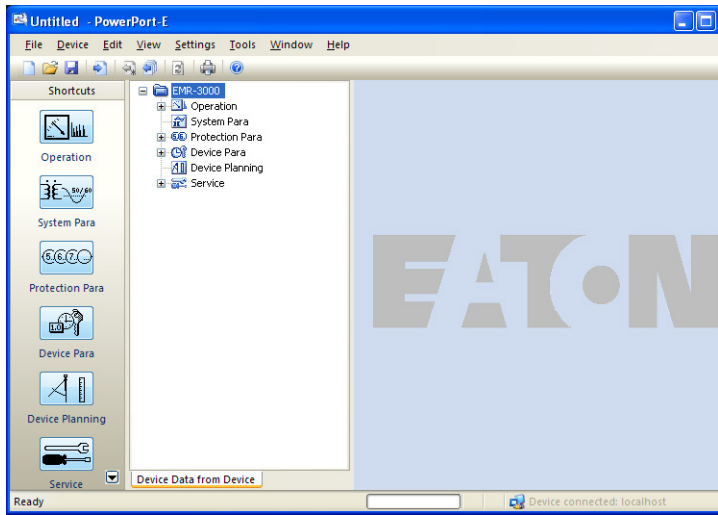


When programming the unit through PowerPort-E, start from an existing or default parameter file, or create a new parameter file. To create a new parameter file, select “Create New Parameter File” from the pull-down menu as shown on the left. This will lead to the dialog box shown below left.

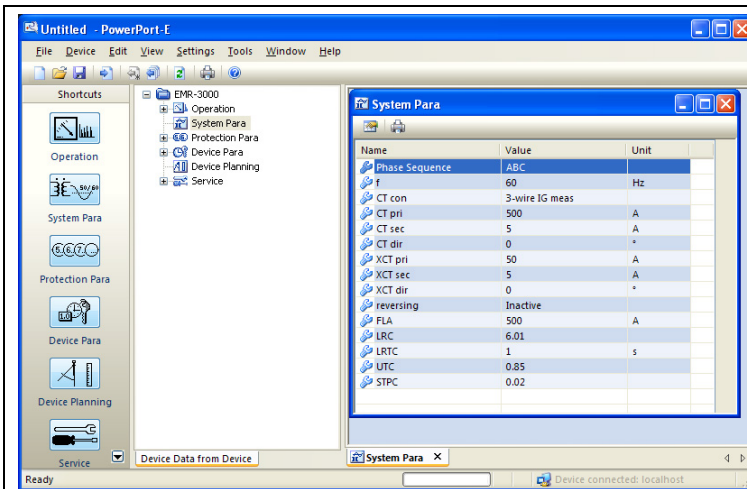


Select the device from the pull-down menu to load the default parameter file.

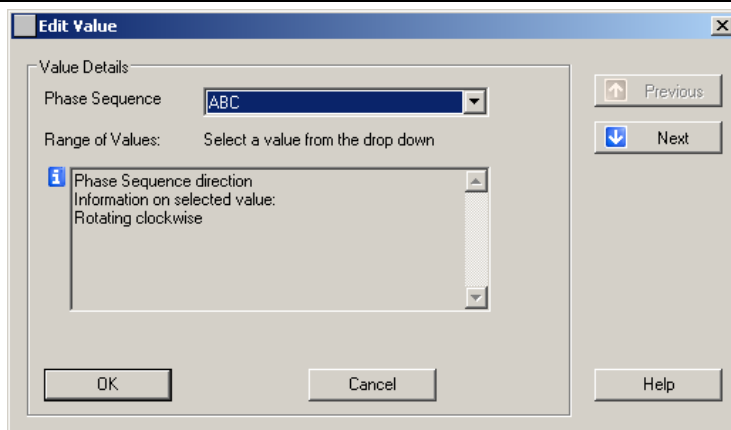
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	A parameter file can also be loaded from a connected device by selecting “Receive Data from Device” from the “Device” pull-down menu.
	Note that to load parameters from the device the User may need to set up the connection to the device through the “Settings -> Connection Settings” pull-down menu.
	The upper left portion of the PowerPort-E screen should now display: • Operation; • System Para; • Protection Para; • Device Para; • Device Planning; and • Service.

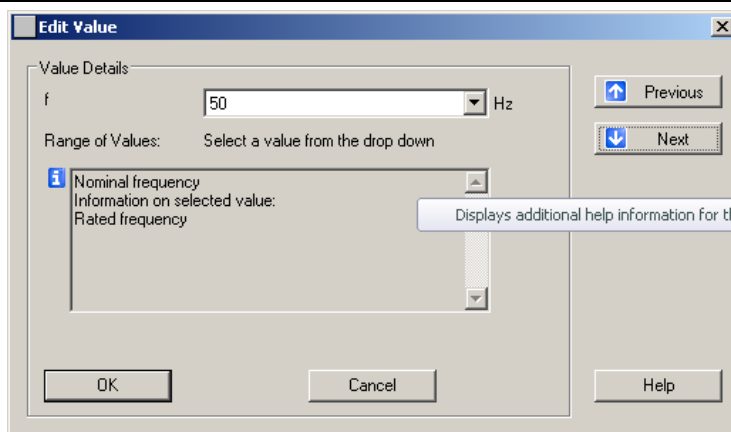
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First, set up the System Parameters by double clicking on the “System Para” as highlighted to the left. This will result in the dialog box shown. When the User double clicks on a parameter within the dialog box, an interface appears that will allow the parameters to be modified.

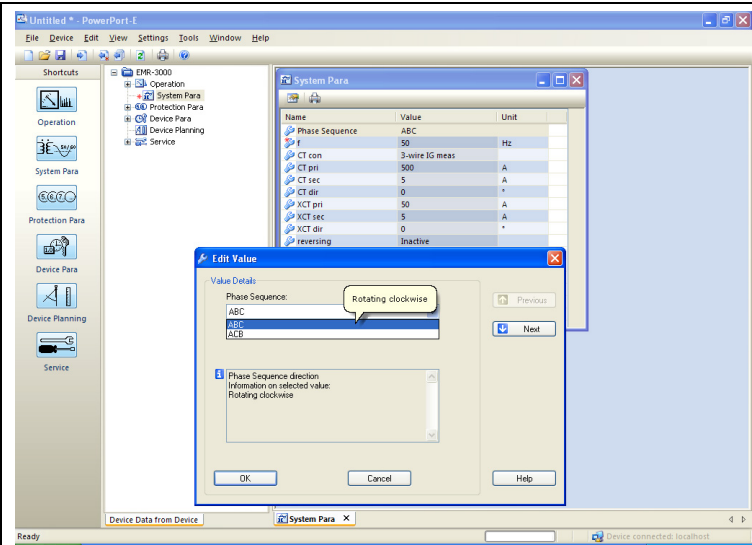


For example, to modify the Phase Sequence System Parameter, double click “Phase Sequence.” This will result in the dialog box displayed to the left. The pull-down menu will allow the User to change the Phase Sequence setting. Note that although the value has been changed, it has NOT yet been saved.

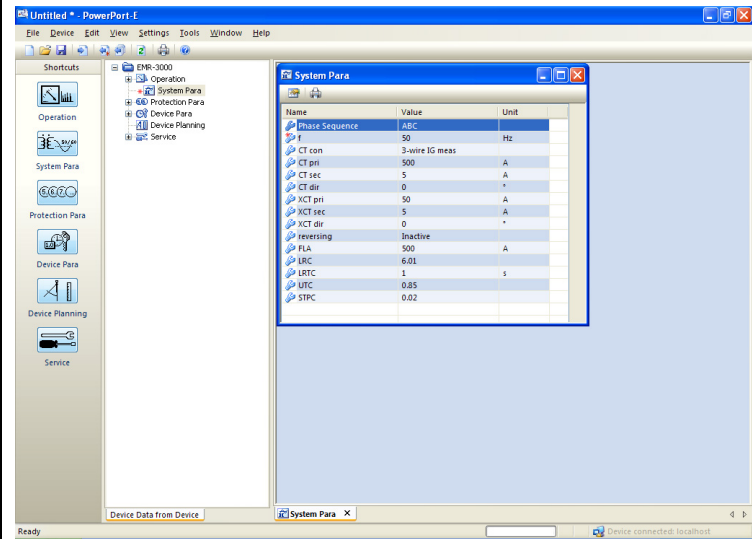


The “Previous” and “Next” buttons can be used to display the Previous and Next parameters within the System Parameter list.

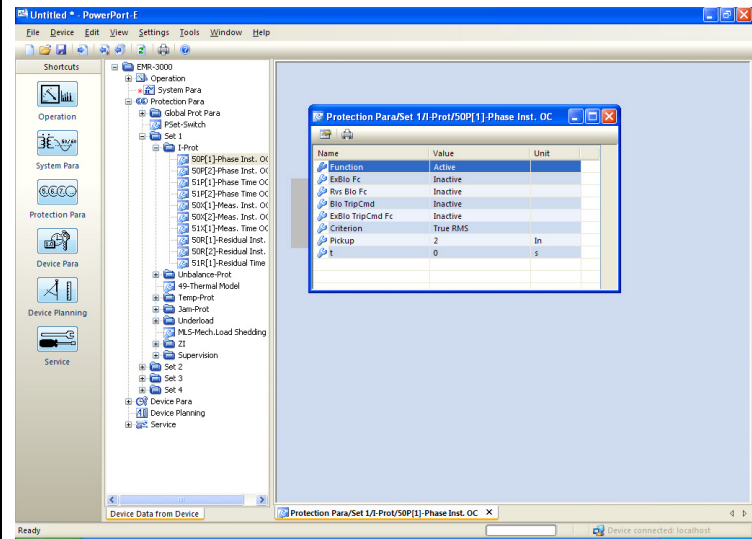
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When a value has been changed, an asterisk will appear next to the changed parameter and also next to the higher-level menu item.

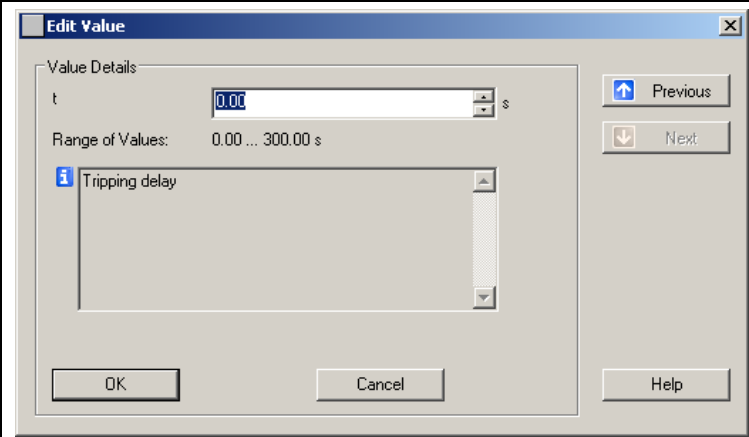


The asterisk next to “Phase Sequence” indicates this parameter has been changed. The asterisk next to “System Parameter” indicates a parameter contained within this set of parameters has been changed.

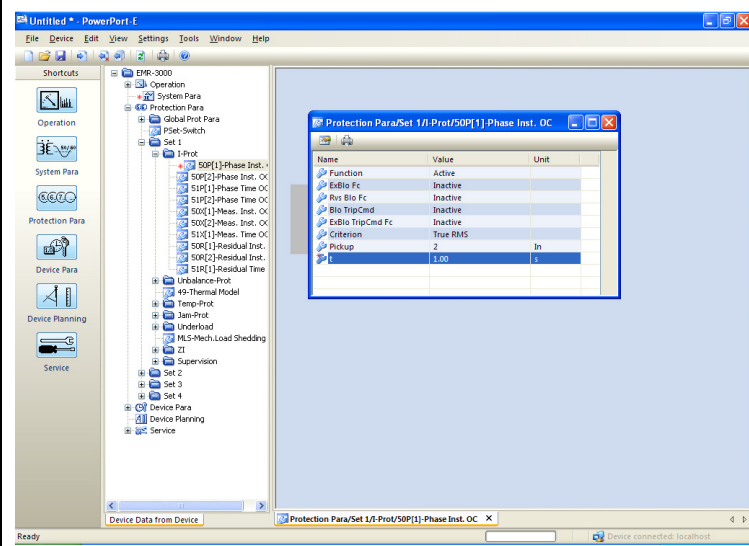


The same procedure should be used to modify the Current Protection (I-Prot) Parameters, Binary Outputs Parameters, or Device Planning. The dialog box to the left is displayed, for example, by double clicking “50P[1].” Note that four sets of I-Prot settings are available. Set 1 is usually used during normal operation. Other parameter sets can be used for abnormal operating conditions, such as to put the device into “Maintenance Mode.”

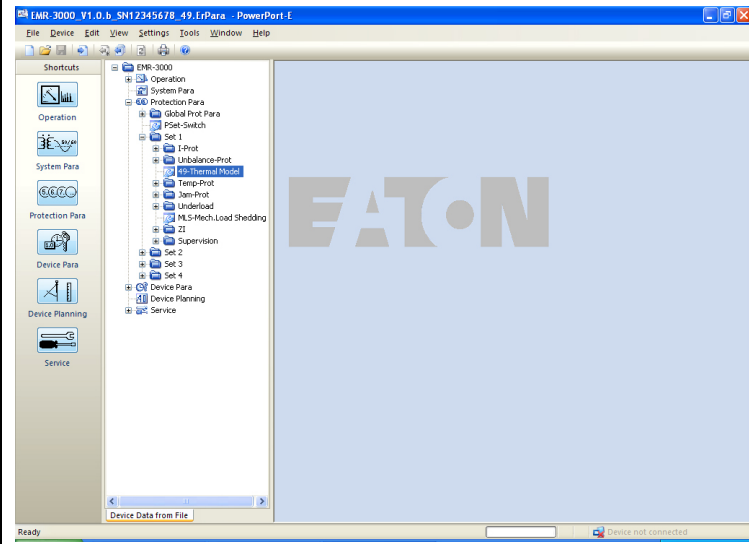
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From within the “50P[1]” dialog box, double click the parameter “t” to bring up the “Tripping delay” dialog box. Set the value using the up and down arrows next to the time setting.

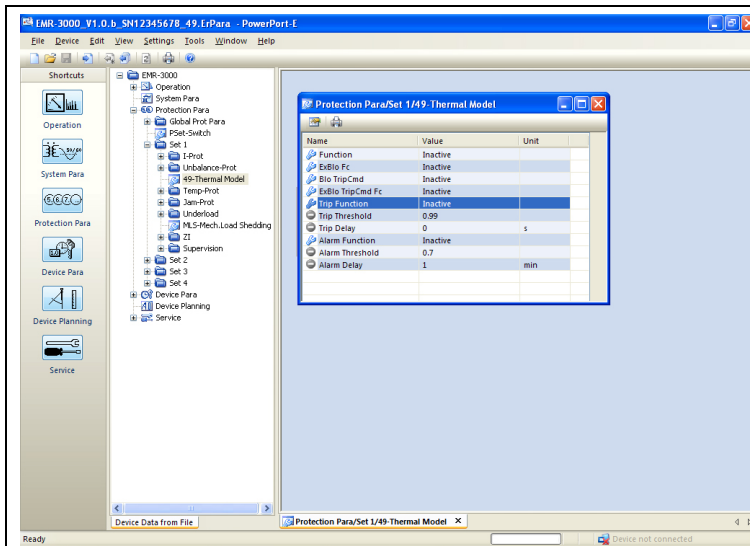


As shown in the screen shot to the left, the time was changed from 0 to 1 second and, therefore, an asterisk appears next to both the “Tripping delay” setting and the higher level “50P[1]” menu.

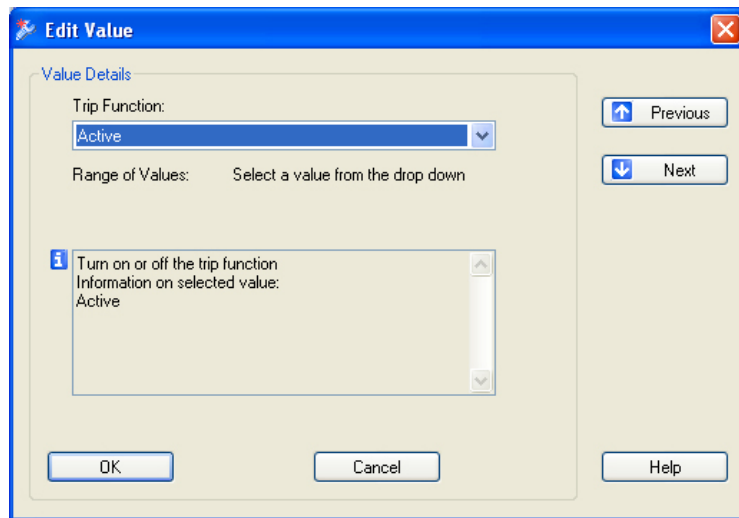


To activate and set the 49 Thermal Model Trip and Alarm Functions, from the Protection Parameters screen select “Set 1” then “49-Thermal Model”.

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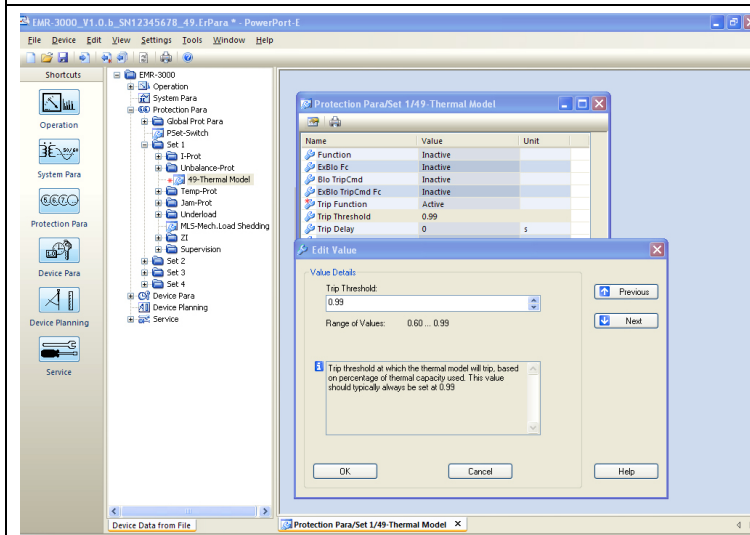
First, set the 49 Trip Function to “Active” by double clicking on the “Trip Function” as highlighted to the left.



This will result in the dialog box shown. Set the 49 Trip Function to “Active” then click on “OK” to activate the 49 Trip Function.

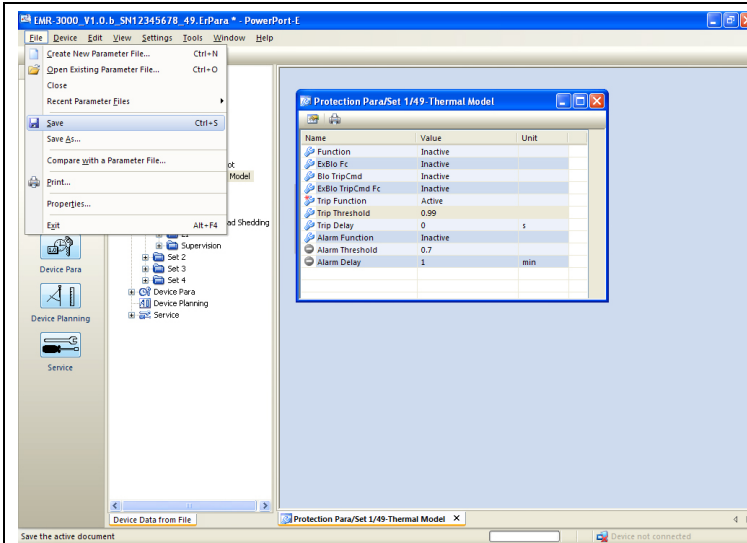
Using the same process, set the 49 Alarm Function to “Active”.

Note: The 49 Trip Function threshold and delay, and the 49 Alarm Function threshold and delay can not be set unless the 49 Trip and Alarm Functions are set to “Active”

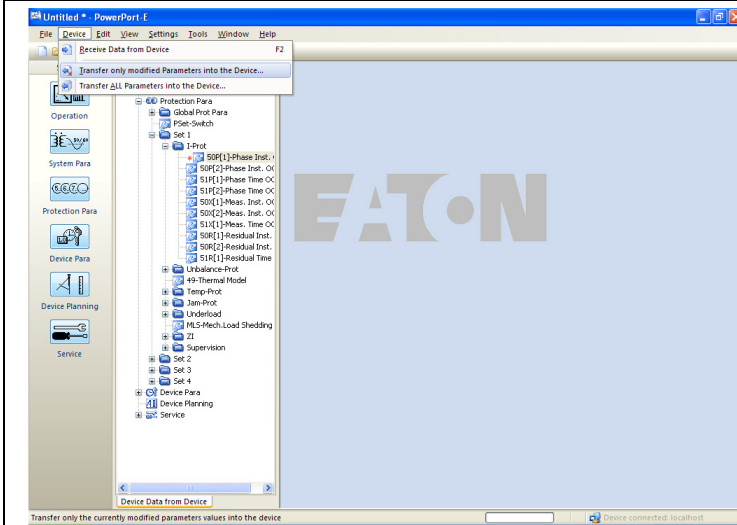


Once the 49 Trip and Alarm Functions have been set to “Active”, the User can set both the Trip Threshold and Delay and the Alarm Threshold and Delay using the same process.

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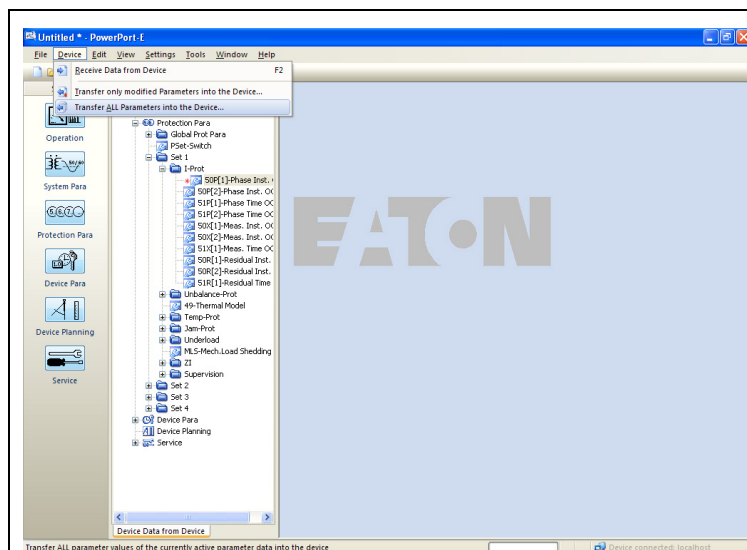


After the 49 Trip and Alarm Functions have been activated and the parameters have been set, “Save” the file. This will activate the new settings and remove the red asterisks identifying the settings that have been changed.

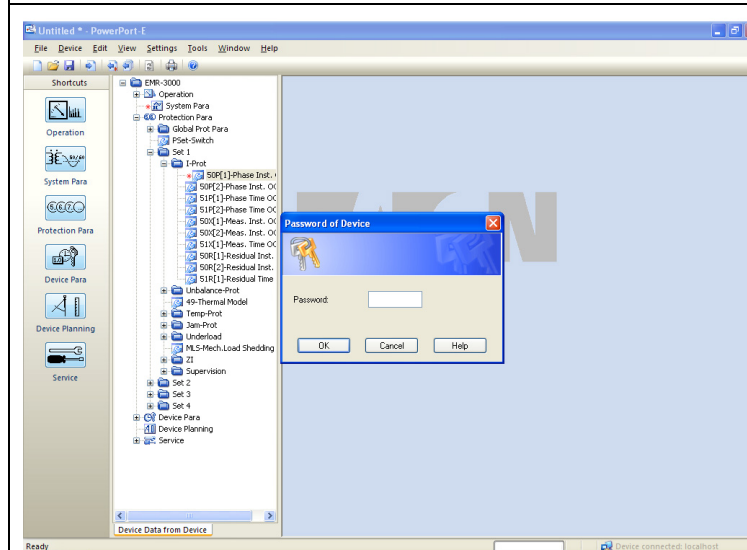


To transfer parameters to the device, make the appropriate selection from the “Device” pull-down menu. The User has the option of downloading all settings or only those modified. Note that if settings were not originally uploaded from the device and the User downloads all parameters, then the defaults for the unmodified parameters will overwrite the parameters currently stored in the device. Transferring only modified parameters is the safer option.

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The pull-down allows for transfer of all parameters (including unmodified parameters) to the device. If the User is working with parameters that were not originally uploaded from the device, caution should be exercised when using this option.



To download the parameters, the User must enter the password (default password is 1234). Note that until a local copy is saved to the User's computer, the asterisks showing modified parameters will continue to be displayed.

Congratulations! You have successfully setup the device using PowerPort E.

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