Operation

Software

SiteTech™ Software

Models:

ADC IId Controller
Decision-Maker® 550 Controller
Decision-Maker® 3000 Controller
Decision-Maker® 3500 Controller
Decision-Maker® 6000 Controller
Decision-Maker® MPAC ATS Controllers
RDC/DC Controller
RDC2/DC2 Controller
Remote Serial Annunciator II (RSA II)
Remote Serial Annunciator III (RSA III)
VSC Controller

ISO 9001 KOHLER POWER SYSTEMS NATIONALLY REGISTERED

KOHLER® Power Systems

TP-6701 1/15g

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Table of Contents, continued

IMPORTANT SAFETY INSTRUCTIONS. Electromechanical equipment, including generator sets, transfer switches, switchgear, and accessories, can cause bodily harm and pose life-threatening danger when improperly installed, operated, or maintained. To prevent accidents be aware of potential dangers and act safely. Read and follow all safety precautions and instructions. SAVE THESE INSTRUCTIONS.

This manual has several types of safety precautions and instructions: Danger, Warning, Caution, and Notice.

DANGER

Danger indicates the presence of a hazard that ***will cause severe personal injury, death***, or ***substantial property damage***.

WARNING

Warning indicates the presence of a hazard that ***can cause severe personal injury, death,*** or ***substantial property damage***.

CAUTION

Caution indicates the presence of a hazard that ***will*** or ***can cause minor personal injury*** or ***property damage***.

NOTICE

Notice communicates installation, operation, or maintenance information that is safety related but not hazard related.

Safety decals affixed to the equipment in prominent places alert the operator or service technician to potential hazards and explain how to act safely. The decals are shown throughout this publication to improve operator recognition. Replace missing or damaged decals.

Hazardous Voltage/ Moving Parts

WARNING

Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Notes

This manual provides instructions for SiteTech™ Software operation with the following controls and devices:

- ADC IId Controller (used on Model 6EKOD, 9–11EKOZD, 5EFKOD, 7–9EFKOZD generator sets)
- Decision-Maker® 550 Generator Set Controller
- Decision-Maker® 3000 Generator Set Controller
- Decision-Maker® 3500 Generator Set Controller
- Decision-Maker® 6000 Paralleling Controller (used with the Decision-Maker® Paralleling System [DPS])
- Decision-Maker® MPAC ATS Controllers
- RDC/DC Generator Set Controllers
- RDC2/DC2 Generator Set Controllers
- Remote Serial Annunciator II (RSA II)
- Remote Serial Annunciator III (RSA III)
- VSC Generator Set Controller (used on Model 6VSG generator sets)

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Using This Manual

Read and follow the Safety Precautions and Instructions at the beginning of this manual. Read Sections 1, 2, and 3 for system requirements, software installation, and software operation. Then refer to the section for your device for connection instructions, SiteTech screens, and lists of device parameters that are available in SiteTech.

Refer to the device Operation Manual for default settings and adjustment ranges.

Carefully follow all procedures and safety precautions to ensure proper equipment operation and to avoid bodily injury.

List of Related Literature

Device settings are covered in the individual device manuals. Figure 1 lists selected manuals for devices that can communicate with SiteTech. For additional information, refer to the service manual(s) for your unit.

Literature Type	Part Number
6EKOD, 9–11EKOZD, 5EFKOD, 7–9EFKOZD with ADC IId Controller Operation Manual	TP-6772
Decision-Maker® 550 Operation Manual	TP-6200
Decision-Maker® 3000 Operation Manual	TP-6694
40–150EOZCJ, 33–125EFOZCJ, 40–150EOZDJ, 33–125EFOZDJ with Decision-Maker® 3500 Controller Operation Manual	TP-6861
Industrial Decision-Maker® 3500 Controller Operation Manual	TP-6914
Decision-Maker® 6000 Operation Manual	TP-6750
Decision-Maker® MPAC ATS Operation Manuals	
MPAC 1500	TP-6883
MPAC 1200	TP-6866
MPAC 750	TP-6865
8/10/12RESV/L with RDC2/DC2 Controller Operation Manual	TP-6880
14/20RESA/RESAL with RDC2/DC2 Controller Operation Manual	TP-6804
38/48/60RCL with RDC2/DC2 Controller Operation Manual	TP-6810
24RCL with RDC2/DC2 Controller Operation Manual	TP-6905
RSA II Instructions	TT-1485
RSA III Instructions	TT-1625
6VSG with VSC Controller Operation Manual	TP-6843

Figure 1 Related Literature

Service Assistance

For professional advice on generator set power requirements and conscientious service, please contact your nearest Kohler distributor or dealer.

- Consult the Yellow Pages under the heading Generators—Electric.
- Visit the Kohler Power Systems website at KOHLERPower.com.
- Look at the labels and stickers on your Kohler product or review the appropriate literature or documents included with the product.
- Call toll free in the US and Canada 1-800-544-2444.
- Outside the US and Canada, call the nearest regional office.

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Kohler Power Systems Netherlands B.V.
Kristallaan 1
4761 ZC Zevenbergen
The Netherlands
Phone: (31) 168 331630
Fax: (31) 168 331631

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Phone: (86) 10 6518 7950
(86) 10 6518 7951
(86) 10 6518 7952
Fax: (86) 10 6518 7955

East China Regional Office, Shanghai
Phone: (86) 21 6288 0500
Fax: (86) 21 6288 0550

India, Bangladesh, Sri Lanka
India Regional Office
Bangalore, India
Phone: (91) 80 3366208
(91) 80 3366231
Fax: (91) 80 3315972

Japan, Korea
North Asia Regional Office
Tokyo, Japan
Phone: (813) 3440-4515
Fax: (813) 3440-2727

Latin America
Latin America Regional Office
Lakeland, Florida, USA
Phone: (863) 619-7568
Fax: (863) 701-7131

1.1 SiteTech Software

Kohler® SiteTech™ is a personal computer (PC)-based software application program designed for use by Kohler-authorized distributors and dealers to configure software settings on Kohler controllers and other devices such as the RSA II. SiteTech also has the ability to install firmware updates to devices.

The SiteTech program runs in Microsoft Windows® and provides the following functions for the Kohler® controllers and devices covered in this manual.

- Setup or adjustment of configurable device settings and calibrations
- Installation of firmware updates
- Recording system events and faults

SiteTech software is a setup program designed for controller configuration. It is not intended to be used for continuous generator set monitoring.

A customer-supplied USB cable or serial cable (for the Decision-Maker® 550 and Decision-Maker® 6000 controller) connects the computer to the controller or other device.

1.2 System Requirements

The following are the system requirements for the personal computer running SiteTech software.

- Personal computer (PC) with Microsoft® Windows® 7, Windows® 8, Windows Vista® or Windows® XP
- Minimum PC screen size 1024 x 768
- Microsoft® .NET Framework 4.0

1.3 Device Connection Hardware

Most controllers and devices use a USB connection to the computer. The Decision-Maker® 550 and Decision-Maker® 6000 controllers use a serial connection.

Microsoft Windows® and Windows Vista® are registered trademarks of Microsoft Corporation.

1.3.1 USB Connection

Use a USB cable to connect the personal computer to the device. See Figure 1-1 or Figure 1-2. The USB cable must have a male USB type-A connector on the PC side.

For ADC IId controllers, the USB cable must have a male standard type-B connector on the controller side. See Figure 1-1.

For all other devices, the USB cable must have a male mini-B connector on the device side. See Figure 1-2.

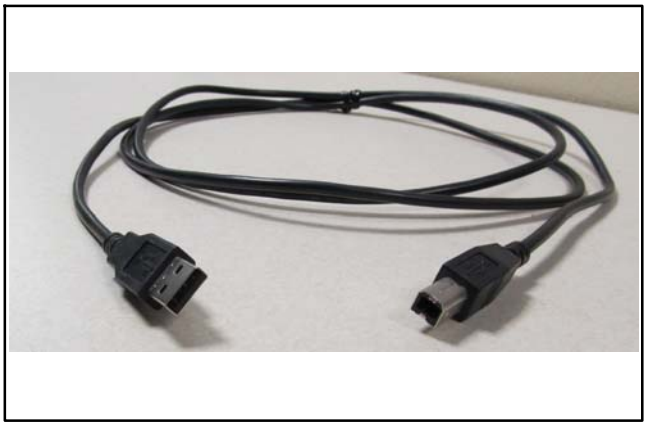
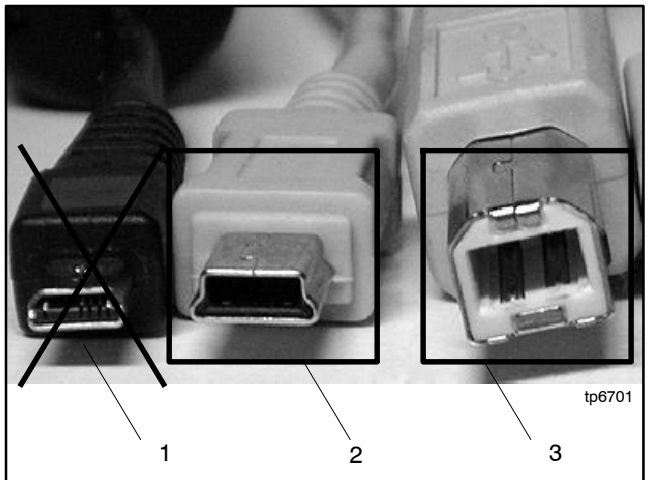


Figure 1-1 USB Cable (for units with an ADC IId Controller)

Figure 1-2 USB Cable (for all other devices)

Note: Be sure that the cable has a mini-B connector (or a standard type-B connector for ADC IId controllers only). Micro-B connectors will not connect to the device. See Figure 1-3.



1. Do not use a micro-B connector.
2. **For all devices except ADC IId controllers:** Mini-B connector required for device connection.
3. **For ADC IId controllers only:** Standard-B connector required for controller connection.

Figure 1-3 Device Connectors

See the section in this manual specific to your device or refer to the operation manual for the device to identify the USB connector location, if necessary. The USB port is labeled with the symbol shown in Figure 1-4.

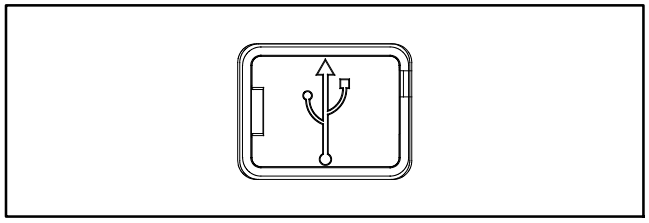


Figure 1-4 USB Port Cover with Symbol (typical)

1.3.2 Modbus Serial Connection

The Decision-Maker® 550 and Decision-Maker® 6000 controllers use a serial Modbus connection to the computer.

When making an RS-485 serial connection, the following cables and converter(s) are required:

- Shielded RS-485 communication cable. Belden #9841 computer cable for RS-485 communications is recommended.
- RS-232/RS-485 converter GM41143-KP1
- DB-9 serial cable or other cable as required to connect to the PC. (See Note.)

Note: Some computers are not equipped with serial ports. A serial port adapter may be required. The Quatech RS-232 1-port PCMCIA adapter and the Gigaware USB-A to serial cable are examples.

1.3.3 Modbus Ethernet Connection

The Decision-Maker® 550 and Decision-Maker® 6000 controllers can connect to the computer over an Ethernet or Internet connection.

When making an Ethernet or Internet connection, a GM41065 Modbus/Ethernet Converter and the appropriate cables and connectors are required. See the connection diagrams in Sections 5.2 and 8.2, and TT-1405, supplied with the Modbus/Ethernet Converter.

2.1 Software Installation

2.1.1 Download the Software

Kohler® Distributors: Download SiteTech™ software from TechTools.

Kohler dealers who subscribe to the Kohler dealer portal can download SiteTech™ software from the Kohler dealer portal. Use your username and password to log on to mykprc.kohlerco.com and navigate to the software downloads page.

1. Navigate to the Software Downloads page.
2. Find SiteTech™ software and click on the link for program download. Select the file for a 32-bit or 64-bit operating system as required for your PC.

   Note: TechTools has a link to the Microsoft website with information on how to determine whether you have a 32-bit or 64-bit operating system.

3. You will have the option to run the SiteTech installation program from the website, or to save the installer file to your PC for installation later. Select Run or Save.

   If you select Save, you will be prompted to save to the directory shown or select a different file location. Change the file location if necessary and then click Save.

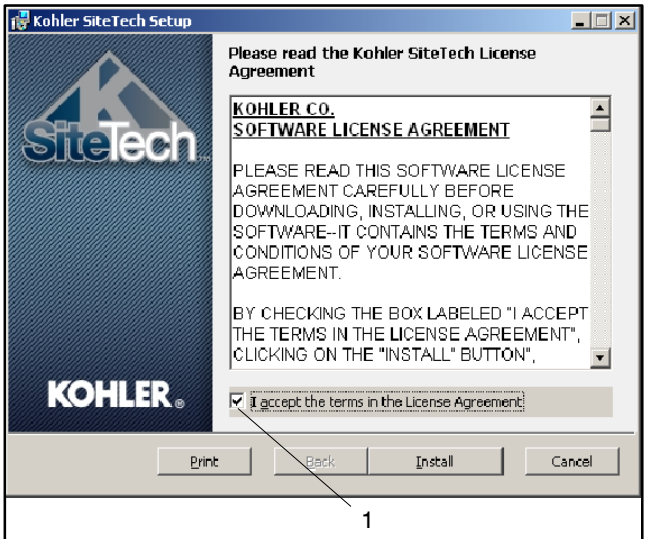
2.1.2 Install SiteTech

If you chose to save the installer file from the website, click on the KohlerSiteTech32BitSetup.msi or KohlerSiteTech64BitSetup.msi file to start the installation.

1. The software license agreement screen will open. Read the agreement, and then click the checkbox to accept the terms. See Figure 2-1.
2. Click Install to proceed. Wait as the program installs on your PC.

   Note: If Microsoft® .NET Framework 4.0 is not installed on the PC, you will be prompted to download it from the Microsoft website. See Section 2.1.3.

3. Click Finish.



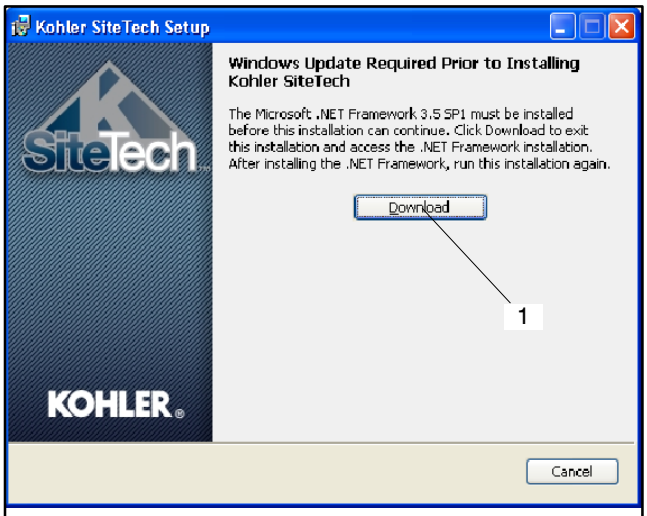
1. Accept license agreement checkbox

Figure 2-1 License Agreement Screen

2.1.3 Download and Install the .NET Framework

The SiteTech™ program requires Microsoft® .NET Framework 4.0. If the required version of the .NET Framework is not installed on the PC, the SiteTech™ installation program will prompt you to download it. See Figure 2-2.

- Click on the Download button to link to the Microsoft® website. (Internet access is required.)
- Follow the instructions on the screen to download and install .NET Framework 4.0.
- After installing the .NET Framework, it may be necessary to restart your computer. Then start the SiteTech installation procedure again. See Section 2.1.2.



1. Click the Download button to link to the Microsoft website for .NET Framework.

Figure 2-2 Download .NET Framework

2.2 Starting the Program

Start SiteTech™ from the Microsoft Windows Start menu as described below.

1. Click on the Start button in the lower left corner of the screen.
2. Click All Programs. Find and click on Kohler SiteTech.

2.3 Software Expiration

To ensure that Kohler®-authorized distributors and dealers always have the latest version of SiteTech™ software, the software has a built-in expiration date. Before the software expires, go to TechTools or the Kohler® dealer portal and download the latest version of the software as described in Section 2.1.1. Follow the instructions in Section 1.3.1 to install the software, if necessary.

SiteTech is typically licensed for a six-month period, expiring on March 30 or September 30. To check the expiration date, click on the File tab and read the expiration date under About SiteTech. See Figure 2-3.

Figure 2-3 Software Expiration

3.1 Software Operation

This section gives general instructions for using Kohler® SiteTech™ software. For a list of parameters available for a specific device, refer to the section of this manual for that device. See the Table of Contents. For default settings and other device-specific information, refer to the instructions provided with the controller or RSA II. See List of Related Literature for document part numbers.

SiteTech screens for different devices may vary from the examples shown in this section. Refer to the sections for specific devices later in this manual for more information.

3.2 Device Connection

3.2.1 Device Connection Options

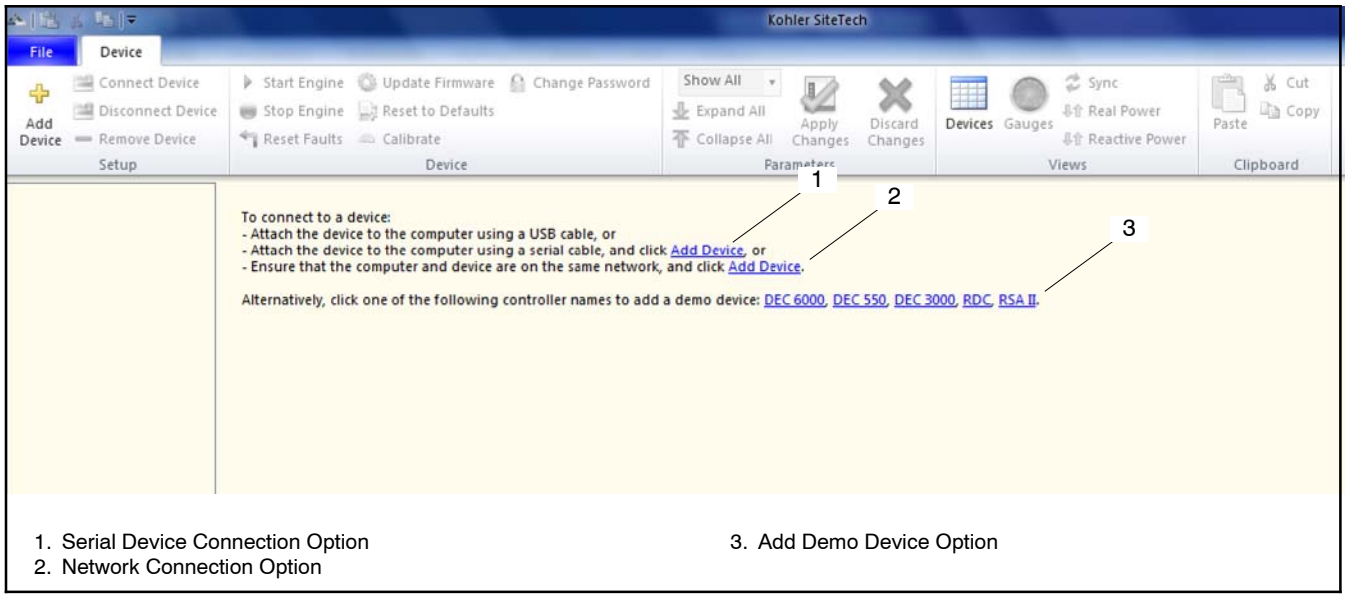
If no device is connected to the PC when SiteTech™ is started, SiteTech™ provides the following device connection options. See Figure 3-1.

- USB device connection
- Modbus serial device connection (Decision-Maker® 550 and 6000 controllers only)
- Modbus Ethernet network device connection (Decision-Maker® 550 and 6000 controllers only)
- Demo device (a mock device with no physical connection to an actual device)

3.2.2 Demo Device

The opening screen includes an option to select a demo device. Click on one of the available devices to open the Parameters screen for that device type. See Figure 3-1.

The demo program allows the user to view all applicable screens for the selected type of device, and to change settings. Because an actual device is not connected, default settings are not displayed, and the program may accept settings that are outside the range of adjustment for the device. Sample events may be shown in the Event History.



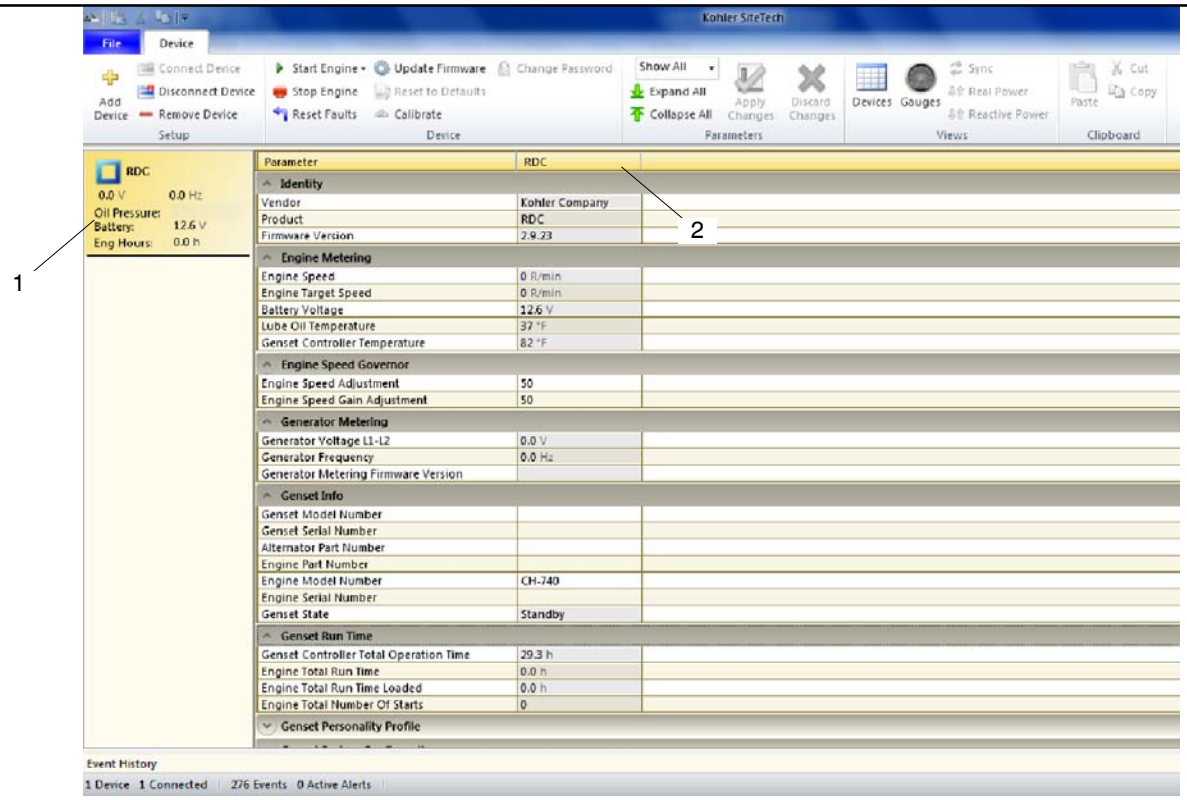
1. Serial Device Connection Option
2. Network Connection Option
3. Add Demo Device Option

Figure 3-1 SiteTech Opening Screen with No Devices Connected

3.2.3 Connected Device

Connected device refers to a controller or RSA II that is communicating with the computer and recognized by SiteTech™. For hardware connections, see Section 1.3 and the section for your device.

When SiteTech™ software recognizes the type of device connected to the PC, the Device View screen opens. The device name is displayed at the top of the parameter setting column and in the navigation panel on the side of the screen. See Figure 3-2.



1. Navigation panel showing connected RDC controller
2. Name of connected device shown at the top of the parameter setting column..

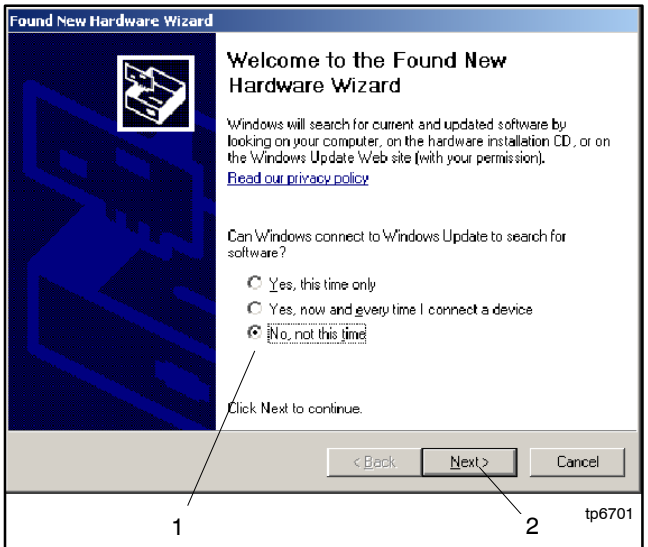
Figure 3-2 Connected Device Display (typical)

3.2.4 USB Connection

The first time a device is connected to the computer through a USB port, the Found New Hardware screens may appear.

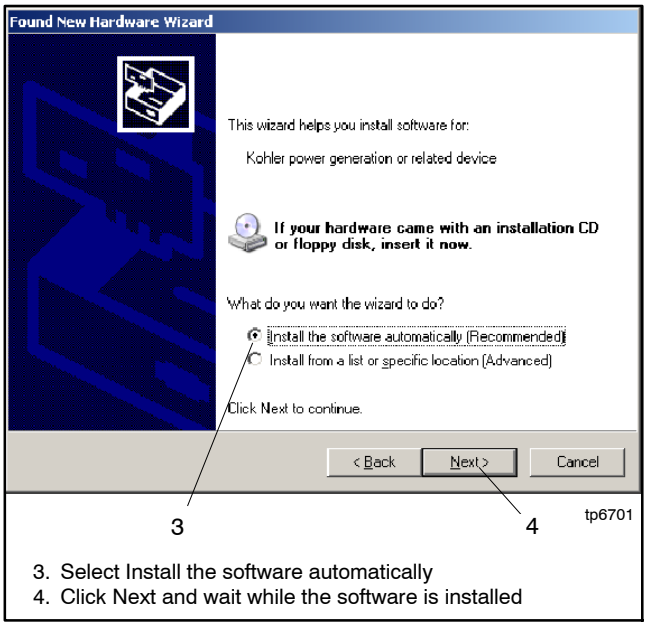
1. See Figure 3-3. The first window asks about searching for software. Select *No, not at this time*.
2. Click Next.
3. See Figure 3-4. The second window asks about installing the software. There is no installation CD to insert. Select *Install the software automatically*.
4. Click Next and wait while the software is installed.
5. See Figure 3-5. Click Finish.

When SiteTech software recognizes the type of device connected to the PC, the Device View screen opens and the device name is displayed at the top of the parameter setting column. See Figure 3-2.



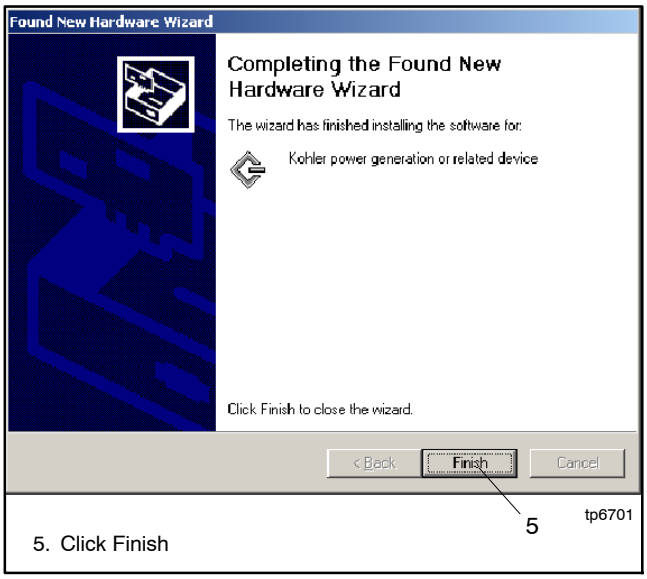
1. Select No, not at this time
2. Click Next

Figure 3-3 New Hardware Wizard Window 1



3. Select Install the software automatically
4. Click Next and wait while the software is installed

Figure 3-4 New Hardware Wizard Window 2



5. Click Finish

Figure 3-5 Last New Hardware Wizard Window

3.3 Access Codes

For SiteTech™ versions 2.6 or higher, an access code is required for connection to devices other than small residential generator sets, marine generator sets, or the RSA II. Different codes are used for the following types of generator sets:

- Lennox models (RGEN12–30)
- Large residential gas models (40-125ERES*)
- Industrial 25-150 kW gas models (including RZG* and REZG*)
- All devices – this code allows connection to all devices, including those listed above and all other Kohler generator sets and devices that use SiteTech

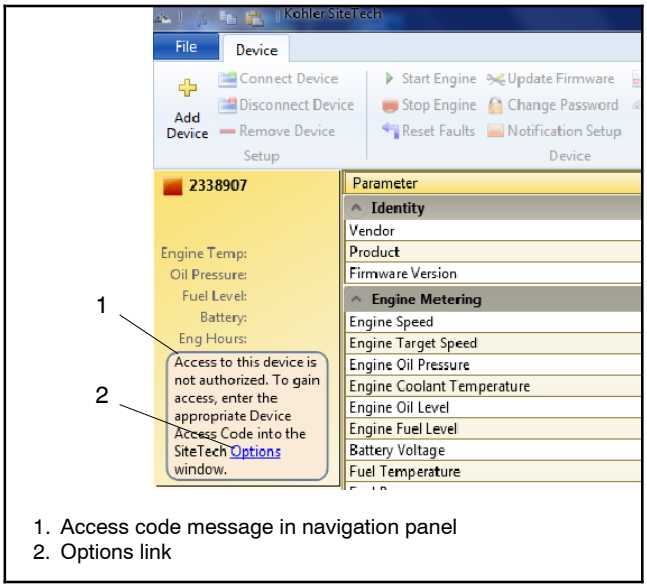
No code is required for small residential models (up to 30 kW), marine models, or the RSA II.

Distributors can obtain the current access codes from TechTools. Dealers, please contact your distributor or Sales Manager if a code is needed. The access codes will change approximately once a year.

Attempting to connect to a device without entering the required access code causes a message to appear in the navigation panel. See Figure 3-6.

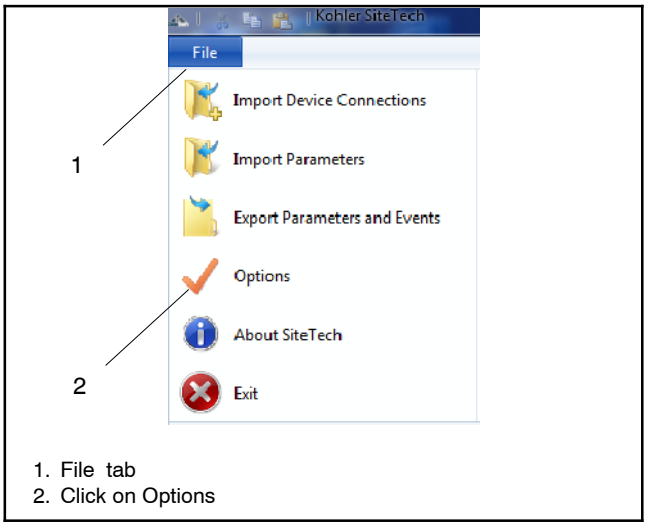
To enter the code, click on the Options link in the access code message, or click on the file tab in SiteTech and select Options. See Figure 3-6 or Figure 3-7. The SiteTech Options dialog box shown in Figure 3-8 appears. Type the access code or codes into the box labeled Device access codes. Use spaces between multiple codes. Then click OK.

* Additional letters at the end of the model designation (for example, 100REZG**D**) do not affect the application of the code.



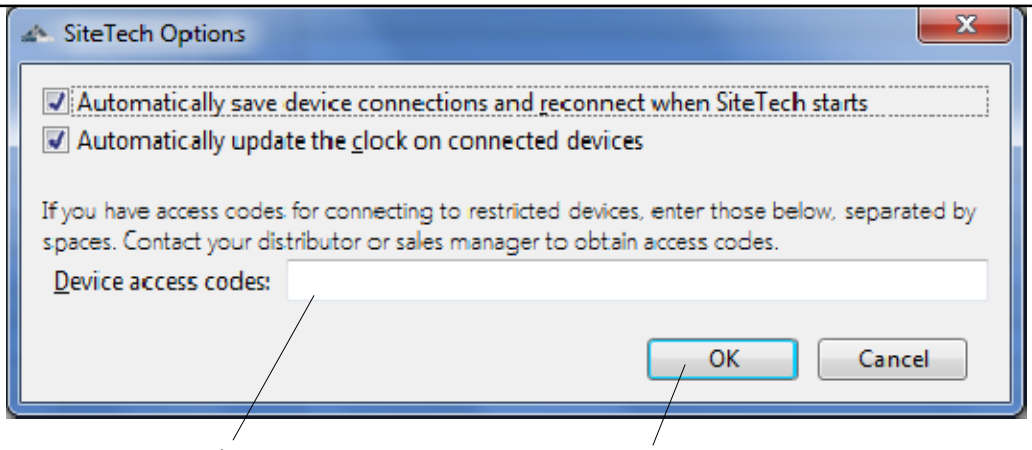
1. Access code message in navigation panel
2. Options link

Figure 3-6 Access Code Message



1. File tab
2. Click on Options

Figure 3-7 File Tab with Options



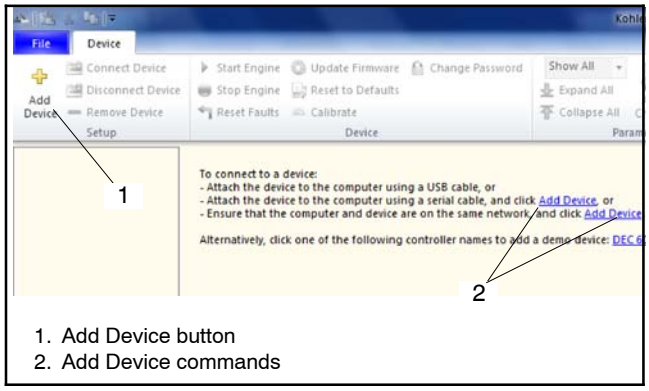
1. Type access code(s)
2. Click OK

Figure 3-8 Options Dialog Box

3.4 Add Device

To connect to a device that is not immediately recognized by SiteTech, click on the Add Device (+) button in the ribbon or one of the Add Device commands in the opening screen. See Figure 3-9.

Clicking on the Add Device button or command opens the Add Device Window. See Figure 3-10. The Add Device window allows selection of several different types of connections, explained in the following sections.



1. Add Device button
2. Add Device commands

Figure 3-9 SiteTech Opening Screen (no device connected)

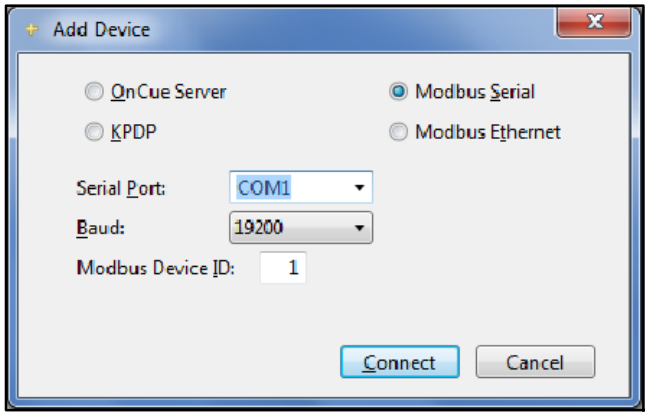


Figure 3-10 Add Device Window, Modbus Serial Connection Selected

3.4.1 Modbus Serial Connection

The Decision-Maker® 550 and Decision-Maker® 6000 controllers can use a Modbus serial connection to the computer. Other controllers covered in this document do not use serial connections. A Modbus serial connection is used when connecting the computer to the controller using an RS-485 to serial converter. See Section 1.3.2. Also see Section 5.2.1 for the Decision-Maker® 550 controller or Section 8.2.1 for the Decision-Maker® 6000 controller.

Click on the Add Device button or one of the Add Device commands in the opening screen to connect to a device using a Modbus serial connection. See Figure 3-9.

When a serial connection is used, select the Modbus Serial option. Select the serial port designation and the baud rate in drop-down boxes. Refer to the instructions for your personal computer to determine the correct serial port designation. Set the baud rate to match the baud rate setting on the controller.

If multiple devices are connected in a daisy-chain configuration and connected to the PC with a serial connection, each device must have a unique Modbus ID. For example, see Figure 8-1.

3.4.2 Modbus Ethernet Connection

The Decision-Maker® 550 and Decision-Maker® 6000 controllers can use a Modbus ethernet connection to the computer. A Modbus ethernet connection is used when connecting the computer to the controller using a Modbus/Ethernet converter. See Section 1.3.3. See Section 5.2.2 for the Decision-Maker® 550 controller or Section 8.2.2 for the Decision-Maker® 6000 controller.

Click on the Add Device button or one of the Add Device commands in the opening screen to connect to a device using an Internet or Ethernet connection. See Figure 3-9.

When an Internet or Ethernet connection is used, select the Modbus Ethernet option in the Add Device window. See Figure 3-11.

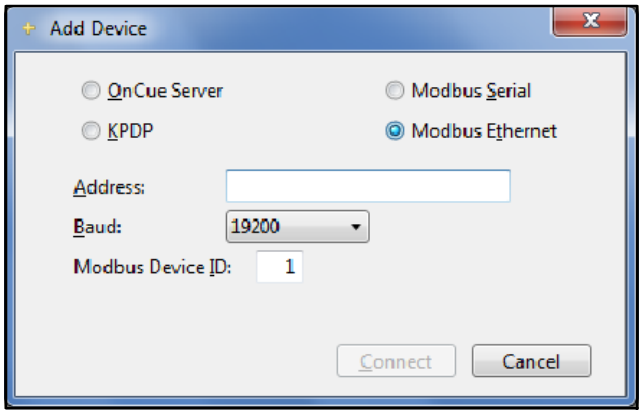


Figure 3-11 Add Device Window, Modbus Ethernet Connection Selected

Enter the IP address assigned to the Modbus/Ethernet converter in the address box. See TT-1405, Converter Installation Instructions, for more information. Set the baud rate to match the baud rate setting on the controller.

Assign the controller a Modbus Device ID number (or Modbus address) through the controller's user interface panel, and enter the same ID number into SiteTech. When more than one device is connected to a Modbus network, each device must have a unique Modbus Device ID. Click on the Connect button to make the connection. See Figure 3-11.

3.4.3 OnCue Server

Note: The OnCue® Server selection in the Add Device window is for future applications.

The OnCue Server selection in the Add Device window will permit connection to RDC/DC, RDC2/DC2, and VSC controllers using the OnCue™ server. The customer must purchase and activate Kohler® OnCue® for residential/commercial generator sets. See the instructions provided with the OnCue kit for further details.

SiteTech™ users will be able to view controller data using an OnCue-like Gauges screen for some controllers.

3.4.4 KPDP

The KPDP selection in the Add Device window is for future applications. Do not select KPDP.

3.4.5 Connect to Multiple Devices

To add another device, click the Add Device button located on the left side of the top ribbon (see Figure 3-9) and follow the instructions in the previous sections for each connected device.

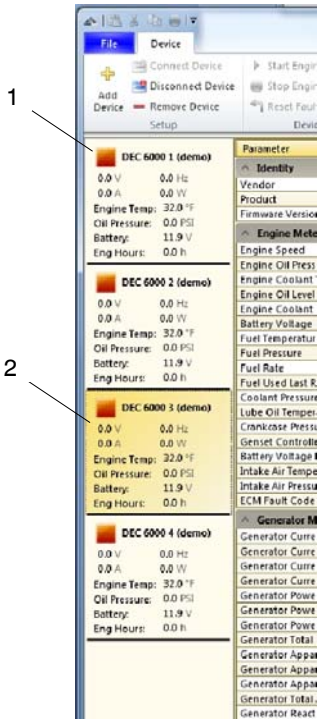
The Add Device command is not required for a device connected directly to the PC using a USB cable. SiteTech will recognize and add the device when it is connected to the PC.

3.5 Navigation Panel

Most SiteTech screens include a navigation panel on the left side. See Figure 3-12. Each connected device is represented in the Navigation Panel by a pane that describes the device with its name and provides a dashboard of important current data including connection state, voltage, frequency, oil pressure, battery voltage, and engine hours.

Click on the desired device in the navigation panel to select it. The selected device will be highlighted in the navigation panel. See Figure 3-12. The Parameters window will continue to display current data for all connected devices. However, device-specific actions, such as connect device, disconnect device, remove device, start engine, stop engine, reset faults, update firmware, device calibration, and reset to device defaults will be performed upon the currently selected device.

The navigation pane includes a status indicator for each generator set. The status indicator changes color and shape to provide a clear visual indication of the status of each generator set. See Figure 3-13.



1. Device status indicator
2. Selected device is highlighted

Figure 3-12 Navigation Panel

Indicator		Status	Description
	Open blue square	Standby	Generator set is ready to start.
	Green triangle	Cranking or running	Engine is starting or running.
	Red X	Fault shutdown	The controller has detected a fault condition and the generator set has shut down.
	Red circle	Off	Controller is OFF.
	Solid orange square	Disconnected	No network connection.

Figure 3-13 Status Indicator Symbols and Colors

3.6 Connect/Disconnect/Remove Device

SiteTech provides buttons for disconnecting, reconnecting, or removing the selected device. Select the device to be disconnected, reconnected, or removed in SiteTech's Navigation Panel on the left side of the display window and verify that the desired device is highlighted.

Disconnect Device

Select a device in the navigation panel and then click on the Disconnect Device button to disconnect a connected device. SiteTech will no longer communicate with the device, but the screen will continue to display the last information collected.

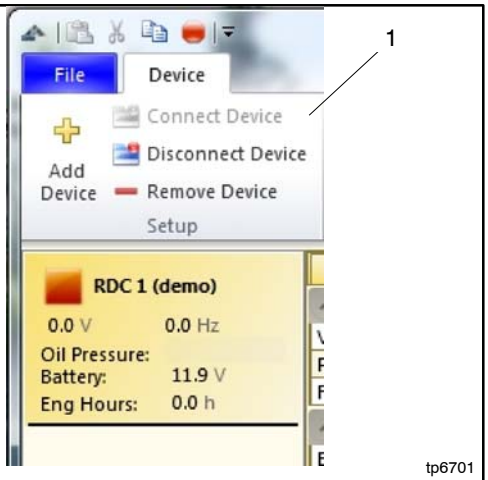
Connect Device

SiteTech may be able to reconnect with disconnected devices by using the Connect Device button. Select the device in the navigation pane and then click Connect Device.

Remove Device

Use the Remove Device button only to disconnect devices that are communicating via serial or Ethernet connections. To remove a device that is no longer of interest, highlight the device in the navigation pane and then click the Remove Device button. The device will no longer be displayed on the screen.

To remove a device that is communicating via USB connection, simply disconnect (unplug) the USB cable from the device.



1. Connect, disconnect, and remove device commands

Figure 3-14 Connect, Disconnect, and Remove Device Commands

3.7 The Ribbon

The SiteTech screens include a ribbon across the top. The ribbon contains commands and options including:

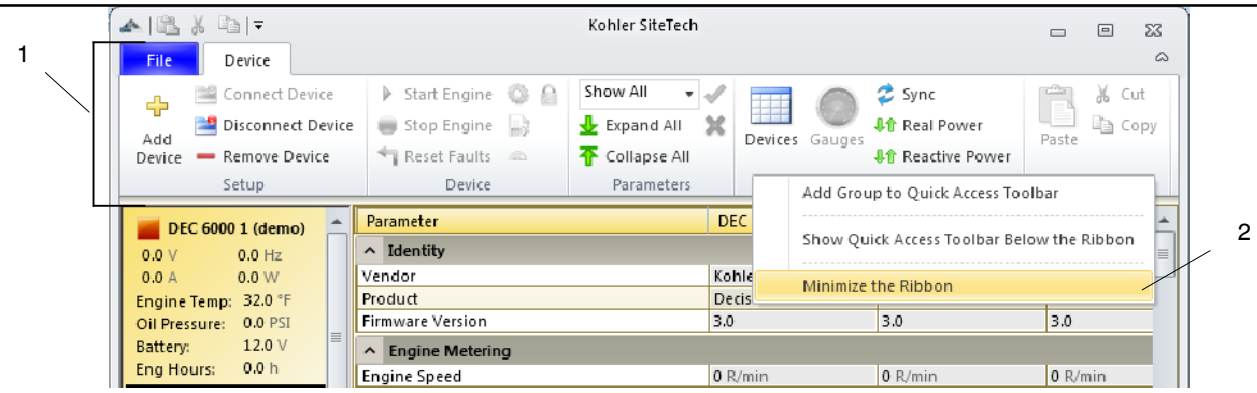
- Add Device
- Connect/disconnect commands
- Engine start/stop commands
- View options (Parameters, Gauges, etc. Some view options may not apply to all devices)

  Note: The Parameters screen is called Devices in previous versions of SiteTech.

- Other commands, shown in Figure 3-15

To use a command or select an option in the ribbon, simply point the cursor at the desired selection and left click. For detailed information about each command or option, refer to the related section of this manual.

To hide the command ribbon at the top of the screen, right click on the ribbon and select “Minimize the Ribbon.” To show the ribbon again, click on the Device tab, right click on the ribbon and click on “Minimize the Ribbon” to remove the checkmark.



1. Ribbon
2. Minimize the Ribbon command

Figure 3-15 The Ribbon

3.8 Firmware Updates

Use SiteTech™ software to load new versions of firmware onto the device or controller.

Note: The Decision-Maker® 550 and 6000 controllers require Program Loader software to update firmware. See TT-1285 for instructions.

3.8.1 Firmware Update Procedure

First, find the firmware file for your device on TechTools or log on to the dealer portal at mykprc.kohlerco.com. Then navigate to the page for your device or controller (for example, the Decision-Maker® 3000 controller).

Note: For the RSA II only: Do not attempt to update firmware on RSA II remote serial annunciators with version 1.0 firmware. Later versions of RSA II firmware can be updated using SiteTech.

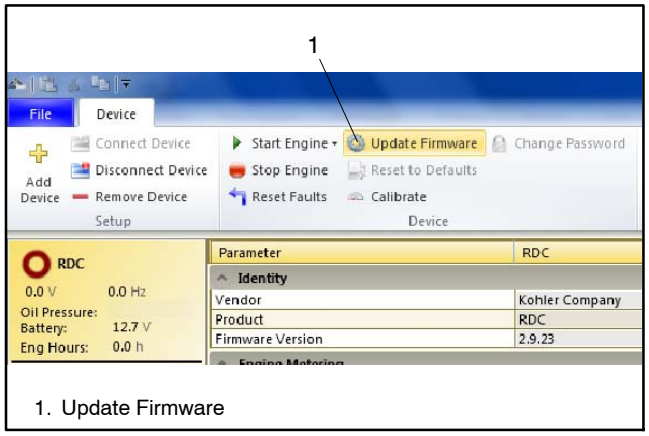
1. Download the new firmware file from the TechTools site or the Kohler dealer portal. Save the new firmware file on your PC. Be sure to note the file location.

2. Use a USB cable to connect the device to a USB port on your PC. See the section in this manual specific to your device for the connector location.

3. Start SiteTech. (Start>Programs>Kohler SiteTech).

4. Wait for the program to recognize the connected device.

5. Click on Update Firmware near the top of the screen. See Figure 3-16.



1. Update Firmware

Figure 3-16 Update Firmware Command

6. A window will open asking you to browse for the firmware file. Click the Browse button and navigate to the directory where you stored the firmware file. Firmware files have the extension .bin (for example: DEC3000_v1.1.bin). Select the file and click Open.

7. The Update Device Firmware screen displays the current version number, new version number, and filename of the selected firmware file. See Figure 3-17. If all of the information is correct, click Update Firmware.

8. When the update is complete, the screen will display the version numbers and the message Firmware Updated Successfully. Click Close.

9. For the RDC2, DC2, or VSC controller, if the display is blank after updating the firmware, reset the controller:

   a. Disconnect the USB cable from the PC or the controller.

   b. Disconnect the generator set engine starting battery, negative lead first.

   c. Wait for 1 minute and then reconnect the generator set engine starting battery, negative lead last.

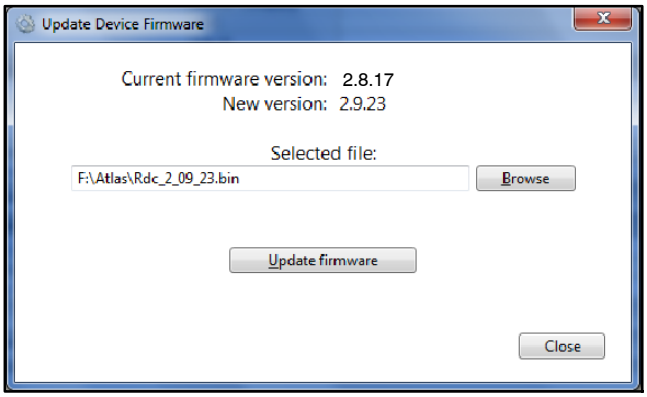


Figure 3-17 Update Device Firmware Screen

3.8.2 Firmware Version Numbers

Software and firmware version numbers consist of three parts separated by periods (or dots) as follows:

[Major version number].[Minor version number].[Build number]

For example, if the version number is 2.3.179, the major version number is 2, the minor version number is 3 and the build number is 179. The build number is usually not shown on the controller display.

Preceding zeros are dropped from version numbers for Kohler PC software applications. For example, SiteTech version 2.3.179 is the same as 2.03.179.

3.9 Event History

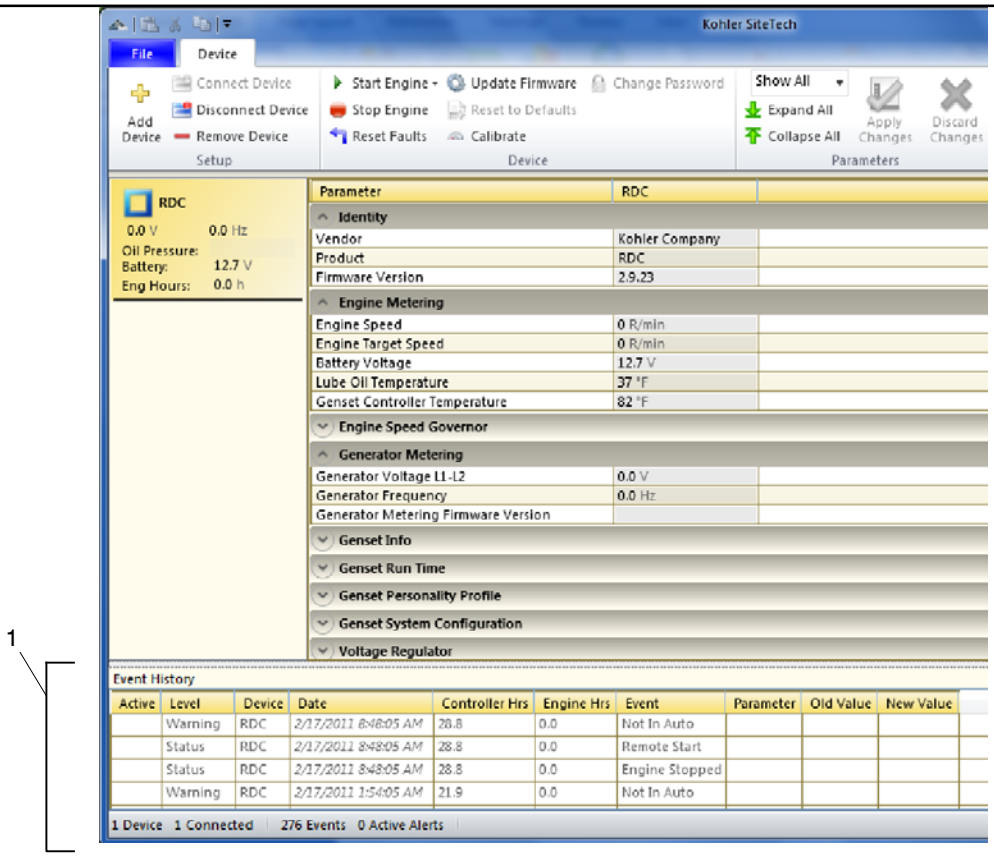
Use the event history to view current device status and event history. The event history lists date- and time-stamped events including engine start and stop, generator set faults (warnings and shutdowns), and engine faults. Active faults are shown in red, and shutdowns are shown in boldface text. See Figure 3-18 for a typical event history window.

Engine Hrs and Controller Hrs display the hours of operation on the generator set engine and controller at the time of the fault. The controller hours may be different than the engine hours if the generator set controller has been replaced.

Click and drag the top edge of the event history window to resize it.

Click on a column heading to sort events by the criteria in that column.

Events can be stored and exported to a file. See Section 3.13.1 for instructions.



1. Event History window

Figure 3-18 Event History (typical)

3.10 Metric and English Units

SiteTech displays parameters in Metric or English units in accordance with each device's measurement system setting.

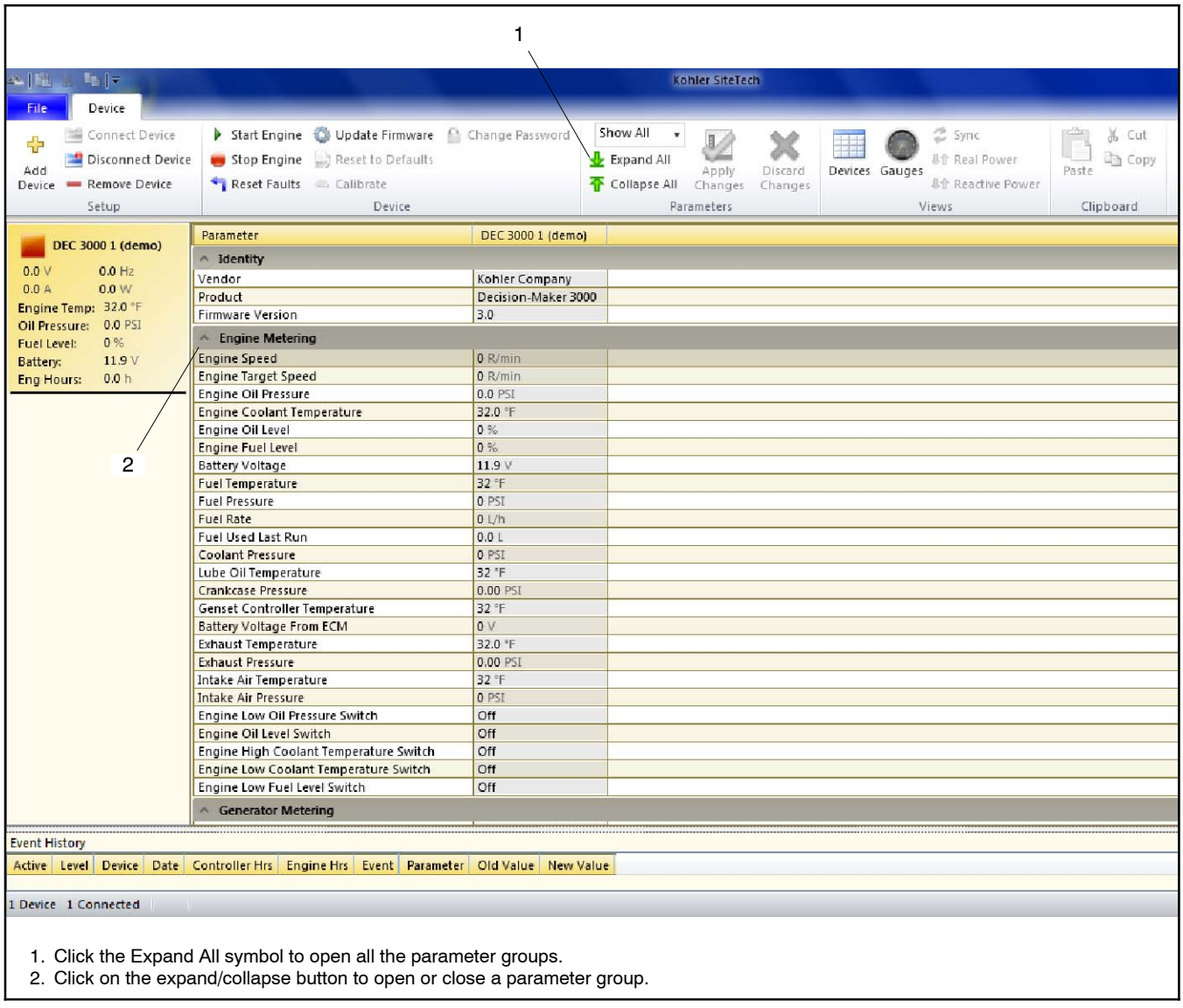
3.11 View and Change Parameter Settings

Note: The Parameters screen was called Devices in previous versions of SiteTech.

The Parameters screen in SiteTech contains parameter groups used for viewing and adjusting device settings. When more than one device is connected, each device appears in a column. Parameters that do not apply to a specific device will be blank. Values that are shown with a gray background cannot be changed.

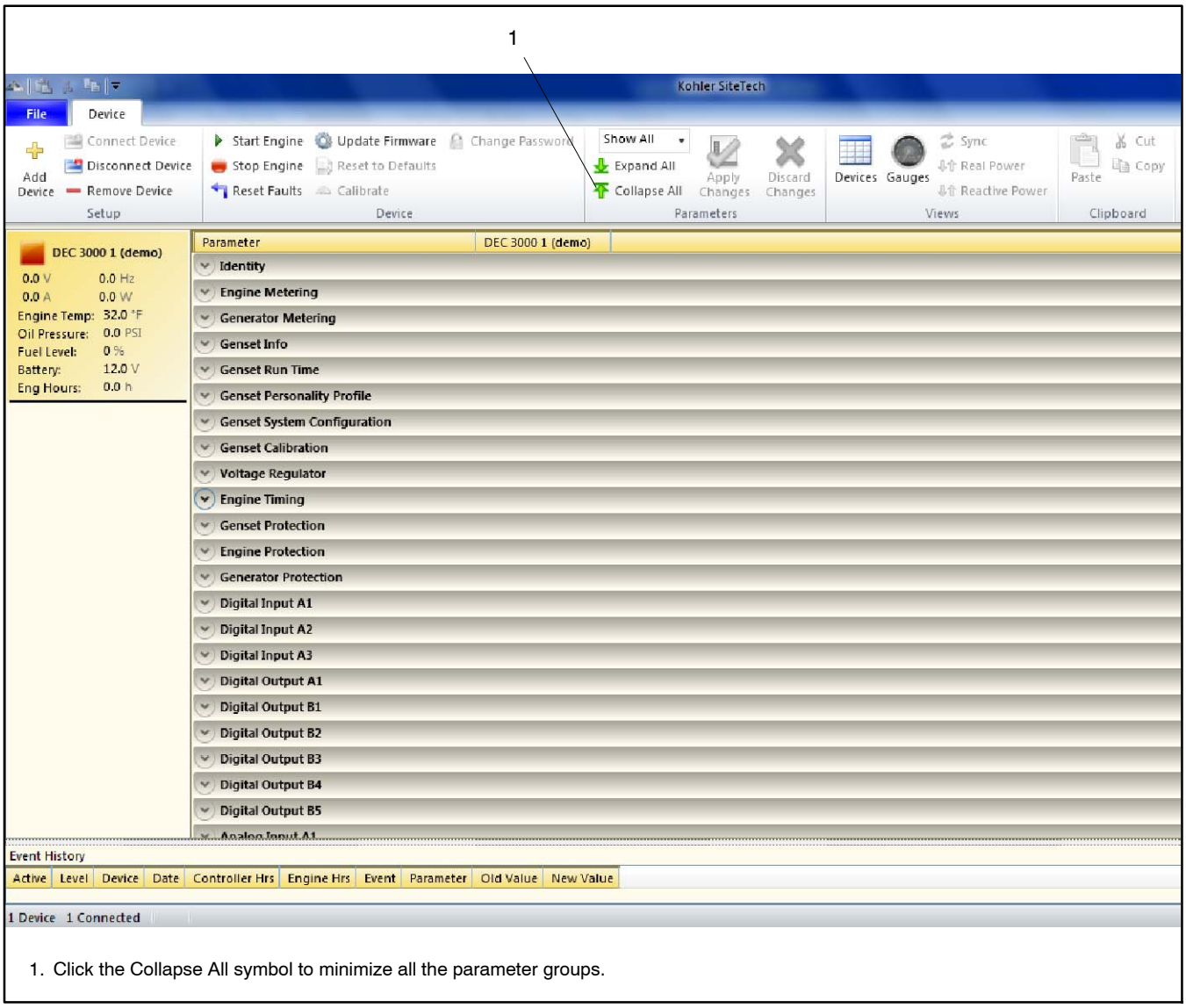
- The Expand All symbol at the top of the screen lets you open all of the parameter groups. The Collapse All symbol closes all parameter groups as shown in Figure 3-20.
- Click on the expand (∨) or collapse (∧) symbol to open or close a parameter group.
- Use the scroll bars at the side and bottom if the open windows are larger than your screen.

SiteTech screens for different devices may vary from the examples shown in this section. Refer to the sections for specific devices later in this manual for more information.



1. Click the Expand All symbol to open all the parameter groups.
2. Click on the expand/collapse button to open or close a parameter group.

Figure 3-19 Sample SiteTech Screen with Parameter Groups Open (Expand All)



1. Click the Collapse All symbol to minimize all the parameter groups.

Figure 3-20 Sample SiteTech Screen with Parameter Groups Closed (Collapse All)

3.11.1 Parameter Filter

Click on the parameter filter button to change which parameter groups are displayed on the SiteTech screen. See Figure 3-22. Four options allow display of all parameters or only some parameters as described in Figure 3-21.

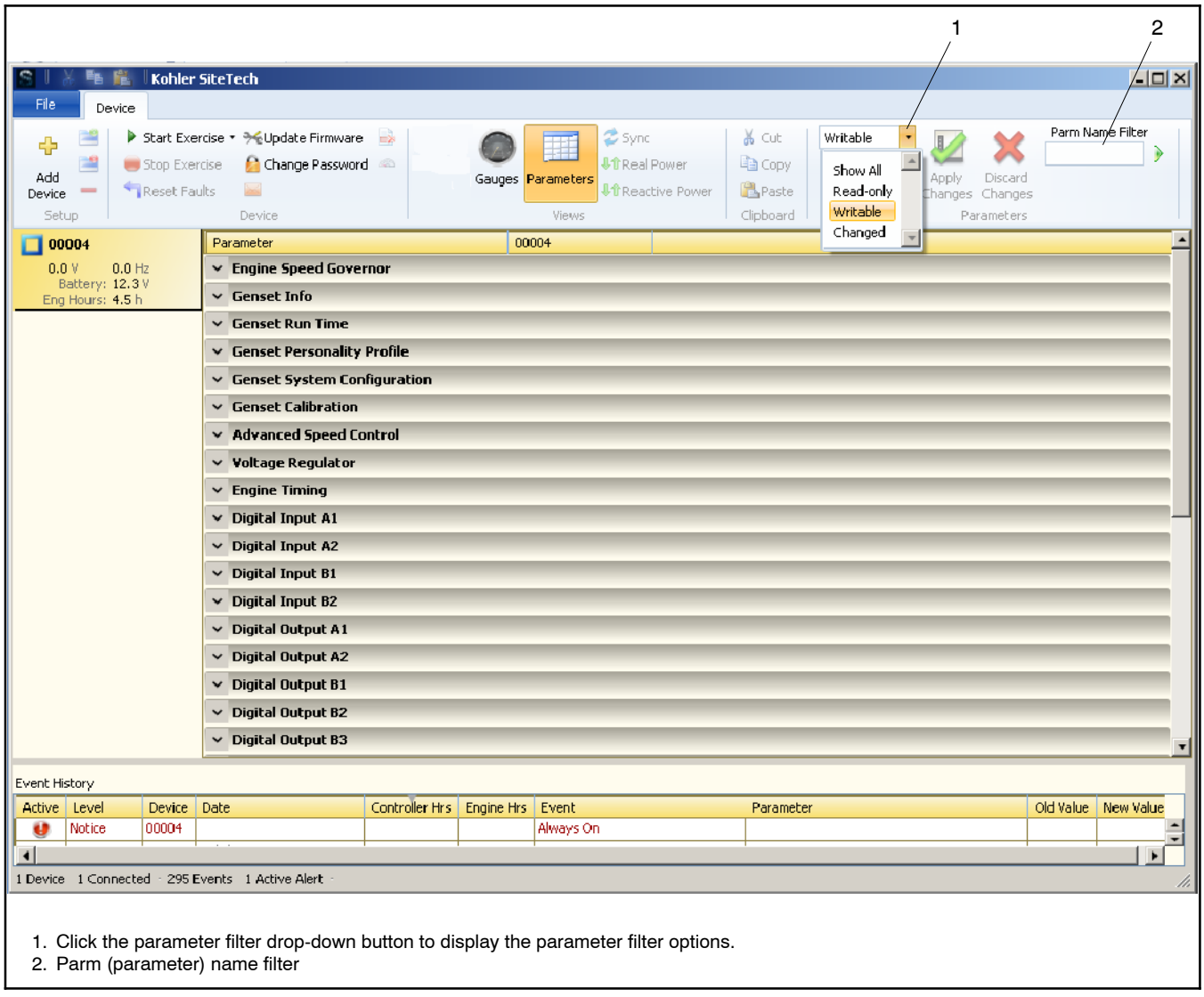
Filter Selection	Description
Show All	Displays all parameter groups for the connected device.
Read Only	Displays the parameter groups that are only viewable.
Writeable	Displays the parameter groups that are changeable.
Changed	Displays changed parameters only, before changes are applied.

Figure 3-21 Parameter Filter Selections

Parm (Parameter) Name Filter Command

Use the Parm Name Filter command to display only selected parameters. See Figure 3-22 for the location of the Parm Name Filter Command near the top right corner of the screen. The filter will cause OnCue to display only parameters with a particular word in the name. For example, entering the word Temperature will allow only parameters with Temperature in the name to be displayed. All other parameters and groups will be hidden.

To use the filter, type the desired word into the box and then click the green arrow to the right of the box. To view all parameters, delete the word from the box and click the green arrow again.



1. Click the parameter filter drop-down button to display the parameter filter options.
2. Parm (parameter) name filter

Figure 3-22 Parameter Filter Button

3.11.2 Changing Settings

Follow these steps to change parameter settings in the Parameters screen. Parameters that are displayed only for monitoring purposes have a gray background and will not allow changes.

Refer to the operation manual for the individual device for parameter default settings and adjustment ranges. See the List of Related Literature.

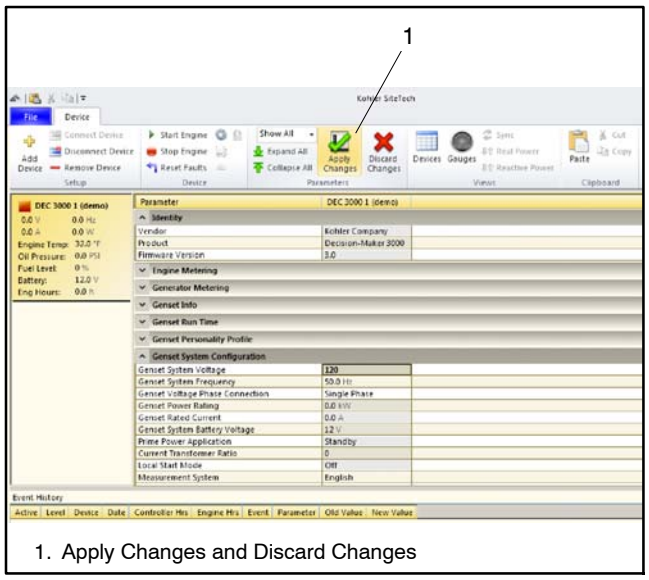
1. Click on the value in the column of the device you want to change. If the value can be changed, it will be highlighted or a drop-down window will open.

2. Select or type in the new setting. The proposed new setting appears in bold text.

3. Repeat for any settings you need to change.

4. Click on the check mark symbol labeled Apply Changes at the top of the screen to change the settings, or click on Discard Changes to keep the current settings without changes. See Figure 3-23.

   If a change is not accepted by the device (for example, if the new value is out of the acceptable range of settings), the proposed setting will stay on the screen in bold text. Click Discard Changes to display the previous (unchanged) setting.



1. Apply Changes and Discard Changes

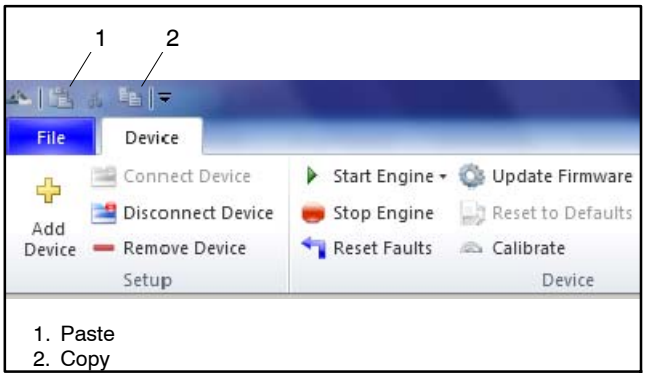
Figure 3-23 Apply and Discard Changes

3.11.3 Copy and Paste Parameters

The tools at the top of the screen allow copying and pasting parameter settings from one device to another or into a spreadsheet file.

To copy settings to a spreadsheet, use the cursor to select the desired data. Click on the copy icon at the top of the screen or use Ctrl+C. Move to an open spreadsheet and paste using Ctrl+V or the paste command in the spreadsheet software.

To copy individual settings from one cell to another, select a setting and click on the Copy icon or use Ctrl+C. Move to the desired cell and click on the Paste (clipboard) icon or use Ctrl+V to paste the setting.



1. Paste
2. Copy

Figure 3-24 Copy and Paste

3.11.4 Parameter Change Errors

If an invalid value is entered, the Parameter Change Errors dialog box will open after the Apply Changes Button is clicked. The dialog box will indicate the device, the parameter, the value that could not be applied, and the reason that the change could not be applied. See Figure 3-25.

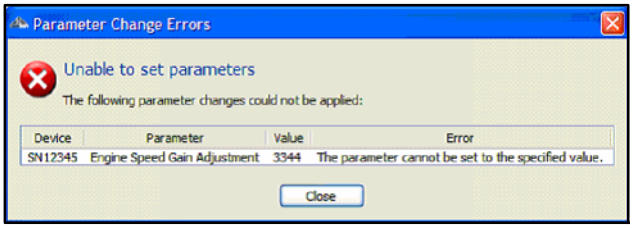


Figure 3-25 Parameter Change Errors Dialog Box

3.12 Assign Inputs and Outputs

Use SiteTech to assign functions to the controller's programmable inputs and outputs. Refer to the device documentation for information about available inputs and outputs.

Use caution when changing input and output functions. Each input and output corresponds to a specific connection on the device. The function assigned to the input or output must correspond to the sensor, switch, or equipment connected to that connection.

Click on the cell for the input or output function and then click on the down arrow for a list of functions. Select the appropriate input or output function from the drop-down list. You cannot type in the name of the input or output function.

In addition to the input function, SiteTech allows setting various parameters for each digital and analog input. See Figure 3-26 for a sample screen showing digital and analog inputs. Click on the value of an adjustable parameter to change it. One of two adjustment methods will be provided for each parameter:

- A drop-down box will open for parameters with a limited number of settings. Click on the down arrow to see a list of all possible settings, and then click on the desired setting.
- The value will be highlighted for parameters that allow the operator to type in a numerical value. Notice the units displayed for each numerical parameter. Type in the desired value.

Refer to the device documentation for information on setting limits and time delays for the inputs.

The new selections will appear in bold face until the changes are applied or discarded. Click on Apply Changes to accept the new settings and update the settings on the device. Click on Discard Changes to keep the previous settings.

SiteTech also displays the value of each input or output function as read from the device. The value for a digital input or output is shown as True (on) or False (off). The input and output values are read from the device and cannot be changed through SiteTech.

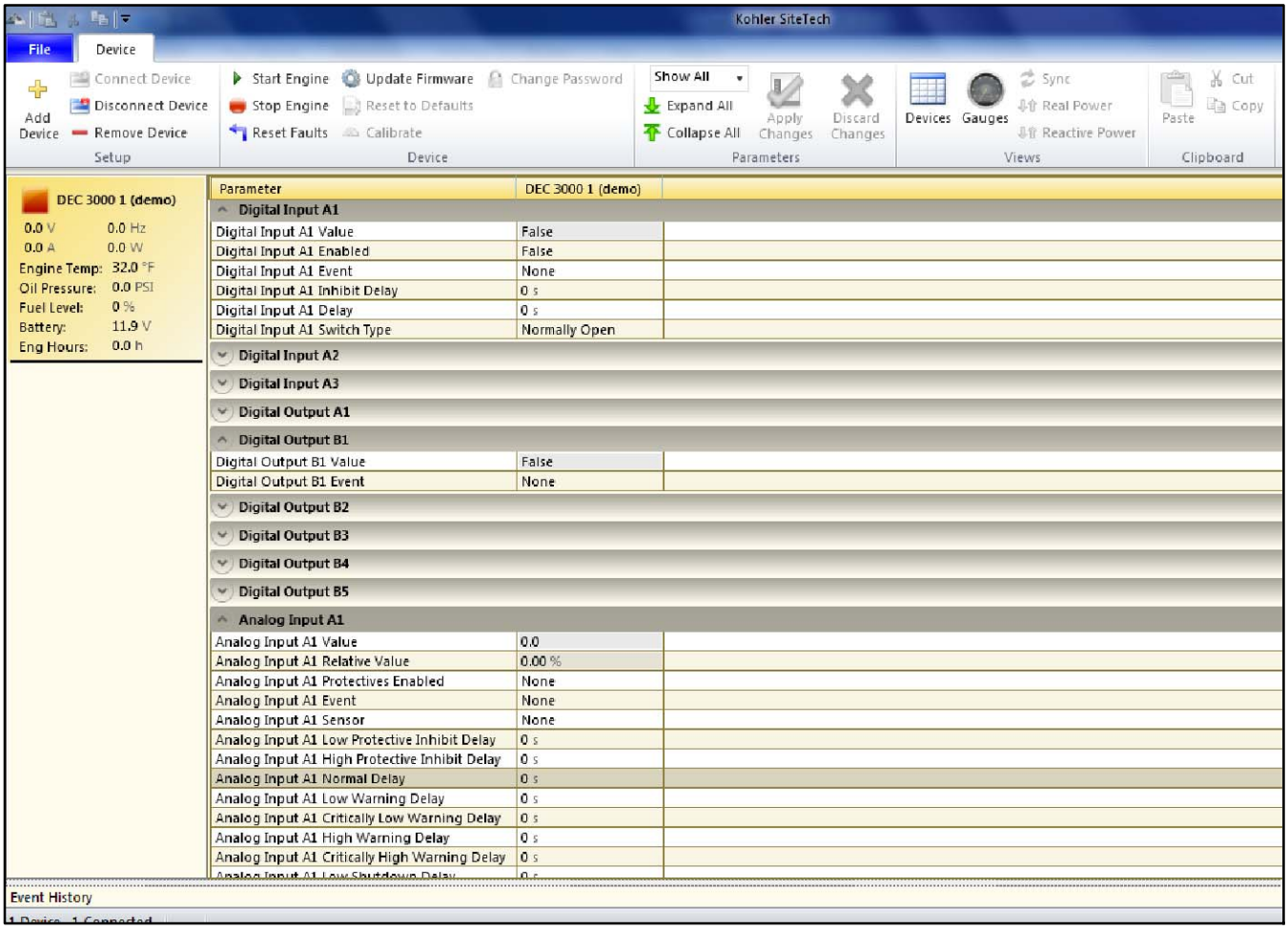


Figure 3-26 Sample Screen with Inputs and Outputs

3.13 Exporting and Importing Parameter Settings and Events

SiteTech software allows the generator set installer or service technician to save the device settings in a file and use that file to reload those settings later.

After the device has been installed and set up for the application, save the settings to a file on the computer. Setting files are saved as spreadsheets with the file extension .xls. Give the file a suitable name that identifies the specific device, and store it in a secure location.

Note: Saving the settings to a file is strongly recommended.

Saving the device settings to a file immediately after system startup creates a file that can be used to restore the device to the desired settings in the event of a system problem. The file can also be used to quickly set up a new controller or RSA II if the device must be replaced in the future.

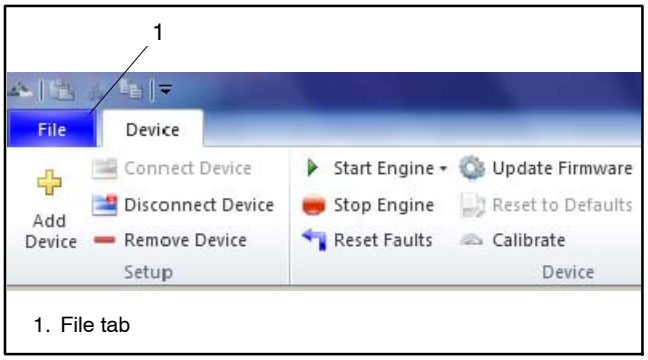
The settings and events are saved in a spreadsheet file that can be opened using Microsoft® Excel software. Open the file to view the settings and events, if desired. Some settings can be modified in the file using Excel. See Section 3.13.3 for important information about editing the file.

3.13.1 Export Parameters and Events

The Export Parameters and Events command saves the parameter settings and events to a spreadsheet file. This function can save time and help with troubleshooting and service.

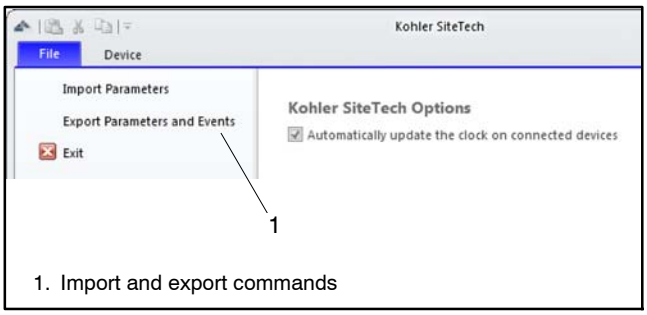
File Export Procedure

1. Click on the *File* tab in the upper left corner of the screen to open the file import and export commands screen. See Figure 3-27 and Figure 3-28.



1. File tab

Figure 3-27 Click the File Tab



1. Import and export commands

Figure 3-28 Import and Export Commands

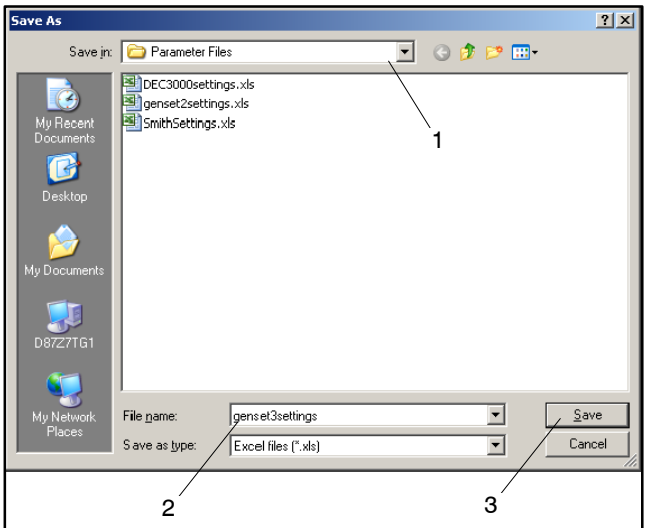
2. Click on Export Parameters and Events. The Save As dialog window will open. See Figure 3-29.

3. The default location to save the file is shown at the top of the dialog box. Use the down arrow to select a different file location on the PC, if necessary.

4. In the File Name box, type in a suitable name for the file. Use a name that clearly identifies the device for future reference.

5. Click Save to save the file to the selected directory on the PC. The settings and events will be saved in a spreadsheet file that can be viewed on a PC, edited, and used to import the settings to another device.

Note: When more than one device is connected, the file export command will export all the settings for each device into the spreadsheet.

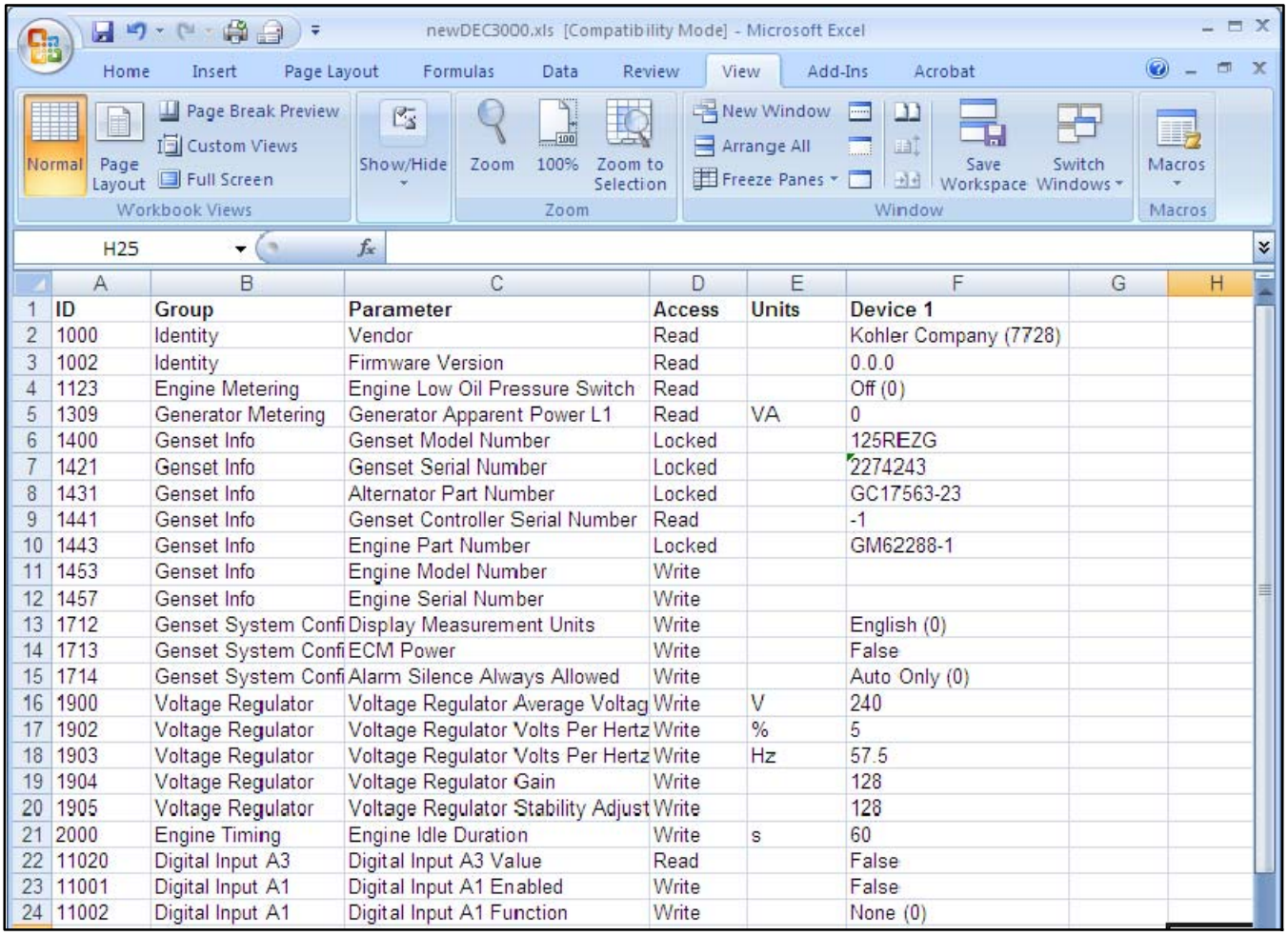


1. File will be saved to this location on the PC. Use the down arrow to change the location, if necessary.
2. Type in a suitable file name.
3. Click Save.

Figure 3-29 Save As Dialog Box for File Export

Parameter Settings File

See Figure 3-30 for an example of a parameter spreadsheet. Only selected rows are shown in this example for illustration. The number and type of parameters recorded will vary depending on the device or controller.



	A	B	C	D	E	F	G	H
1	**ID**	**Group**	**Parameter**	**Access**	**Units**	**Device 1**		
2	1000	Identity	Vendor	Read		Kohler Company (7728)		
3	1002	Identity	Firmware Version	Read		0.0.0		
4	1123	Engine Metering	Engine Low Oil Pressure Switch	Read		Off (0)		
5	1309	Generator Metering	Generator Apparent Power L1	Read	VA	0		
6	1400	Genset Info	Genset Model Number	Locked		125REZG		
7	1421	Genset Info	Genset Serial Number	Locked		2274243		
8	1431	Genset Info	Alternator Part Number	Locked		GC17563-23		
9	1441	Genset Info	Genset Controller Serial Number	Read		-1		
10	1443	Genset Info	Engine Part Number	Locked		GM62288-1		
11	1453	Genset Info	Engine Model Number	Write				
12	1457	Genset Info	Engine Serial Number	Write				
13	1712	Genset System Confi	Display Measurement Units	Write		English (0)		
14	1713	Genset System Confi	ECM Power	Write		False		
15	1714	Genset System Confi	Alarm Silence Always Allowed	Write		Auto Only (0)		
16	1900	Voltage Regulator	Voltage Regulator Average Voltag	Write	V	240		
17	1902	Voltage Regulator	Voltage Regulator Volts Per Hertz	Write	%	5		
18	1903	Voltage Regulator	Voltage Regulator Volts Per Hertz	Write	Hz	57.5		
19	1904	Voltage Regulator	Voltage Regulator Gain	Write		128		
20	1905	Voltage Regulator	Voltage Regulator Stability Adjust	Write		128		
21	2000	Engine Timing	Engine Idle Duration	Write	s	60		
22	11020	Digital Input A3	Digital Input A3 Value	Read		False		
23	11001	Digital Input A1	Digital Input A1 Enabled	Write		False		
24	11002	Digital Input A1	Digital Input A1 Function	Write		None (0)		

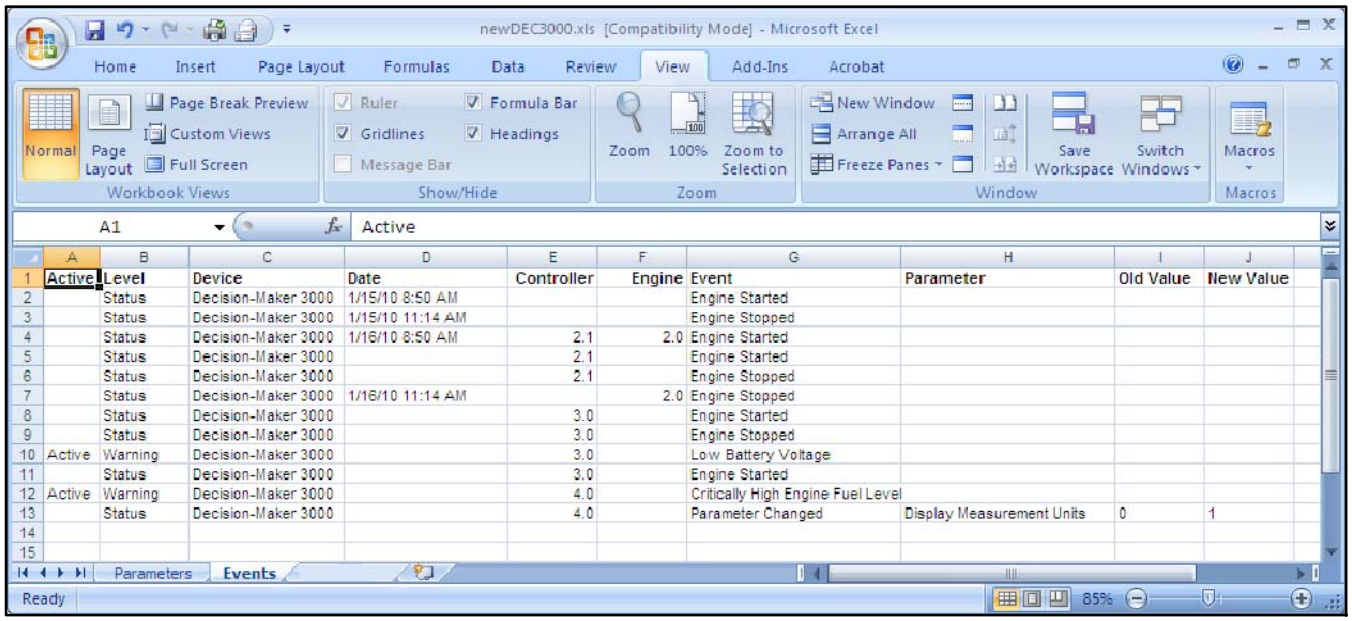
Figure 3-30 Sample Parameter Files Spreadsheet (selected rows shown for illustration only)

3.13.2 Event History File

SiteTech exports event history data with the parameter files. Event history data can be useful for troubleshooting and service.

The event history file is exported as the second sheet in the parameter settings file. See Figure 3-31. Events are date- and time-stamped and also indicate the controller operation hours and engine operation hours.

The event history is not imported when settings are loaded from the file onto a controller.



	A	B	C	D	E	F	G	H	I	J
1	Active	Level	Device	Date	Controller	Engine	Event	Parameter	Old Value	New Value
2		Status	Decision-Maker 3000	1/15/10 8:50 AM			Engine Started			
3		Status	Decision-Maker 3000	1/15/10 11:14 AM			Engine Stopped			
4		Status	Decision-Maker 3000	1/16/10 8:50 AM	2.1	2.0	Engine Started			
5		Status	Decision-Maker 3000		2.1		Engine Started			
6		Status	Decision-Maker 3000		2.1		Engine Stopped			
7		Status	Decision-Maker 3000	1/16/10 11:14 AM		2.0	Engine Stopped			
8		Status	Decision-Maker 3000		3.0		Engine Started			
9		Status	Decision-Maker 3000		3.0		Engine Stopped			
10	Active	Warning	Decision-Maker 3000		3.0		Low Battery Voltage			
11		Status	Decision-Maker 3000		3.0		Engine Started			
12	Active	Warning	Decision-Maker 3000		4.0		Critically High Engine Fuel Level			
13		Status	Decision-Maker 3000		4.0		Parameter Changed	Display Measurement Units	0	1
14										
15										

Figure 3-31 Sample Event History Sheet

3.13.3 Editing Parameter Files

The parameter files created by the Export Parameters and Events command can be opened using Excel software and reviewed for service or troubleshooting purposes. Some parameter settings can be changed in the Excel file and then reloaded onto the device using the Import Parameters command.

Note: Do not modify any settings that are not labeled "Write" in the Access column of the spreadsheet.

Only settings that are labeled "Write" in the Access column *and* have simple numerical values or True or False in the last column of the spreadsheet should be modified. See Figure 3-32. Change only the values shown in the device column of the spreadsheet (labeled Device 1 in Figure 3-30).

Use this feature with caution. Be sure that the new values are within the acceptable range for each parameter. Refer to the documentation provided with the controller or device for default settings and adjustment ranges.

Access	Value	Sample Values	Change Allowed in Spreadsheet?
Write	Simple numerical values	0 57.5	YES
Write	True or False	True False	YES
Write	Numbers in parentheses	(0)	NO
Write	Mixed text and numbers	Off(0) 12 V (12)	NO
Read	Any	—	NO
Locked	Any	—	NO

Figure 3-32 Parameter Changes Allowed in Spreadsheet

3.13.4 Import Parameters

The Import Parameters command allows the operator to import device settings from a file. Use setting files created by the Export Parameters and Events command. (See Section 3.13.1.) Setting files are saved as spreadsheets with the file extension .xls. Parameters not included in the files are not changed.

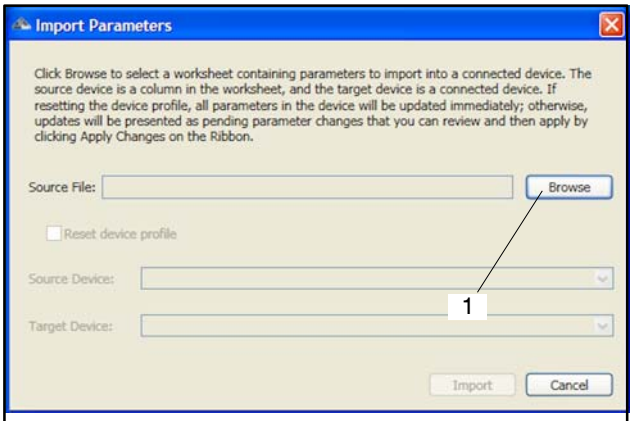
Use the Import Parameters command to set up more than one generator set controller to the same settings, or to import the device settings to a new controller after the controller has been replaced.

The parameter file can contain settings for more than one device. Select the device you want to use as the source device and then select the target device. SiteTech may select the connected device as the target device for you. See Figure 3-33 and Figure 3-34.

File Import Procedure

1. Click on the File tab in the upper left corner of the screen to reveal the file import and export commands. See Figure 3-28.

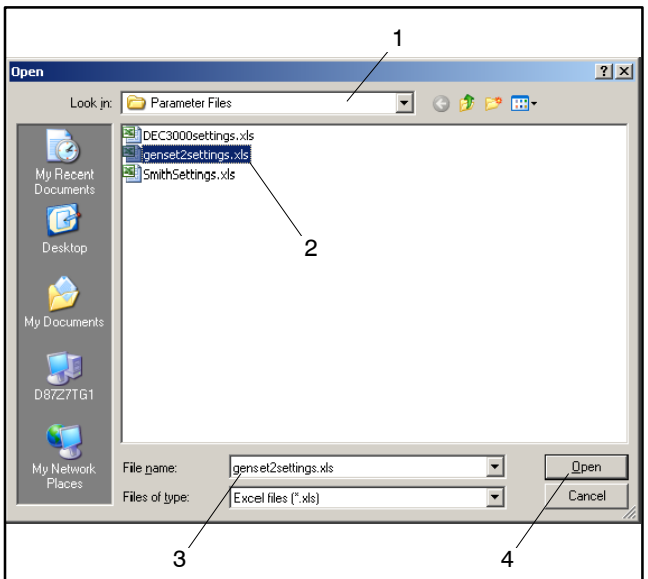
2. Click on Import Parameters. A dialog window will open. See Figure 3-33.



1. Click on the Browse button.

Figure 3-33 Import Parameters Window

3. Click on the Browse button. A window will open. See Figure 3-34.



1. File location. Click down arrow to change, if necessary.
2. Select the desired file from the list.
3. Name of selected parameter file should appear here.
4. Click Open.

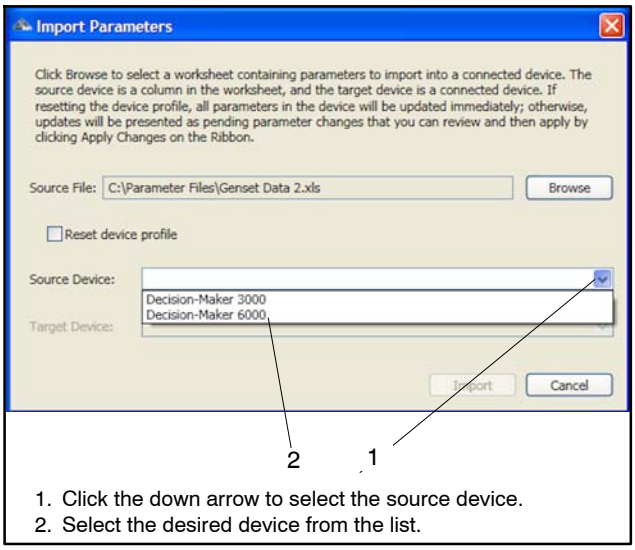
Figure 3-34 Open Dialog Box for File Import

4. The default location to find the file is shown at the top of the dialog box. Use the down arrow to select a different file location on the PC, if necessary.

5. Click on the name of the file to select it. Check that the selected file name appears in the File Name box near the bottom of the window.

6. Click Open.

7. The selected file now appears in the Source File box. See Figure 3-35.



1. Click the down arrow to select the source device.
2. Select the desired device from the list.

Figure 3-35 Import Parameters Window

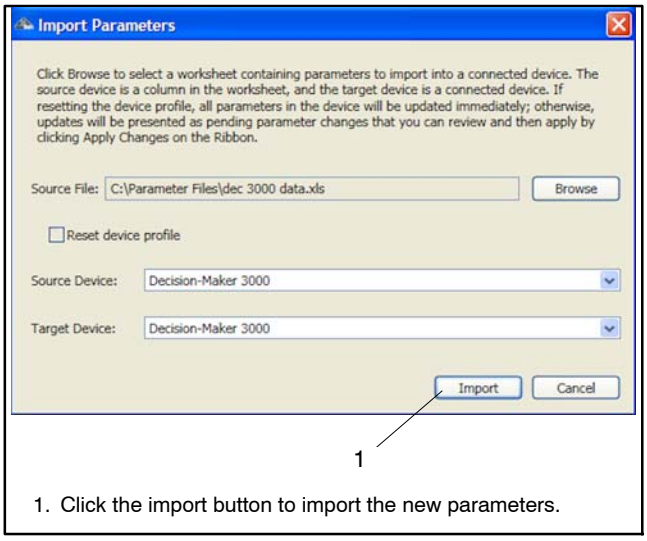
8. To select the source device, click the down arrow on the Source Device box.

9. Click on the desired device in the list.

10. Click the Import button to import the new parameters. See Figure 3-36.

11. New settings will appear in bold face on the SiteTech screen. Click on Apply Changes to load the new settings onto the device. Click Discard Changes if you decide not to load the new settings onto the device.

The procedure outlined above will not import locked parameters that are included in the controller's personality profile. Proceed to Section 3.13.5 for instructions to load the personality profile on the Decision-Maker® 3000 controller.



1. Click the import button to import the new parameters.

Figure 3-36 Import Parameters Window

3.13.5 Reset with New Profile (Personality Profile)

Note: This procedure applies to the Decision-Maker® 3000 and 3500 controllers only. For Decision-Maker® 550 and 6000 controllers, use Program Loader to load personality profiles. See TT-1285, Program Loader Instructions.

To load personality profile settings onto the Decision-Maker® 3000 and 3500 controllers, check the Reset device profile box in the Import Parameters window. This procedure imports locked settings from the personality profile to restore the device to its factory settings. Use this function if the controller needs to be reset or replaced. The personality profile can be found on a compact disk (CD) that is shipped with the generator set.

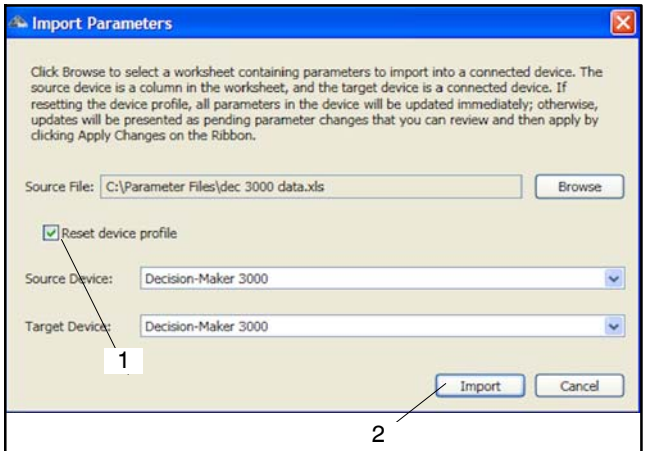
Note that the personality profile contains the factory settings for the device. If any settings were changed during the system installation and startup, the changes will not be reflected in the personality profile. To load the settings for a specific application, use the file created for the application as described in Section 3.13.1 and import the parameters as described in Section 3.13.4.

The Reset with New Profile command does not change the device calibration. The previous calibration is retained.

Reset with Personality Profile Procedure

1. Load the personality profile by using File Import Procedure in Section 3.13.4 and perform steps 1 through 9 of the file import procedure.
2. Click on the Reset device profile checkbox in the Import Parameters window.

   Note: The Reset device profile box must be checked in order to load the personality profile.
3. Click the Import button to reset the device.



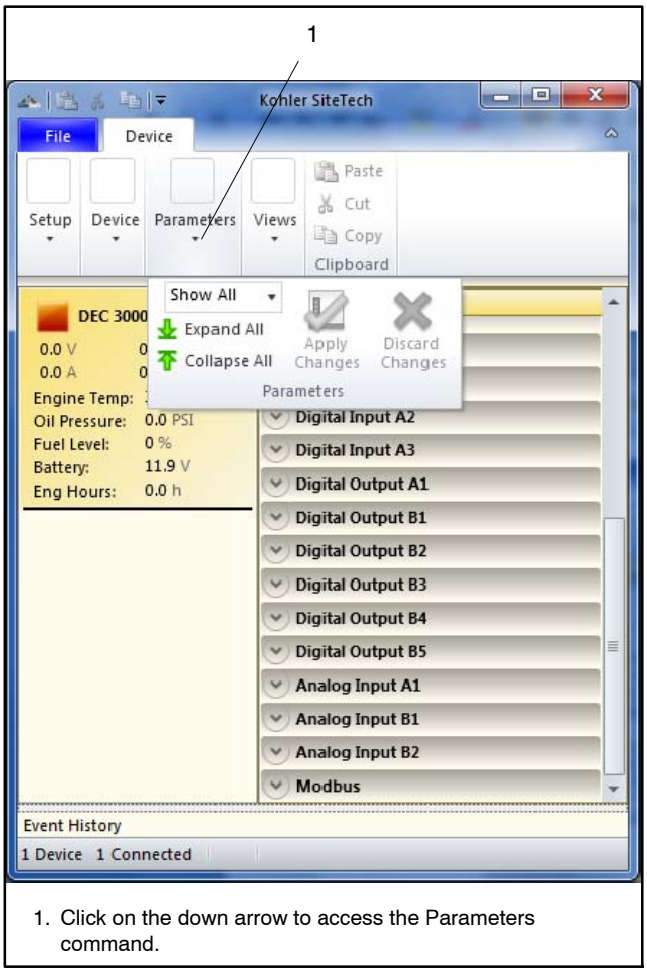
1. Click on the Reset device profile checkbox.
2. Click the Import button to reset the device.

Figure 3-37 Click Reset New Profile to Load Personality Profile (Decision-Maker® 3000 and 3500 only)

3.14 Resizing the Screen

Click and drag on the edge of the screen to resize it, if desired. Notice that, if the screen is narrowed, the command groups in the ribbon at the top may collapse into smaller boxes. To access the commands, click on the down arrow as shown in Figure 3-38.

In the Parameters screen, click and drag on the right edge of a column heading to resize the width of a column. Click and drag the top of the Event History window to resize the window and reveal more parameters.



1. Click on the down arrow to access the Parameters command.

Figure 3-38 Minimized Command Windows

Notes

4.1 Introduction

SiteTech™ software allows viewing and adjustment of most ADC IId controller settings.

SiteTech™ software version 3.0 or higher is required for use with the ADC IId controller.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech™ software. If the controller is not powered by the generator set battery, it may drain the battery on the connected laptop PC.

This section provides information specific to the ADC IId controller. For general software operating instructions, see Section 3, Software Operation. For controller operation instructions, refer to the generator set operation manual provided with the generator set. See List of Related Literature on page 9 for the document part number.

4.2 Device Connection

⚠ WARNING

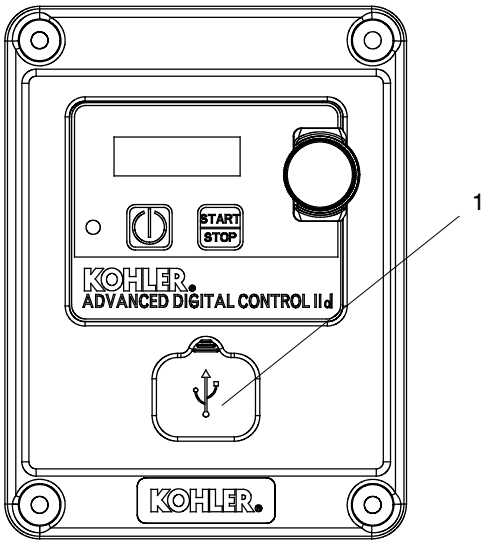
Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Remove the USB port cover from the ADC IId controller. See Figure 4-1. Use a USB cable with a standard type-B connector to connect the controller to your personal computer. See Figure 4-2 for the USB connector location on the controller. See Section 1.3 for USB cable details.

Replace the USB port cover after disconnecting the ADC IId controller from the PC.



1. USB Port Cover

Figure 4-1 ADC IId Controller

1. USB Device Connector (connects to SiteTech™)
2. USB Host Connector (connects to mass-storage device)

Figure 4-2 ADC IId Controller

4.3 Parameters Screens

SiteTech™ screens for the ADC IId controller are shown in the following figures. See Section 4.4 for a summary of controller parameters.

Refer to the generator set operation manual for default settings and adjustment ranges.

4.3.1 Parameter Settings

SiteTech™ allows viewing and adjustment of many engine and generator set parameters. Refer to the screen shots in Section 4.3.2 and parameter list in Section 4.4 to see the individual parameters.

4.3.2 Parameters Screen

Figure 4-3 shows the SiteTech™ Parameters screen for the ADC IId controller. Some groups are shown closed in this illustration. See Section 4.3.3 for illustrations of the parameter groups.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

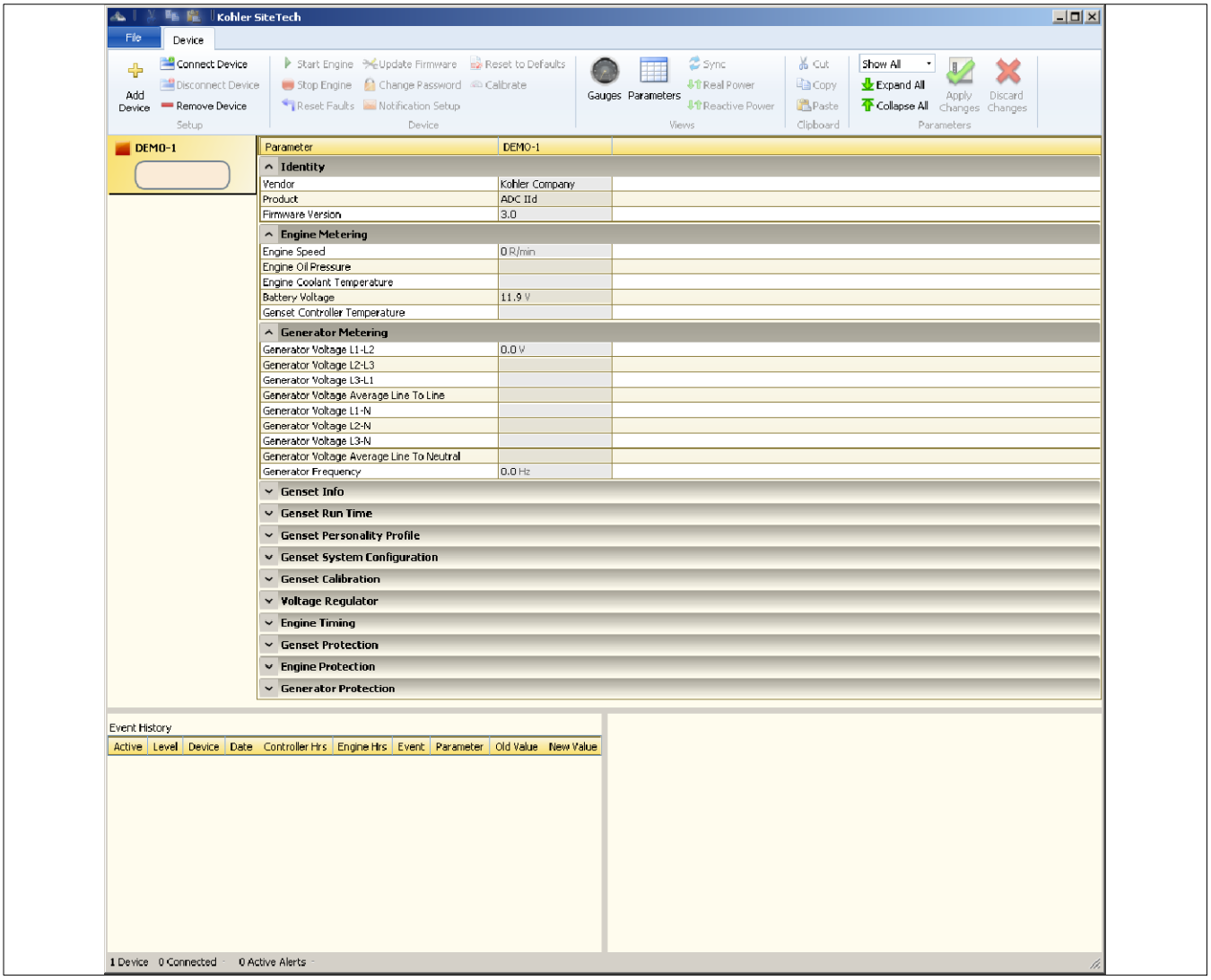


Figure 4-3 Parameters Screen, ADC IId Controller

4.3.3 Parameter Groups

The parameter groups for the ADC IId controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 4.4.

Identity	
Vendor	Kohler Company
Product	ADC IId
Firmware Version	3.0

Engine Metering	
Engine Speed	0 R/min
Engine Oil Pressure	
Engine Coolant Temperature	
Battery Voltage	11.9 V
Genset Controller Temperature	

Generator Metering	
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	
Generator Voltage L3-L1	
Generator Voltage Average Line To Line	
Generator Voltage L1-N	
Generator Voltage L2-N	
Generator Voltage L3-N	
Generator Voltage Average Line To Neutral	
Generator Frequency	0.0 Hz

Genset Info	
Genset Model Number	
Genset Serial Number	DEMO-1
Alternator Part Number	
Genset Controller Serial Number	0
Engine Part Number	
Engine Model Number	
Engine Serial Number	
Genset State	Standby

Genset Run Time	
Genset Controller Total Operation Time	2.5 h
Engine Total Run Time	0.0 h
Engine Total Number Of Starts	
Engine Maintenance Period Hours	
Engine Run Time Until Maintenance	
Engine Number Of Starts Since Maintenance	

Genset Personality Profile	
Engine Crank Disconnect Speed	
Engine Coolant Temperature Protectives Enabled	
Engine High Coolant Temperature Inhibit Delay	
Engine Low Coolant Temperature Warning Delay	
Engine High Coolant Temperature Shutdown Delay	
Engine Low Coolant Temperature Warning Limit	
Engine High Coolant Temperature Warning Limit	
Engine High Coolant Temperature Shutdown Limit	
Engine Cranking Oil Pressure	

Genset System Configuration	
Genset System Voltage	
Genset System Frequency	
Genset Voltage Phase Connection	
Genset System Battery Voltage	
ECM Power	
Public CAN Protocol	
Display Contrast	

Genset Calibration	
Genset Calibration Factor Voltage L1-L2	
Genset Calibration Factor Voltage L2-L3	
Genset Calibration Factor Voltage L3-L1	
Genset Calibration Factor Voltage L1-N	
Genset Calibration Factor Voltage L2-N	
Genset Calibration Factor Voltage L3-N	

Voltage Regulator	
Voltage Regulator Average Voltage Adjustment	
Voltage Regulator Volts Per Hertz Slope	
Voltage Regulator Volts Per Hertz Cut In Frequency	
Voltage Regulator Gain	
Voltage Regulator Stability Adjust	
Voltage Regulator Firmware Version	

Engine Timing	
Engine Start Delay	
Engine Start Aid Delay	
Engine Crank On Delay	
Engine Crank Pause Delay	
Engine Number Of Crank Cycles	

Genset Protection	
After Crank Disconnect Fault Inhibit Delay	
Genset Low Battery Voltage Warning Delay	
Genset High Battery Voltage Warning Delay	
Genset Low Battery Voltage Warning Limit	
Genset High Battery Voltage Warning Limit	
Genset Battery Low Cranking Voltage Warning Dela	
Genset Battery Low Cranking Voltage Warning Limit	
Genset Preheat Low Battery Voltage Limit	

Engine Protection	
Engine Low Coolant Level Shutdown Delay	
Engine Low Oil Pressure Warning Delay	
Engine Low Oil Pressure Shutdown Delay	
Engine Locked Rotor Shutdown Delay	
Genset High Engine Speed Shutdown Limit	
Genset High Engine Speed Shutdown Frequency	
Engine Oil Pressure Protectives Enabled	
Engine High Oil Pressure Inhibit Delay	
Engine High Oil Pressure Shutdown Delay	
Engine Low Oil Pressure Warning Limit	
Engine High Oil Pressure Warning Limit	
Engine High Oil Pressure Shutdown Limit	

Generator Protection	
Loss Of AC Sensing Shutdown Delay	
Genset Low Voltage Shutdown Delay	
Genset High Voltage Shutdown Delay	
Genset Low Voltage Shutdown Limit	
Genset High Voltage Shutdown Limit	
Genset Short Term Low Frequency Shutdown Delay	
Genset High Frequency Shutdown Delay	
Genset Low Frequency Shutdown Limit	
Genset High Frequency Shutdown Limit	

4.4 Parameter Summary

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The View/Adjust column in the table indicates whether each parameter can be changed or only monitored.

- View: View only, no adjustment
- Locked: Parameter is not adjustable using SiteTech™ software.
- Adjust: Parameter is adjustable

Generator set calibration can be viewed through SiteTech™, but changes to the calibration can only be made at the controller.

Refer to the generator set operation manual for default settings and adjustment ranges.

Parameter	Parameter Group	View/ Adjust	Units
Active Alerts	Kohler Power Device Protocol	View	
After Crank Disconnect Fault Inhibit Delay	Genset Protection	View	s
Alternator Part Number	Genset Info	Locked	
Battery Voltage	Engine Metering	View	V
Display Contrast	Genset System Configuration	Adjust	
ECM Power	Genset System Configuration	Adjust	
Engine Coolant Temperature	Engine Metering	View	°C
Engine Coolant Temperature Protectives Enabled	Genset Personality Profile	Adjust	
Engine Crank Disconnect Speed	Genset Personality Profile	Locked	R/min
Engine Crank On Delay	Engine Timing	Adjust	s
Engine Crank Pause Delay	Engine Timing	Adjust	s
Engine Cranking Oil Pressure	Genset Personality Profile	Locked	kPa
Engine High Coolant Temperature Inhibit Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Shutdown Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Shutdown Limit	Genset Personality Profile	Locked	°C
Engine High Coolant Temperature Warning Limit	Genset Personality Profile	Locked	°C
Engine High Oil Pressure Inhibit Delay	Engine Protection	Locked	s
Engine High Oil Pressure Shutdown Delay	Engine Protection	Locked	s
Engine High Oil Pressure Shutdown Limit	Engine Protection	Locked	kPa
Engine High Oil Pressure Warning Limit	Engine Protection	Locked	kPa
Engine Locked Rotor Shutdown Delay	Engine Protection	Adjust	s
Engine Low Coolant Level Shutdown Delay	Engine Protection	View	s
Engine Low Coolant Temperature Warning Delay	Genset Personality Profile	View	s
Engine Low Coolant Temperature Warning Limit	Genset Personality Profile	Locked	°C
Engine Low Oil Pressure Shutdown Delay	Engine Protection	Locked	s
Engine Low Oil Pressure Warning Delay	Engine Protection	Locked	s
Engine Low Oil Pressure Warning Limit	Engine Protection	Locked	kPa
Engine Maintenance Period Hours	Genset Run Time	Adjust	h
Engine Model Number	Genset Info	Locked	
Engine Number Of Crank Cycles	Engine Timing	Adjust	
Engine Number Of Starts Since Maintenance	Genset Run Time	View	
Engine Oil Pressure	Engine Metering	View	kPa
Engine Oil Pressure Protectives Enabled	Engine Protection	Adjust	
Engine Part Number	Genset Info	Locked	
Engine Run Time Until Maintenance	Genset Run Time	View	h
Engine Serial Number	Genset Info	Locked	

Parameter	Parameter Group	View/ Adjust	Units
Engine Speed	Engine Metering	View	R/min
Engine Start Aid Delay	Engine Timing	Adjust	s
Engine Start Delay	Engine Timing	Adjust	s
Engine Total Number Of Starts	Genset Run Time	View	
Engine Total Run Time	Genset Run Time	View	h
Events	Kohler Power Device Protocol	View	
Firmware Version	Identity	View	
Generator Frequency	Generator Metering	View	Hz
Generator Voltage AB	Generator Metering	View	V
Generator Voltage AN	Generator Metering	View	V
Generator Voltage BC	Generator Metering	View	V
Generator Voltage BN	Generator Metering	View	V
Generator Voltage CA	Generator Metering	View	V
Generator Voltage CN	Generator Metering	View	V
Generator Voltage Average Line To Line	Generator Metering	View	V
Generator Voltage Average Line To Neutral	Generator Metering	View	V
Genset Battery Low Cranking Voltage Warning Delay	Genset Protection	View	s
Genset Battery Low Cranking Voltage Warning Limit	Genset Protection	View	%
Genset Calibration Factor Voltage AB	Genset Calibration	Locked	
Genset Calibration Factor Voltage AN	Genset Calibration	Locked	
Genset Calibration Factor Voltage BC	Genset Calibration	Locked	
Genset Calibration Factor Voltage BN	Genset Calibration	Locked	
Genset Calibration Factor Voltage CA	Genset Calibration	Locked	
Genset Calibration Factor Voltage CN	Genset Calibration	Locked	
Genset Controller Serial Number	Genset Info	Locked	
Genset Controller Temperature	Engine Metering	View	°C
Genset Controller Total Operation Time	Genset Run Time	View	h
Genset High Battery Voltage Warning Delay	Genset Protection	View	s
Genset High Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset High Engine Speed Shutdown Frequency	Engine Protection	Adjust	Hz
Genset High Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset High Frequency Shutdown Delay	Generator Protection	View	s
Genset High Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset High Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset High Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Low Battery Voltage Warning Delay	Genset Protection	View	s
Genset Low Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset Low Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset Low Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset Low Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Model Number	Genset Info	Locked	
Genset Preheat Low Battery Voltage Limit	Genset Protection	View	%
Genset Serial Number	Genset Info	Locked	
Genset Short Term Low Frequency Shutdown Delay	Generator Protection	View	s
Genset State	Genset Info	View	
Genset System Battery Voltage	Genset System Configuration	Locked	V
Genset System Frequency	Genset System Configuration	Adjust	Hz
Genset System Voltage	Genset System Configuration	Adjust	V
Genset Voltage Phase Connection	Genset System Configuration	Adjust	

Parameter	Parameter Group	View/ Adjust	Units
Loss Of AC Sensing Shutdown Delay	Generator Protection	View	s
Product	Identity	View	
Public Can Protocol	Genset System Configuration	Adjust	
Supported Services	Kohler Power Device Protocol	View	
Vendor	Identity	View	
Voltage Regulator Average Voltage Adjustment	Voltage Regulator	Adjust	V
Voltage Regulator Firmware Version	Voltage Regulator	View	
Voltage Regulator Gain	Voltage Regulator	Adjust	
Voltage Regulator Stability Adjust	Voltage Regulator	Adjust	
Voltage Regulator Volts Per Hertz Cut In Frequency	Voltage Regulator	Adjust	Hz
Voltage Regulator Volts Per Hertz Slope	Voltage Regulator	Adjust	%

5.1 Introduction

SiteTech™ software allows viewing and adjustment of Decision-Maker® 550 controller settings.

Note: To update firmware on the Decision-Maker® 550 controller, use Program Loader software. See TT-1285 for instructions.

SiteTech™ software version 2.3 or higher is required for use with the Decision-Maker® 550 controller.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech software.

This section provides information specific to the Decision-Maker® 550 controller. For general SiteTech™ software operating instructions, see Section 3, Software Operation.

For controller operation instructions, refer to the controller operation manual provided with the generator set. See List of Related Literature on page 9 for the document part numbers.

5.2 Device Connections

⚠ WARNING

Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

5.2.1 Modbus Serial Connection

The following figures illustrate Modbus serial connections to the Decision-Maker® 550 controller. Also see Section 3.4.1.

Figure 5-1 illustrates an RS-485 serial device connection from port P20 to a personal computer.

Figure 5-2 illustrates an RS-232 serial connection using a null modem cable connected to port P18.

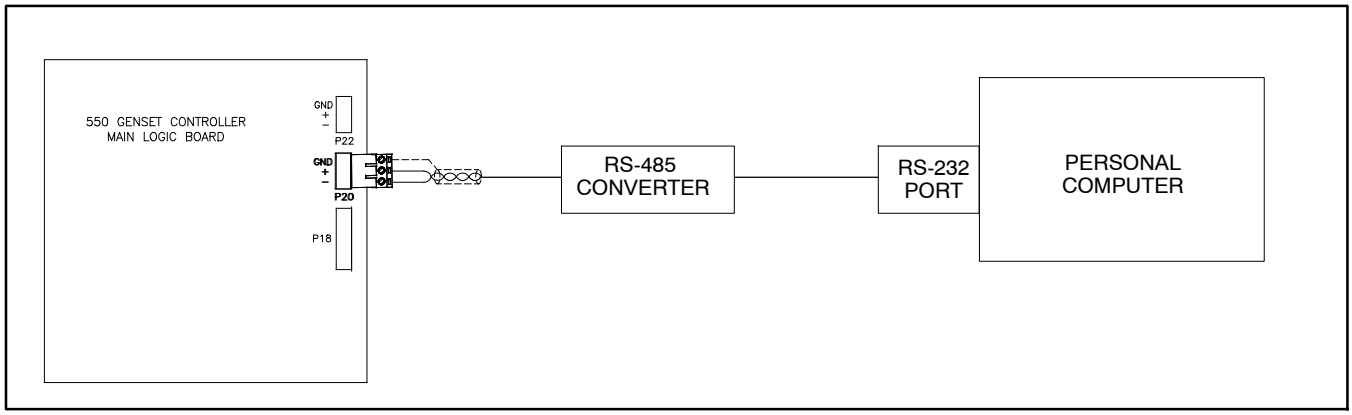


Figure 5-1 Decision-Maker® 550 RS-485 Serial Connection to P20

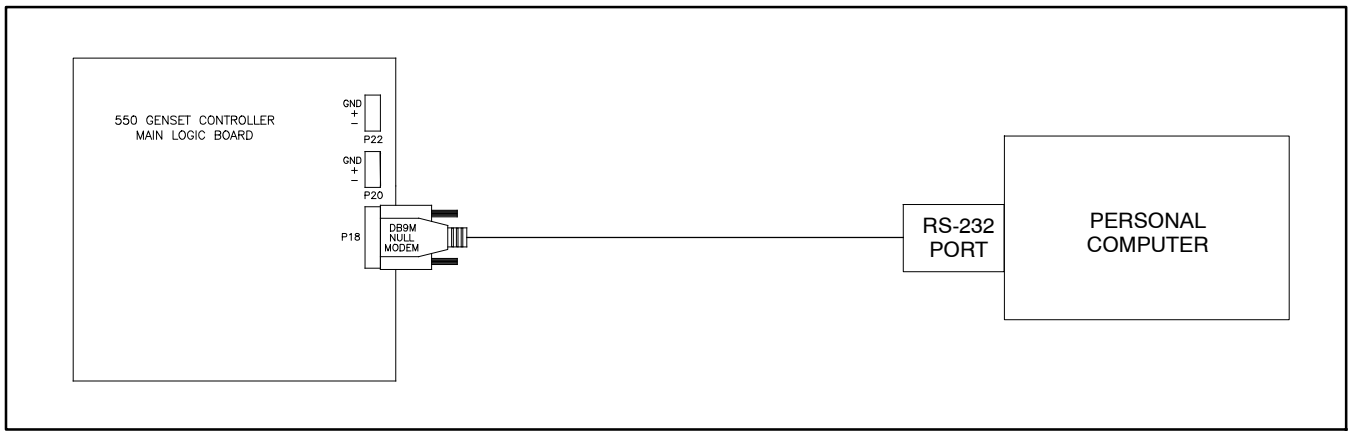


Figure 5-2 Decision-Maker® 550 RS-232 Serial Connection to P18

5.2.2 Network Connections

Figure 5-3 and Figure 5-4 illustrate network connections using the Modbus/Ethernet converter. See the instructions provided with the Modbus/Ethernet converter for converter connection and setup instructions. Also see Section 3.4.2 of this document.

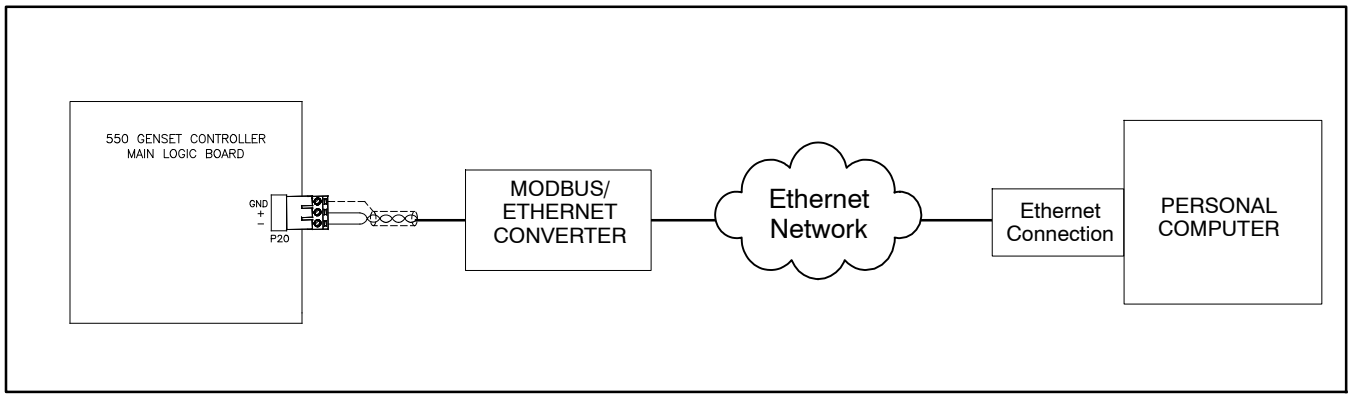


Figure 5-3 Decision-Maker® 550 Internet Connection with Modbus/Ethernet Converter

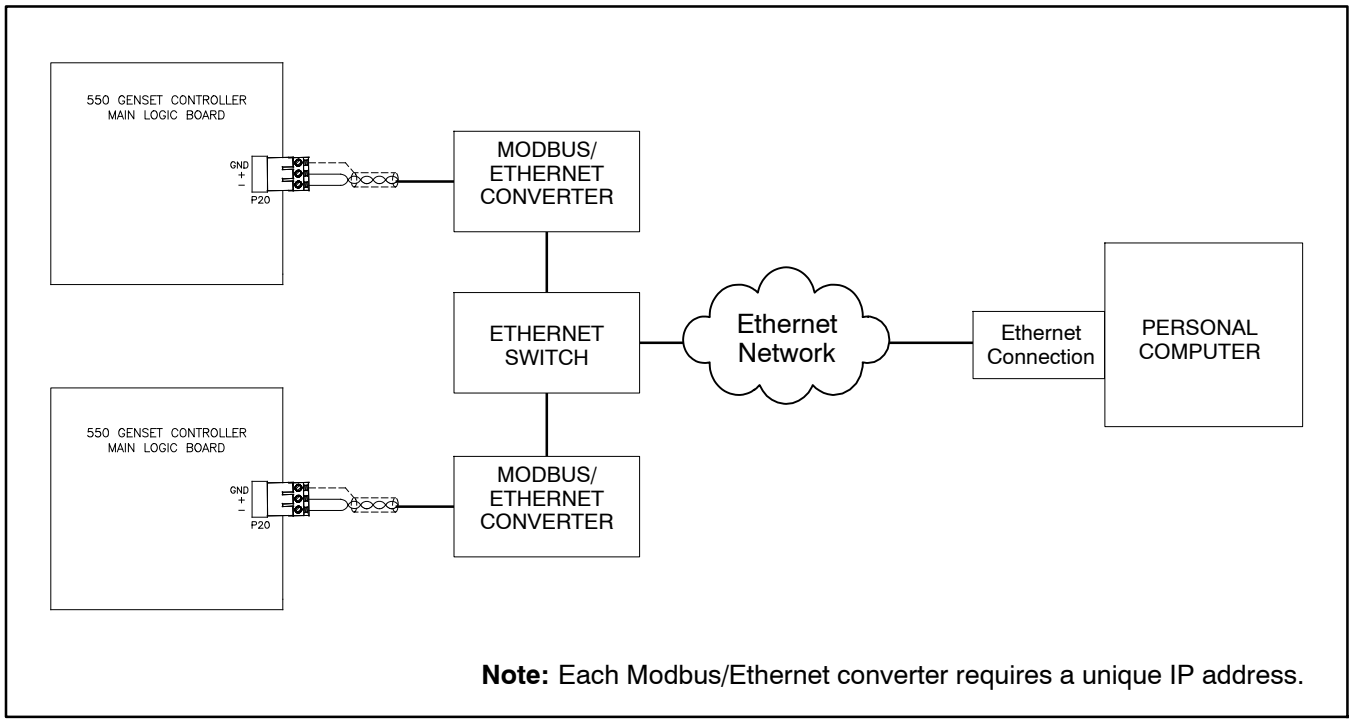


Figure 5-4 Multiple Decision-Maker® 550 Internet Connections with Separate Modbus/Ethernet Converters

5.3 Screens

SiteTech™ screens for the Decision-Maker® 550 controller are shown in the following figures. See Section 8.8 for a summary of controller parameters.

Refer to the Decision-Maker® 550 Controller Operation Manual for default settings and adjustment ranges. See List of Related Literature on page 9 for document part numbers.

5.4 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Figure 8-4 shows the SiteTech Parameters screen for the Decision-Maker® 550 controller. The Parameters screen shows parameters for all connected devices. See Section 8.8.1 for illustrations of the parameter groups.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

Set the Decision-Maker® 550 controller's programming mode to Remote to allow setting changes through SiteTech. Refer to the Decision-Maker® 550 Controller Operation Manual for instructions, if necessary.

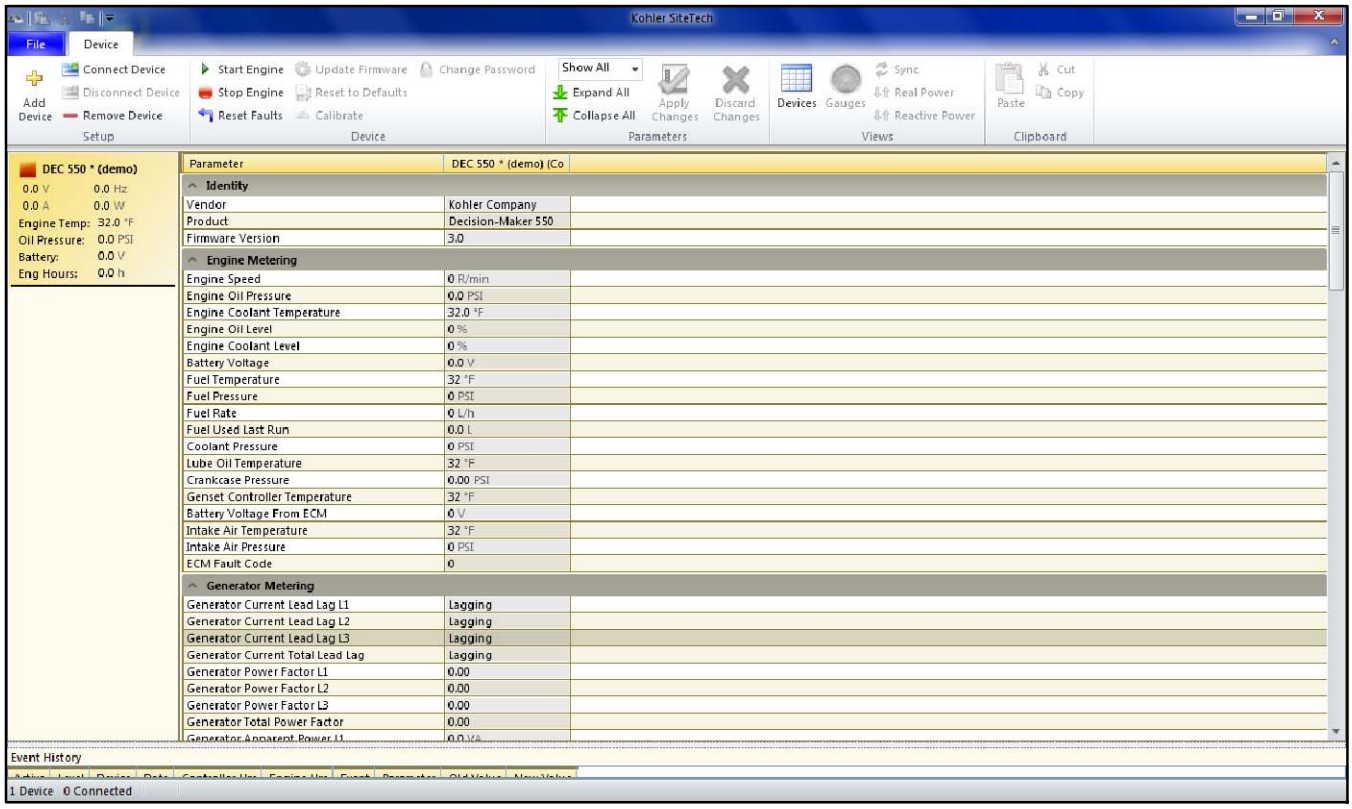


Figure 5-5 SiteTech Parameters Screen for the Decision-Maker® 550 Controller

5.5 Parameter Summary

5.5.1 Parameter Groups

The individual parameter groups for the Decision-Maker® 550 controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 8.8.

Some parameters shown in SiteTech are not accessible on all models. Support of some parameters is dependent on the controller configuration or generator set model.

Identity	
Vendor	Kohler Company
Product	Decision-Maker 550
Firmware Version	3.0

Engine Metering	
Engine Speed	0 R/min
Engine Oil Pressure	0.0 PSI
Engine Coolant Temperature	32.0 °F
Engine Oil Level	0 %
Engine Coolant Level	0 %
Battery Voltage	0.0 V
Fuel Temperature	32 °F
Fuel Pressure	0 PSI
Fuel Rate	0 L/h
Fuel Used Last Run	0.0 L
Coolant Pressure	0 PSI
Lube Oil Temperature	32 °F
Crankcase Pressure	0.00 PSI
Genset Controller Temperature	32 °F
Battery Voltage From ECM	0 V
Intake Air Temperature	32 °F
Intake Air Pressure	0 PSI
ECM Fault Code	0

Genset Info	
Genset Model Number	
Genset Spec Number	
Genset Serial Number	
Alternator Part Number	
Genset Controller Serial Number	0
Engine Part Number	
Engine Model Number	
Engine Serial Number	
ECM Status	0
ECM Unit Number	
ECM Serial Number	
Master Switch Position	Error
Programming Mode Status	Invalid
Final Assembly Date	2/18/2011 2:29:04 PM
Final Assembly Clock Number	0
Genset Designation	
Genset Load	
Genset Location	

Generator Metering	
Generator Current Lead Lag L1	Lagging
Generator Current Lead Lag L2	Lagging
Generator Current Lead Lag L3	Lagging
Generator Current Total Lead Lag	Lagging
Generator Power Factor L1	0.00
Generator Power Factor L2	0.00
Generator Power Factor L3	0.00
Generator Total Power Factor	0.00
Generator Apparent Power L1	0.0 VA
Generator Apparent Power L2	0.0 VA
Generator Apparent Power L3	0.0 VA
Generator Total Apparent Power	0.0 VA
Generator Reactive Power L1	0.0 VAR
Generator Reactive Power L2	0.0 VAR
Generator Reactive Power L3	0.0 VAR
Generator Total Reactive Power	0.0 VAR
Generator True Power L1	0.0 W
Generator True Power L2	0.0 W
Generator True Power L3	0.0 W
Generator True Total Power	0.0 W
Generator True Percent Of Rated Power	0 %
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	0.0 V
Generator Voltage L3-L1	0.0 V
Generator Voltage L1-N	0.0 V
Generator Voltage L2-N	0.0 V
Generator Voltage L3-N	0.0 V
Generator Current L1	0.0 A
Generator Current L2	0.0 A
Generator Current L3	0.0 A
Generator Frequency	0.0 Hz

Genset Run Time	
Genset Controller Clock Time	2/18/2011 2:29:04 PM
Genset Controller Total Operation Time	0.0 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Run Time Unloaded	0.00 h
Engine Total Number Of Starts	0
Genset Total Energy	0.0 kW·h
Genset Date Time Of Last Maintenance	2/18/2011 2:29:04 PM
Genset Controller Hours Of Operation Since Ma	0.0 h
Engine Run Time Since Maintenance	0.0 h
Engine Run Time Loaded Since Maintenance	0.0 h
Engine Run Time Unloaded Since Maintenance	0 h
Engine Number Of Starts Since Maintenance	0
Genset Energy Since Maintenance	0.0 kW·h
Engine Last Start Time	2/18/2011 2:29:04 PM
Last Run Length	0 h
Last Run Loaded	False
Timed Run Time	0.0 h
Timed Run Time Remaining	0.0 h
Timed Run Active	False

Genset Personality Profile	
Configuration Locked	False
Genset System Configuration	
Genset System Voltage	0.0 V
Genset System Frequency	50.0 Hz
Genset Voltage Phase Connection	Single Phase
Genset Power Rating	0.0 kW
Genset Rated Current	0.0 A
Genset System Battery Voltage	12 V
Measurement System	English
NFPA 110 Enabled	False
Cool Down Temperature Override	False
Voltage Regulator	
Voltage Regulator Average Voltage Adjustment	0.0 V
Voltage Regulator Gain	0
Under Frequency Unload Enabled	False
Under Frequency Unload Cut-in	0.0 Hz
Under Frequency Slope	0.0
Reactive Droop Enabled	False
Reactive Droop Adjust	0.0 %
Reactive Power Control Enabled	False
Reactive Power Adjustment	0.0 kVAR
Reactive Power Control	Absorbing
Power Factor Control Enabled	False
Power Factor Adjustment	0.00
Power Factor Control Lead Lag	Leading
Utility Gain	0

Engine Timing	
Engine Start Delay	0 s
Engine Cool Down Delay	0 s
Engine Start Aid Delay	0 s
Engine Crank On Delay	0 s
Engine Crank Pause Delay	0 s
Engine Number Of Crank Cycles	0
Genset Protection	
Genset Low Battery Voltage Warning Voltage	0 V
Genset High Battery Voltage Warning Voltage	0 V
Engine Protection	
Genset High Engine Speed Shutdown Frequen	0 Hz
Generator Protection	
Genset Low Voltage Shutdown Delay	0 s
Genset High Voltage Shutdown Delay	0 s
Genset Low Voltage Shutdown Limit	0 %
Genset High Voltage Shutdown Limit	0 %
Genset Low Frequency Shutdown Limit	0 %
Genset High Frequency Shutdown Limit	0 %

Digital Input A1	
Digital Input A1 Value	False
Digital Input A1 Enabled	False
Digital Input A1 Function	Warning
Digital Input A1 Inhibit Delay	0 s
Digital Input A1 Delay	0 s
Digital Input A1 Description	

The parameters shown above are available for all digital inputs, A1 – A21.

Analog Input A1	
Analog Input A1 Value	0.0
Analog Input A1 Shutdown Enabled	False
Analog Input A1 Warning Enabled	False
Analog Input A1 Inhibit Delay	0 s
Analog Input A1 Warning Delay	0 s
Analog Input A1 Shutdown Delay	0 s
Analog Input A1 Low Warning Limit	0.0
Analog Input A1 Low Shutdown Limit	0.0
Analog Input A1 High Warning Limit	0.0
Analog Input A1 High Shutdown Limit	0.0
Analog Input A1 Description	

The parameters shown above are available for all analog inputs, A1 – A7.

Relay Driver Output A1	
Relay Driver Output A1 Selection	Emergency Stop
Relay Driver Output A1 Setpoint	None

The parameters shown above are available for all relay driver outputs, A1 – A31.

Load Shedding	
Genset Load Shed Power Delay	0 s
Genset Load Shed Power Limit	0 %
Protective Relays	
PR Over Power Trip	0 %
PR Over Power Time Delay	0 s
PR Reverse Power Trip	0 %
PR Reverse Power Time Delay	0 s
PR Over Voltage Trip	0 %
PR Over Voltage Time Delay	0 s
PR Under Voltage Trip	0 %
PR Under Voltage Time Delay	0 s
PR Over Frequency Trip	0 %
PR Over Frequency Time Delay	0 s
PR Under Frequency Trip	0 %
PR Under Frequency Time Delay	0 s
PR Reverse Var Trip	0 %
PR Reverse Var Time Delay	0 s
PR Over Current VR Trip	0 %
PR Over Current VR Time Delay	0 s
SD Over Power Trip	0 %
SD Over Power Time Delay	0 s
SD Reverse Power Trip	0 %
SD Reverse Power Time Delay	0 s
SD Reverse Var Trip	0 %
SD Reverse Var Time Delay	0 s
SD Over Current VR Trip	0 %
SD Over Current VR Time Delay	0 s
Synch Check Relay Magnitude	0 V
Synch Check Relay Frequency	0 Hz
Synch Check Relay Phase Angle	0 °
Synch Check Relay Time Delay	0 s

5.5.2 Parameter Summary Table

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The View/Adjust column in the table indicates whether each parameter can be changed or only monitored.

- View: View only, no adjustment
- Adjust: Parameter is adjustable
- Locked: Not adjustable using SiteTech software.

Locked personality profile parameters can only be changed by using Program Loader to load the personality profile. See TT-1285, Program Loader Instructions.

Generator set calibration can be viewed through SiteTech, but changes to the calibration can only be made at the controller.

Refer to the Decision-Maker® 550 Controller Operation Manual for default settings and adjustment ranges.

Parameter	Parameter Group	View/ Adjust	Units
Alternator Part Number	Genset Info	Locked	
Analog Input Description (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input High Shutdown Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input High Warning Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Inhibit Delay (A1 – A7)	Analog Input A1 – A7	Adjust	s
Analog Input Low Shutdown Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Low Warning Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Shutdown Delay (A1 – A7)	Analog Input A1 – A7	Adjust	s
Analog Input Shutdown Enabled (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Value (A1 – A7)	Analog Input A1 – A7	View	
Analog Input Warning Delay (A1 – A7)	Analog Input A1 – A7	Adjust	s
Analog Input Warning Enabled (A1 – A7)	Analog Input A1 – A7	Adjust	
Battery Voltage	Engine Metering	View	V
Battery Voltage From ECM	Engine Metering	View	V
Configuration Locked	Genset Personality Profile	View	
Cool Down Temperature Override	Genset System Configuration	Adjust	
Coolant Pressure	Engine Metering	View	kPa
Crankcase Pressure	Engine Metering	View	kPa
Digital Input Delay (A1 – A21)	Digital Input A1 – A21	Adjust	s
Digital Input Description (A1 – A21)	Digital Input A1 – A21	Adjust	
Digital Input Enabled (A1 – A21)	Digital Input A1 – A21	Adjust	
Digital Input Function (A1 – A21)	Digital Input A1 – A21	Adjust	
Digital Input Inhibit Delay (A1 – A21)	Digital Input A1 – A21	Adjust	s
Digital Input Value (A1 – A21)	Digital Input A1 – A21	View	
ECM Fault Code	Engine Metering	View	
ECM Serial Number	Genset Info	View	
ECM Status	Genset Info	View	
ECM Unit Number	Genset Info	View	
Engine Cool Down Delay	Engine Timing	Adjust	s
Engine Coolant Level	Engine Metering	View	%
Engine Coolant Temperature	Engine Metering	View	C
Engine Crank On Delay	Engine Timing	Adjust	s
Engine Crank Pause Delay	Engine Timing	Adjust	s
Engine Last Start Time	Genset Run Time	View	
Engine Model Number	Genset Info	Locked	
Engine Number Of Crank Cycles	Engine Timing	Adjust	
Engine Number Of Starts Since Maintenance	Genset Run Time	View	
Engine Oil Level	Engine Metering	View	%

Parameter	Parameter Group	View/ Adjust	Units
Engine Oil Pressure	Engine Metering	View	kPa
Engine Part Number	Genset Info	Locked	
Engine Run Time Loaded Since Maintenance	Genset Run Time	View	h
Engine Run Time Since Maintenance	Genset Run Time	View	h
Engine Run Time Unloaded Since Maintenance	Genset Run Time	View	h
Engine Serial Number	Genset Info	Locked	
Engine Speed	Engine Metering	View	R/min
Engine Start Aid Delay	Engine Timing	Adjust	s
Engine Start Delay	Engine Timing	Adjust	s
Engine Total Number Of Starts	Genset Run Time	View	
Engine Total Run Time	Genset Run Time	View	h
Engine Total Run Time Loaded	Genset Run Time	View	h
Engine Total Run Time Unloaded	Genset Run Time	View	h
Final Assembly Clock Number	Genset Info	Adjust	
Final Assembly Date	Genset Info	View	
Firmware Version	Identity	View	
Fuel Pressure	Engine Metering	View	kPa
Fuel Rate	Engine Metering	View	L/h
Fuel Temperature	Engine Metering	View	C
Fuel Used Last Run	Engine Metering	View	L
Generator Apparent Power L1	Generator Metering	View	VA
Generator Apparent Power L2	Generator Metering	View	VA
Generator Apparent Power L3	Generator Metering	View	VA
Generator Current L1	Generator Metering	View	A
Generator Current L2	Generator Metering	View	A
Generator Current L3	Generator Metering	View	A
Generator Current Lead Lag L1	Generator Metering	View	
Generator Current Lead Lag L2	Generator Metering	View	
Generator Current Lead Lag L3	Generator Metering	View	
Generator Current Total Lead Lag	Generator Metering	View	
Generator Frequency	Generator Metering	View	Hz
Generator Power Factor L1	Generator Metering	View	
Generator Power Factor L2	Generator Metering	View	
Generator Power Factor L3	Generator Metering	View	
Generator Reactive Power L1	Generator Metering	View	VAR
Generator Reactive Power L2	Generator Metering	View	VAR
Generator Reactive Power L3	Generator Metering	View	VAR
Generator Total Apparent Power	Generator Metering	View	VA
Generator Total Power Factor	Generator Metering	View	
Generator Total Reactive Power	Generator Metering	View	VAR
Generator True Percent Of Rated Power	Generator Metering	View	%
Generator True Power L1	Generator Metering	View	W
Generator True Power L2	Generator Metering	View	W
Generator True Power L3	Generator Metering	View	W
Generator True Total Power	Generator Metering	View	W
Generator Voltage L1-L2	Generator Metering	View	V
Generator Voltage L1-N	Generator Metering	View	V
Generator Voltage L2-L3	Generator Metering	View	V
Generator Voltage L2-N	Generator Metering	View	V

Parameter	Parameter Group	View/ Adjust	Units
Generator Voltage L3-L1	Generator Metering	View	V
Generator Voltage L3-N	Generator Metering	View	V
Genset Controller Clock Time	Genset Run Time	View	
Genset Controller Hours Of Operation Since Maintenance	Genset Run Time	View	h
Genset Controller Serial Number	Genset Info	View	
Genset Controller Temperature	Engine Metering	View	C
Genset Controller Total Operation Time	Genset Run Time	View	h
Genset Date Time Of Last Maintenance	Genset Run Time	View	
Genset Designation	Genset Info	Adjust	
Genset Energy Since Maintenance	Genset Run Time	View	kW h
Genset High Battery Voltage Warning Voltage	Genset Protection	Adjust	V
Genset High Engine Speed Shutdown Frequency	Engine Protection	Adjust	Hz
Genset High Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset High Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset High Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Load	Genset Info	Adjust	
Genset Load Shed Power Delay	Load Shedding	Adjust	s
Genset Load Shed Power Limit	Load Shedding	Adjust	%
Genset Location	Genset Info	Adjust	
Genset Low Battery Voltage Warning Voltage	Genset Protection	Adjust	V
Genset Low Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset Low Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset Low Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Model Number	Genset Info	Locked	
Genset Power Rating	Genset System Configuration	Locked	kW
Genset Rated Current	Genset System Configuration	View	A
Genset Serial Number	Genset Info	Locked	
Genset Spec Number	Genset Info	Locked	
Genset System Battery Voltage	Genset System Configuration	Locked	V
Genset System Frequency	Genset System Configuration	Adjust	Hz
Genset System Voltage	Genset System Configuration	Adjust	V
Genset Total Energy	Genset Run Time	View	kW h
Genset Voltage Phase Connection	Genset System Configuration	Adjust	
Intake Air Pressure	Engine Metering	View	kPa
Intake Air Temperature	Engine Metering	View	C
Last Run Length	Genset Run Time	View	h
Last Run Loaded	Genset Run Time	View	
Lube Oil Temperature	Engine Metering	View	C
Master Switch Position	Genset Info	View	
Measurement System	Genset System Configuration	Adjust	
NFPA 110 Enabled	Genset System Configuration	Adjust	
Power Factor Adjustment	Voltage Regulator	Adjust	
Power Factor Control Enabled	Voltage Regulator	Adjust	
Power Factor Control Lead Lag	Voltage Regulator	Adjust	
PR Over Current VR Time Delay	Protective Relays	Adjust	s
PR Over Current VR Trip	Protective Relays	Adjust	%
PR Over Frequency Time Delay	Protective Relays	Adjust	s
PR Over Frequency Trip	Protective Relays	Adjust	%

Parameter	Parameter Group	View/ Adjust	Units
PR Over Power Time Delay	Protective Relays	Adjust	s
PR Over Power Trip	Protective Relays	Adjust	%
PR Over Voltage Time Delay	Protective Relays	Adjust	s
PR Over Voltage Trip	Protective Relays	Adjust	%
PR Reverse Power Time Delay	Protective Relays	Adjust	s
PR Reverse Power Trip	Protective Relays	Adjust	%
PR Reverse Var Time Delay	Protective Relays	Adjust	s
PR Reverse Var Trip	Protective Relays	Adjust	%
PR Under Frequency Time Delay	Protective Relays	Adjust	s
PR Under Frequency Trip	Protective Relays	Adjust	%
PR Under Voltage Time Delay	Protective Relays	Adjust	s
PR Under Voltage Trip	Protective Relays	Adjust	%
Product	Identity	View	
Programming Mode Status	Genset Info	View	
Reactive Droop Adjust	Voltage Regulator	Adjust	%
Reactive Droop Enabled	Voltage Regulator	Adjust	
Reactive Power Adjustment	Voltage Regulator	Adjust	kVAR
Reactive Power Control	Voltage Regulator	Adjust	
Reactive Power Control Enabled	Voltage Regulator	Adjust	
Relay Driver Output Selection (A1 – A31)	Relay Driver Output A1 – A31	Adjust	
Relay Driver Output Setpoint (A1 – A31)	Relay Driver Output A1 – A31	Adjust	
SD Over Current VR Time Delay	Protective Relays	Adjust	s
SD Over Current VR Trip	Protective Relays	Adjust	%
SD Over Power Time Delay	Protective Relays	Adjust	s
SD Over Power Trip	Protective Relays	Adjust	%
SD Reverse Power Time Delay	Protective Relays	Adjust	s
SD Reverse Power Trip	Protective Relays	Adjust	%
SD Reverse Var Time Delay	Protective Relays	Adjust	s
SD Reverse Var Trip	Protective Relays	Adjust	%
Synch Check Relay Frequency	Protective Relays	Adjust	Hz
Synch Check Relay Magnitude	Protective Relays	Adjust	V
Synch Check Relay Phase Angle	Protective Relays	Adjust	
Synch Check Relay Time Delay	Protective Relays	Adjust	s
Timed Run Active	Genset Run Time	View	
Timed Run Time	Genset Run Time	Adjust	h
Timed Run Time Remaining	Genset Run Time	View	h
Under Frequency Slope	Voltage Regulator	Adjust	
Under Frequency Unload Cut-in	Voltage Regulator	Adjust	Hz
Under Frequency Unload Enabled	Voltage Regulator	Adjust	
Utility Gain	Voltage Regulator	Adjust	
Vendor	Identity	View	
Voltage Regulator Average Voltage Adjustment	Voltage Regulator	Adjust	V
Voltage Regulator Gain	Voltage Regulator	Adjust	

6.1 Introduction

SiteTech™ software allows viewing and adjustment of most Decision-Maker® 3000 controller settings, including many parameters that are not accessible through the controller's user interface.

SiteTech™ software version 1.1 or higher is required for use with the Decision-Maker® 3000 controller.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech software. If the controller is not powered by the generator set battery, it may drain the battery on the connected laptop PC.

This section provides information specific to the Decision-Maker® 3000 controller. For general software operating instructions, see Section 3, Software Operation. For controller operation instructions, refer to the controller operation manual provided with the generator set. See List of Related Literature on page 9 for the document part number.

6.2 Device Connection

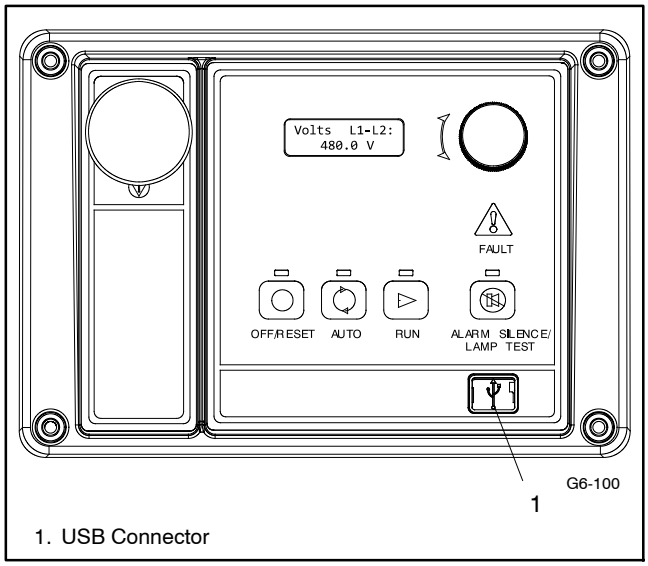
⚠ WARNING

Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Use a USB cable with a mini-B connector to connect the controller to your personal computer. See Figure 6-1 for the USB connector location on the controller. See Section 1.3 for USB cable details.



1. USB Connector

Figure 6-1 Decision-Maker® 3000 Controller

6.3 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

SiteTech™ screens for the Decision-Maker® 3000 controller are shown in the following figures. See Section 6.4 for a summary of controller parameters.

Some parameters shown in SiteTech are not accessible on all models. Support of some parameters is dependent on the controller configuration or generator set model.

Refer to the Decision-Maker® 3000 Controller Operation Manual for default settings and adjustment ranges.

6.3.1 Parameter Settings

SiteTech allows viewing and adjustment of many engine and generator set parameters that are not accessible through the controller's user interface. Refer to the screen shots in Section 6.3.3 and parameter list in Section 6.4 to see the individual parameters.

6.3.2 Programmable Inputs and Outputs

Use SiteTech to assign functions to digital and analog inputs and outputs. Each input and output corresponds to a controller connection. Verify that the settings are appropriate for the connected sensor, switch, or equipment. Do not change factory-set inputs and outputs without verifying the input and output connections.

Inputs and outputs labeled with a letter A are connected to the Decision-Maker 3000 controller's main logic board. See Figure 6-2.

SiteTech I/O Name	DEC 3000 Board Connection
Analog Input A1	TB1 AI2 *
Digital Output A1	TB2 (relay output)
Digital Input A1	TB1 DI1
Digital Input A2	TB1 DI2
Digital Input A3	TB1 DI3
* AI1 on the board is not programmable.	

Figure 6-2 Logic Board I/O Connections

Inputs and outputs labeled with a letter B are on the optional remote I/O board. See Figure 6-3.

SiteTech I/O Name	Optional I/O Board Connection
Analog Input B1	P28 Analog Input VN1/VP1
Analog Input B2	P28 Analog Input VN2/VP2
Digital Output B1	P29 Relay Output 2.1
Digital Output B2	P30 Relay Output 2.2
Digital Output B3	P31 Relay Output 2.3
Digital Output B4	P32 Relay Output 2.4
Digital Output B5	P32 Relay Output 2.5

Figure 6-3 Optional Inputs and Outputs

Analog Inputs

Click on the Analog Input Function cell to see a list of functions that can be assigned to each analog input.

For each analog input, set the delays and limits and enable or disable protectives by clicking on the cell and selecting or typing in the desired value.

The analog input value and relative value (% of maximum) are displayed.

Digital Inputs

Click on the Digital Input Function cell to see a list of functions that can be selected for each programmable digital input. Enable or disable the input using the Digital Input Enabled setting. Enter the delays and switch type, normally open (NO) or normally closed (NC), as appropriate for the connection.

The Digital Input Value cell indicates whether the digital input is on (True) or off (False). Note that this value requires selection of the appropriate switch type (NO or NC).

Programmable Digital Outputs

Click on the Digital Output Function cell to see a list of functions that can be selected for each programmable digital output.

The Digital Output Value cell indicates whether the output is on (True) or off (False).

6.3.3 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Figure 6-4 shows the SiteTech Parameters screen for the Decision-Maker® 3000 controller. The parameter groups are shown closed in this illustration. See Section 6.3.4 for illustrations of the parameter groups.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

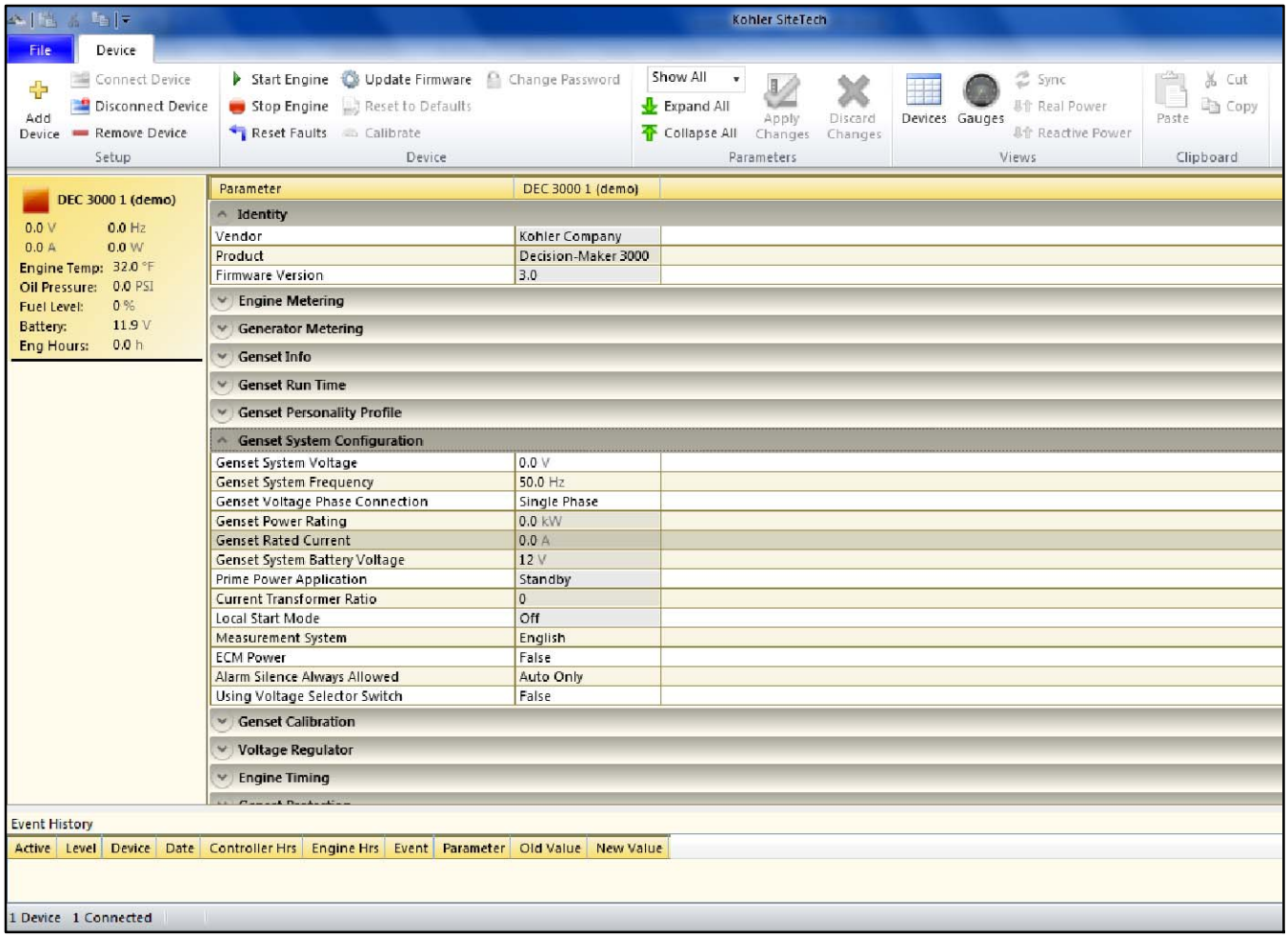


Figure 6-4 SiteTech Parameters Screen Showing All Closed Groups for the Decision-Maker® 3000 Controller

6.3.4 Parameter Groups

The parameter groups for the Decision-Maker® 3000 controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 6.4.

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Parameter settings and data shown in the following screen shots are sample values only.

Identity	
Vendor	Kohler Company
Product	Decision-Maker 3000
Firmware Version	0.0.0

Engine Metering	
Engine Speed	0 R/min
Engine Target Speed	0 R/min
Engine Oil Pressure	0.0 PSI
Engine Coolant Temperature	140.0 °F
Engine Oil Level	0 %
Engine Fuel Level	0 %
Battery Voltage	11.9 V
Fuel Temperature	32 °F
Fuel Pressure	0 PSI
Fuel Rate	0 Gal/h
Fuel Used Last Run	0.0 Gal
Coolant Pressure	0 PSI
Lube Oil Temperature	32 °F
Crankcase Pressure	0.00 PSI
Genset Controller Temperature	32 °F
Battery Voltage From ECM	0.0 V
Exhaust Temperature	32.0 °F
Exhaust Pressure	0.00 PSI
Intake Air Temperature	32 °F
Intake Air Pressure	0 PSI
Engine Low Oil Pressure Switch	Off
Engine Oil Level Switch	Off
Engine High Coolant Temperature Switch	Off
Engine Low Coolant Temperature Switch	Off
Engine Low Fuel Level Switch	Off

Generator Metering	
Generator Apparent Power L1	0.0 VA
Generator Apparent Power L2	0.0 VA
Generator Apparent Power L3	0.0 VA
Generator Total Apparent Power	0.0 VA
Generator True Power L1	0.0 W
Generator True Power L2	0.0 W
Generator True Power L3	0.0 W
Generator True Total Power	0.0 W
Generator True Percent Of Rated Power	0 %
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	0.0 V
Generator Voltage L3-L1	0.0 V
Generator Voltage Average Line To Line	0.0 V
Generator Voltage L1-N	0.0 V
Generator Voltage L2-N	0.0 V
Generator Voltage L3-N	0.0 V
Generator Voltage Average Line To Neutral	0.0 V
Generator Current L1	0.0 A
Generator Current L2	0.0 A
Generator Current L3	0.0 A
Generator Current Average	0.0 A
Generator Frequency	0.0 Hz
Generator Metering Firmware Version	0.0.0

Genset Info	
Genset Model Number	
Genset Serial Number	
Alternator Part Number	
Genset Controller Serial Number	0
Engine Part Number	
Engine Model Number	
Engine Serial Number	
Genset State	Off

Genset Run Time	
Genset Controller Total Operation Time	0.2 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Number Of Starts	0
Genset Total Energy	0.0 kW·h

Genset Personality Profile	
ECM Model	Not Selected
Maximum Alternator Current	0 A
Engine Number Of Flywheel Teeth	0
Engine Warmed Up Temperature	32 °F
Engine Cooled Down Temperature	32 °F
Engine Crank Disconnect Speed	0 R/min
Engine Idle Speed	0 R/min
Engine Run Speed	0 R/min
Engine Coolant Temperature Protectives Enabled	None
Engine Coolant Temperature Sensor	None
Engine High Coolant Temperature Inhibit Delay	0 s
Engine Low Coolant Temperature Warning Delay	0 s
Engine High Coolant Temperature Warning Delay	0 s
Engine Low Coolant Temperature Shutdown Delay	0 s
Engine High Coolant Temperature Shutdown Delay	0 s
Engine Low Coolant Temperature Warning Limit	32.0 °F
Engine High Coolant Temperature Warning Limit	32.0 °F
Engine High Coolant Temperature Shutdown Limit	32.0 °F
Engine Coolant Temperature Deadband	32.0 °F
Personality Alternator Manufacturer	Marathon
Personality Alternator Toc Time Constant	0 s
Personality Alternator Number Of Poles	0
Personality Alternator Type	Old Reconnectable O...
Personality Fixed Voltage 50 Hz	0 V
Personality Power Rating Single Phase 50 Hz 10 PF	0 kW
Personality Power Rating Single Phase 50 Hz 8 PF	0 kW
Personality Power Rating Fixed Volt 50 Hz	0 kW
Personality Power Rating 50 Hz 220 440	0 kW
Personality Power Rating 50 Hz 208 415	0 kW
Personality Power Rating 50 Hz 200 400	0 kW
Personality Power Rating 50 Hz 190 380	0 kW
Personality Power Rating 50 Hz 173 346	0 kW
Personality Power Rating 50 Hz Delta	0 kW
Personality Fixed Voltage 60 Hz	0 V
Personality Power Rating Single Phase 60 Hz 10 PF	0 kW
Personality Power Rating Single Phase 60 Hz 8 PF	0 kW
Personality Power Rating Fixed Volt 60 Hz	0 kW
Personality Power Rating 60 Hz 240 480	0 kW
Personality Power Rating 60 Hz 230 460	0 kW
Personality Power Rating 60 Hz 220 440	0 kW
Personality Power Rating 60 Hz 208 416	0 kW
Personality Power Rating 60 Hz 190 380	0 kW
Personality Power Rating 60 Hz Delta	0 kW
Personality Installed Options	None

Genset System Configuration	
Genset System Voltage	0.0 V
Genset System Frequency	50.0 Hz
Genset Voltage Phase Connection	Single Phase
Genset Power Rating	0.0 kW
Genset Rated Current	0.0 A
Genset System Battery Voltage	12 V
Prime Power Application	Standby
Current Transformer Ratio	0
Local Start Mode	Off
Measurement System	English
ECM Power	False
Alarm Silence Always Allowed	Auto Only
Display Contrast	0
Using Voltage Selector Switch	False
Battle Mode	Off

Genset Calibration	
Genset Calibration Factor Voltage L1-L2	0.000000
Genset Calibration Factor Voltage L2-L3	0.000000
Genset Calibration Factor Voltage L3-L1	0.000000
Genset Calibration Factor Voltage L1-N	0.000000
Genset Calibration Factor Voltage L2-N	0.000000
Genset Calibration Factor Voltage L3-N	0.000000
Genset Calibration Factor Current L1	0.000000
Genset Calibration Factor Current L2	0.000000
Genset Calibration Factor Current L3	0.000000

Voltage Regulator	
Voltage Regulator Average Voltage Adjustment	0.0 V
Voltage Regulator Volts Per Hertz Slope	0 %
Voltage Regulator Volts Per Hertz Cut In Frequency	0.0 Hz
Voltage Regulator Gain	0
Voltage Regulator Stability Adjust	0
Voltage Regulator Firmware Version	0.0.0

Engine Timing	
Engine Idle Duration	0.0 s
Engine Restart Delay	0 s
Engine Start Delay	0 s
Engine ECM Start Delay	0 s
Engine Cool Down Delay	0 s
Engine Start Aid Delay	0 s
Engine Crank On Delay	0 s
Engine Crank Pause Delay	0 s
Engine Number Of Crank Cycles	0

Genset Protection	
After Crank Disconnect Fault Inhibit Delay	0 s
Genset Low Battery Voltage Warning Delay	0 s
Genset High Battery Voltage Warning Delay	0 s
Genset Low Battery Voltage Warning Limit	0 %
Genset High Battery Voltage Warning Limit	0 %
Genset Battery Low Cranking Voltage Warning Delay	0 s
Genset Battery Low Cranking Voltage Warning Limit	0 %

Engine Protection	
Engine Low Coolant Level Shutdown Delay	0 s
Engine Low Oil Pressure Warning Delay	0 s
Engine Low Oil Pressure Shutdown Delay	0 s
Engine Locked Rotor Shutdown Delay	0 s
ECM Communication Loss Shutdown Delay	0 s
Genset Low Engine Speed Shutdown Limit	0 %
Genset High Engine Speed Shutdown Limit	0 %
Engine Oil Pressure Protectives Enabled	None
Engine Oil Pressure Sensor	None
Engine Low Oil Pressure Inhibit Delay	0 s
Engine Low Oil Pressure Warning Limit	0.0 PSI
Engine Low Oil Pressure Shutdown Limit	0.0 PSI
Engine Oil Pressure Deadband	0.0 PSI

Generator Protection	
Loss Of AC Sensing Shutdown Delay	0 s
Genset Low Voltage Shutdown Delay	0 s
Genset High Voltage Shutdown Delay	0 s
Genset Low Voltage Shutdown Limit	0 %
Genset High Voltage Shutdown Limit	0 %
Genset Short Term Low Frequency Shutdown Delay	0 s
Genset Long Term Low Frequency Shutdown Delay	0 s
Genset High Frequency Shutdown Delay	0 s
Genset Low Frequency Shutdown Limit	0 %
Genset High Frequency Shutdown Limit	0 %

Digital Input A1	
Digital Input A1 Value	False
Digital Input A1 Enabled	False
Digital Input A1 Event	None
Digital Input A1 Inhibit Delay	0 s
Digital Input A1 Delay	0 s
Digital Input A1 Switch Type	Normally Open

The groups for all digital inputs are similar.

Digital Output A1	
Digital Output A1 Value	False
Digital Output A1 Event	None

The groups for all digital outputs are similar.

Analog Input A1	
Analog Input A1 Value	0.0
Analog Input A1 Relative Value	0.00 %
Analog Input A1 Protectives Enabled	None
Analog Input A1 Event	None
Analog Input A1 Sensor	None
Analog Input A1 Low Protective Inhibit Delay	0 s
Analog Input A1 High Protective Inhibit Delay	0 s
Analog Input A1 Normal Delay	0 s
Analog Input A1 Low Warning Delay	0 s
Analog Input A1 Critically Low Warning Delay	0 s
Analog Input A1 High Warning Delay	0 s
Analog Input A1 Critically High Warning Delay	0 s
Analog Input A1 Low Shutdown Delay	0 s
Analog Input A1 High Shutdown Delay	0 s
Analog Input A1 Low Warning Limit	0.0
Analog Input A1 Critically Low Warning Limit	0.0
Analog Input A1 Low Shutdown Limit	0.0
Analog Input A1 High Warning Limit	0.0
Analog Input A1 Critically High Warning Limit	0.0
Analog Input A1 High Shutdown Limit	0.0
Analog Input A1 Deadband	0.0

The groups for all analog inputs are similar.

Modbus	
Modbus Baud Rate	9600 b/s
Modbus Slave Address	0

6.4 Parameter Summary

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The View/Adjust column in the table indicates whether each parameter can be changed or only monitored.

- View: View only, no adjustment
- Locked: Adjustable only when resetting the device profile (personality profile). See Section 3.13.5.
- Adjust: Parameter is adjustable

Refer to the Decision-Maker® 3000 Controller Operation Manual for default settings and adjustment ranges.

Some parameters shown in SiteTech are not accessible on all models. Support of some parameters is dependent on the controller configuration or generator set model.

Generator set calibration can be viewed through SiteTech, but changes to the calibration can only be made at the controller.

Parameter	Parameter Group	View/ Adjust	Units
After Crank Disconnect Fault Inhibit Delay	Genset Protection	View	s
Alarm Silence Always Allowed	Genset System Configuration	Adjust	
Alternator Part Number	Genset Info	Locked	
Analog Input A1 Critically High Warning Delay	Analog Input A1	Adjust	s
Analog Input A1 Critically High Warning Limit	Analog Input A1	Adjust	
Analog Input A1 Critically Low Warning Delay	Analog Input A1	Adjust	s
Analog Input A1 Critically Low Warning Limit	Analog Input A1	Adjust	
Analog Input A1 Deadband	Analog Input A1	Adjust	
Analog Input A1 Event	Analog Input A1	Adjust	
Analog Input A1 High Protective Inhibit Delay	Analog Input A1	Adjust	s
Analog Input A1 High Shutdown Delay	Analog Input A1	Adjust	s
Analog Input A1 High Shutdown Limit	Analog Input A1	Adjust	
Analog Input A1 High Warning Delay	Analog Input A1	Adjust	s
Analog Input A1 High Warning Limit	Analog Input A1	Adjust	
Analog Input A1 Low Protective Inhibit Delay	Analog Input A1	Adjust	s
Analog Input A1 Low Shutdown Delay	Analog Input A1	Adjust	s
Analog Input A1 Low Shutdown Limit	Analog Input A1	Adjust	
Analog Input A1 Low Warning Delay	Analog Input A1	Adjust	s
Analog Input A1 Low Warning Limit	Analog Input A1	Adjust	
Analog Input A1 Normal Delay	Analog Input A1	Adjust	s
Analog Input A1 Protectives Enabled	Analog Input A1	Adjust	
Analog Input A1 Relative Value	Analog Input A1	View	%
Analog Input A1 Sensor	Analog Input A1	Adjust	
Analog Input A1 Value	Analog Input A1	View	
Analog Input B1 Critically High Warning Delay	Analog Input B1	Adjust	s
Analog Input B1 Critically High Warning Limit	Analog Input B1	Adjust	
Analog Input B1 Critically Low Warning Delay	Analog Input B1	Adjust	s
Analog Input B1 Critically Low Warning Limit	Analog Input B1	Adjust	
Analog Input B1 Deadband	Analog Input B1	Adjust	
Analog Input B1 Event	Analog Input B1	Adjust	
Analog Input B1 High Protective Inhibit Delay	Analog Input B1	Adjust	s
Analog Input B1 High Shutdown Delay	Analog Input B1	Adjust	s
Analog Input B1 High Shutdown Limit	Analog Input B1	Adjust	
Analog Input B1 High Warning Delay	Analog Input B1	Adjust	s
Analog Input B1 High Warning Limit	Analog Input B1	Adjust	
Analog Input B1 Low Protective Inhibit Delay	Analog Input B1	Adjust	s
Analog Input B1 Low Shutdown Delay	Analog Input B1	Adjust	s
Analog Input B1 Low Shutdown Limit	Analog Input B1	Adjust	
Analog Input B1 Low Warning Delay	Analog Input B1	Adjust	s

Parameter	Parameter Group	View/ Adjust	Units
Analog Input B1 Low Warning Limit	Analog Input B1	Adjust	
Analog Input B1 Normal Delay	Analog Input B1	Adjust	s
Analog Input B1 Protectives Enabled	Analog Input B1	Adjust	
Analog Input B1 Relative Value	Analog Input B1	View	%
Analog Input B1 Sensor	Analog Input B1	Adjust	
Analog Input B1 Value	Analog Input B1	View	
Analog Input B2 Critically High Warning Delay	Analog Input B2	Adjust	s
Analog Input B2 Critically High Warning Limit	Analog Input B2	Adjust	
Analog Input B2 Critically Low Warning Delay	Analog Input B2	Adjust	s
Analog Input B2 Critically Low Warning Limit	Analog Input B2	Adjust	
Analog Input B2 Deadband	Analog Input B2	Adjust	
Analog Input B2 Event	Analog Input B2	Adjust	
Analog Input B2 High Protective Inhibit Delay	Analog Input B2	Adjust	s
Analog Input B2 High Shutdown Delay	Analog Input B2	Adjust	s
Analog Input B2 High Shutdown Limit	Analog Input B2	Adjust	
Analog Input B2 High Warning Delay	Analog Input B2	Adjust	s
Analog Input B2 High Warning Limit	Analog Input B2	Adjust	
Analog Input B2 Low Protective Inhibit Delay	Analog Input B2	Adjust	s
Analog Input B2 Low Shutdown Delay	Analog Input B2	Adjust	s
Analog Input B2 Low Shutdown Limit	Analog Input B2	Adjust	
Analog Input B2 Low Warning Delay	Analog Input B2	Adjust	s
Analog Input B2 Low Warning Limit	Analog Input B2	Adjust	
Analog Input B2 Normal Delay	Analog Input B2	Adjust	s
Analog Input B2 Protectives Enabled	Analog Input B2	Adjust	
Analog Input B2 Relative Value	Analog Input B2	View	%
Analog Input B2 Sensor	Analog Input B2	Adjust	
Analog Input B2 Value	Analog Input B2	View	
Analog Input C1 Critically High Warning Delay	Analog Input C1	Adjust	s
Analog Input C1 Critically High Warning Limit	Analog Input C1	Adjust	
Analog Input C1 Critically Low Warning Delay	Analog Input C1	Adjust	s
Analog Input C1 Critically Low Warning Limit	Analog Input C1	Adjust	
Analog Input C1 Deadband	Analog Input C1	Adjust	
Analog Input C1 Event	Analog Input C1	Adjust	
Analog Input C1 High Protective Inhibit Delay	Analog Input C1	Adjust	s
Analog Input C1 High Shutdown Delay	Analog Input C1	Adjust	s
Analog Input C1 High Shutdown Limit	Analog Input C1	Adjust	
Analog Input C1 High Warning Delay	Analog Input C1	Adjust	s
Analog Input C1 High Warning Limit	Analog Input C1	Adjust	
Analog Input C1 Low Protective Inhibit Delay	Analog Input C1	Adjust	s
Analog Input C1 Low Shutdown Delay	Analog Input C1	Adjust	s
Analog Input C1 Low Shutdown Limit	Analog Input C1	Adjust	
Analog Input C1 Low Warning Delay	Analog Input C1	Adjust	s
Analog Input C1 Low Warning Limit	Analog Input C1	Adjust	
Analog Input C1 Normal Delay	Analog Input C1	Adjust	s
Analog Input C1 Protectives Enabled	Analog Input C1	Adjust	
Analog Input C1 Relative Value	Analog Input C1	View	%
Analog Input C1 Sensor	Analog Input C1	Adjust	
Analog Input C1 Value	Analog Input C1	View	
Analog Input C2 Critically High Warning Delay	Analog Input C2	Adjust	s
Analog Input C2 Critically High Warning Limit	Analog Input C2	Adjust	
Analog Input C2 Critically Low Warning Delay	Analog Input C2	Adjust	s
Analog Input C2 Critically Low Warning Limit	Analog Input C2	Adjust	
Analog Input C2 Deadband	Analog Input C2	Adjust	

Parameter	Parameter Group	View/ Adjust	Units
Analog Input C2 Event	Analog Input C2	Adjust	
Analog Input C2 High Protective Inhibit Delay	Analog Input C2	Adjust	s
Analog Input C2 High Shutdown Delay	Analog Input C2	Adjust	s
Analog Input C2 High Shutdown Limit	Analog Input C2	Adjust	
Analog Input C2 High Warning Delay	Analog Input C2	Adjust	s
Analog Input C2 High Warning Limit	Analog Input C2	Adjust	
Analog Input C2 Low Protective Inhibit Delay	Analog Input C2	Adjust	s
Analog Input C2 Low Shutdown Delay	Analog Input C2	Adjust	s
Analog Input C2 Low Shutdown Limit	Analog Input C2	Adjust	
Analog Input C2 Low Warning Delay	Analog Input C2	Adjust	s
Analog Input C2 Low Warning Limit	Analog Input C2	Adjust	
Analog Input C2 Normal Delay	Analog Input C2	Adjust	s
Analog Input C2 Protectives Enabled	Analog Input C2	Adjust	
Analog Input C2 Relative Value	Analog Input C2	View	%
Analog Input C2 Sensor	Analog Input C2	Adjust	
Analog Input C2 Value	Analog Input C2	View	
Battery Voltage	Engine Metering	View	V
Battery Voltage From ECM	Engine Metering	View	V
Battle Mode	Genset System Configuration	Adjust	
Coolant Pressure	Engine Metering	View	kPa
Crankcase Pressure	Engine Metering	View	kPa
Current Transformer Ratio	Genset System Configuration	Locked	
Digital Input A1 Delay	Digital Input A1	Adjust	s
Digital Input A1 Enabled	Digital Input A1	Adjust	
Digital Input A1 Event	Digital Input A1	Adjust	
Digital Input A1 Inhibit Delay	Digital Input A1	Adjust	s
Digital Input A1 Switch Type	Digital Input A1	Adjust	
Digital Input A1 Value	Digital Input A1	View	
Digital Input A2 Delay	Digital Input A2	Adjust	s
Digital Input A2 Enabled	Digital Input A2	Adjust	
Digital Input A2 Event	Digital Input A2	Adjust	
Digital Input A2 Inhibit Delay	Digital Input A2	Adjust	s
Digital Input A2 Switch Type	Digital Input A2	Adjust	
Digital Input A2 Value	Digital Input A2	View	
Digital Input A3 Delay	Digital Input A3	Adjust	s
Digital Input A3 Enabled	Digital Input A3	Adjust	
Digital Input A3 Event	Digital Input A3	Adjust	
Digital Input A3 Inhibit Delay	Digital Input A3	Adjust	s
Digital Input A3 Switch Type	Digital Input A3	Adjust	
Digital Input A3 Value	Digital Input A3	View	
Digital Input C1 Delay	Digital Input C1	Adjust	s
Digital Input C1 Enabled	Digital Input C1	Adjust	
Digital Input C1 Event	Digital Input C1	Adjust	
Digital Input C1 Inhibit Delay	Digital Input C1	Adjust	s
Digital Input C1 Switch Type	Digital Input C1	Adjust	
Digital Input C1 Value	Digital Input C1	View	
Digital Input C2 Delay	Digital Input C2	Adjust	s
Digital Input C2 Enabled	Digital Input C2	Adjust	
Digital Input C2 Event	Digital Input C2	Adjust	
Digital Input C2 Inhibit Delay	Digital Input C2	Adjust	s
Digital Input C2 Switch Type	Digital Input C2	Adjust	
Digital Input C2 Value	Digital Input C2	View	
Digital Input C3 Delay	Digital Input C3	Adjust	s

Parameter	Parameter Group	View/ Adjust	Units
Digital Input C3 Enabled	Digital Input C3	Adjust	
Digital Input C3 Event	Digital Input C3	Adjust	
Digital Input C3 Inhibit Delay	Digital Input C3	Adjust	s
Digital Input C3 Switch Type	Digital Input C3	Adjust	
Digital Input C3 Value	Digital Input C3	View	
Digital Input C4 Delay	Digital Input C4	Adjust	s
Digital Input C4 Enabled	Digital Input C4	Adjust	
Digital Input C4 Event	Digital Input C4	Adjust	
Digital Input C4 Inhibit Delay	Digital Input C4	Adjust	s
Digital Input C4 Switch Type	Digital Input C4	Adjust	
Digital Input C4 Value	Digital Input C4	View	
Digital Output A1 Event	Digital Output A1	Adjust	
Digital Output A1 Value	Digital Output A1	View	
Digital Output B1 Event	Digital Output B1	Adjust	
Digital Output B1 Value	Digital Output B1	View	
Digital Output B2 Event	Digital Output B2	Adjust	
Digital Output B2 Value	Digital Output B2	View	
Digital Output B3 Event	Digital Output B3	Adjust	
Digital Output B3 Value	Digital Output B3	View	
Digital Output B4 Event	Digital Output B4	Adjust	
Digital Output B4 Value	Digital Output B4	View	
Digital Output B5 Event	Digital Output B5	Adjust	
Digital Output B5 Value	Digital Output B5	View	
Digital Output C1 Event	Digital Output C1	Adjust	
Digital Output C1 Value	Digital Output C1	View	
Digital Output C10 Event	Digital Output C10	Adjust	
Digital Output C10 Value	Digital Output C10	View	
Digital Output C11 Event	Digital Output C11	Adjust	
Digital Output C11 Value	Digital Output C11	View	
Digital Output C12 Event	Digital Output C12	Adjust	
Digital Output C12 Value	Digital Output C12	View	
Digital Output C13 Event	Digital Output C13	Adjust	
Digital Output C13 Value	Digital Output C13	View	
Digital Output C14 Event	Digital Output C14	Adjust	
Digital Output C14 Value	Digital Output C14	View	
Digital Output C2 Event	Digital Output C2	Adjust	
Digital Output C2 Value	Digital Output C2	View	
Digital Output C3 Event	Digital Output C3	Adjust	
Digital Output C3 Value	Digital Output C3	View	
Digital Output C4 Event	Digital Output C4	Adjust	
Digital Output C4 Value	Digital Output C4	View	
Digital Output C5 Event	Digital Output C5	Adjust	
Digital Output C5 Value	Digital Output C5	View	
Digital Output C6 Event	Digital Output C6	Adjust	
Digital Output C6 Value	Digital Output C6	View	
Digital Output C7 Event	Digital Output C7	Adjust	
Digital Output C7 Value	Digital Output C7	View	
Digital Output C8 Event	Digital Output C8	Adjust	
Digital Output C8 Value	Digital Output C8	View	
Digital Output C9 Event	Digital Output C9	Adjust	
Digital Output C9 Value	Digital Output C9	View	
Display Contrast	Genset System Configuration	Adjust	
ECM Communication Loss Shutdown Delay	Engine Protection	View	s

Parameter	Parameter Group	View/ Adjust	Units
ECM Model	Genset Personality Profile	Locked	
ECM Power	Genset System Configuration	Adjust	
Engine Cool Down Delay	Engine Timing	Adjust	s
Engine Coolant Temperature	Engine Metering	View	°C
Engine Coolant Temperature Deadband	Genset Personality Profile	View	°C
Engine Coolant Temperature Protectives Enabled	Genset Personality Profile	Adjust	
Engine Coolant Temperature Sensor	Genset Personality Profile	Locked	
Engine Cooled Down Temperature	Genset Personality Profile	Locked	°C
Engine Crank Disconnect Speed	Genset Personality Profile	Locked	R/min
Engine Crank On Delay	Engine Timing	Adjust	s
Engine Crank Pause Delay	Engine Timing	Adjust	s
Engine ECM Start Delay	Engine Timing	Adjust	s
Engine Fuel Level	Engine Metering	View	%
Engine High Coolant Temperature Inhibit Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Shutdown Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Shutdown Limit	Genset Personality Profile	Locked	°C
Engine High Coolant Temperature Switch	Engine Metering	View	
Engine High Coolant Temperature Warning Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Warning Limit	Genset Personality Profile	Locked	°C
Engine Idle Duration	Engine Timing	Adjust	s
Engine Idle Speed	Genset Personality Profile	Locked	R/min
Engine Locked Rotor Shutdown Delay	Engine Protection	Adjust	s
Engine Low Coolant Level Shutdown Delay	Engine Protection	View	s
Engine Low Coolant Temperature Shutdown Delay	Genset Personality Profile	View	s
Engine Low Coolant Temperature Switch	Engine Metering	View	
Engine Low Coolant Temperature Warning Delay	Genset Personality Profile	View	s
Engine Low Coolant Temperature Warning Limit	Genset Personality Profile	Locked	°C
Engine Low Fuel Level Switch	Engine Metering	View	
Engine Low Oil Pressure Inhibit Delay	Engine Protection	Locked	s
Engine Low Oil Pressure Shutdown Delay	Engine Protection	Locked	s
Engine Low Oil Pressure Shutdown Limit	Engine Protection	Locked	kPa
Engine Low Oil Pressure Switch	Engine Metering	View	
Engine Low Oil Pressure Warning Delay	Engine Protection	Locked	s
Engine Low Oil Pressure Warning Limit	Engine Protection	Locked	kPa
Engine Model Number	Genset Info	Locked	
Engine Number Of Crank Cycles	Engine Timing	Adjust	
Engine Number Of Flywheel Teeth	Genset Personality Profile	Locked	
Engine Oil Level	Engine Metering	View	%
Engine Oil Level Switch	Engine Metering	View	
Engine Oil Pressure	Engine Metering	View	kPa
Engine Oil Pressure Deadband	Engine Protection	Locked	kPa
Engine Oil Pressure Protectives Enabled	Engine Protection	Adjust	
Engine Oil Pressure Sensor	Engine Protection	Locked	
Engine Part Number	Genset Info	Locked	
Engine Restart Delay	Engine Timing	Adjust	s
Engine Run Speed	Genset Personality Profile	Adjust	R/min
Engine Serial Number	Genset Info	Locked	
Engine Speed	Engine Metering	View	R/min
Engine Start Aid Delay	Engine Timing	Adjust	s
Engine Start Delay	Engine Timing	Adjust	s
Engine Target Speed	Engine Metering	View	R/min
Engine Total Number Of Starts	Genset Run Time	View	
Engine Total Run Time	Genset Run Time	View	h

Parameter	Parameter Group	View/ Adjust	Units
Engine Total Run Time Loaded	Genset Run Time	View	h
Engine Warmed Up Temperature	Genset Personality Profile	Locked	°C
Exhaust Pressure	Engine Metering	View	kPa
Exhaust Temperature	Engine Metering	View	°C
Firmware Version	Identity	View	
Fuel Pressure	Engine Metering	View	kPa
Fuel Rate	Engine Metering	View	L/h
Fuel Temperature	Engine Metering	View	°C
Fuel Used Last Run	Engine Metering	View	L
Generator Apparent Power L1	Generator Metering	View	VA
Generator Apparent Power L2	Generator Metering	View	VA
Generator Apparent Power L3	Generator Metering	View	VA
Generator Current Average	Generator Metering	View	A
Generator Current L1	Generator Metering	View	A
Generator Current L2	Generator Metering	View	A
Generator Current L3	Generator Metering	View	A
Generator Frequency	Generator Metering	View	Hz
Generator Metering Firmware Version	Generator Metering	View	
Generator Total Apparent Power	Generator Metering	View	VA
Generator True Percent Of Rated Power	Generator Metering	View	%
Generator True Power L1	Generator Metering	View	W
Generator True Power L2	Generator Metering	View	W
Generator True Power L3	Generator Metering	View	W
Generator True Total Power	Generator Metering	View	W
Generator Voltage Average Line To Line	Generator Metering	View	V
Generator Voltage Average Line To Neutral	Generator Metering	View	V
Generator Voltage L1-L2	Generator Metering	View	V
Generator Voltage L1-N	Generator Metering	View	V
Generator Voltage L2-L3	Generator Metering	View	V
Generator Voltage L2-N	Generator Metering	View	V
Generator Voltage L3-L1	Generator Metering	View	V
Generator Voltage L3-N	Generator Metering	View	V
Genset Battery Low Cranking Voltage Warning Delay	Genset Protection	View	s
Genset Battery Low Cranking Voltage Warning Limit	Genset Protection	View	%
Genset Calibration Factor Current L1	Genset Calibration	Adjust	
Genset Calibration Factor Current L2	Genset Calibration	Adjust	
Genset Calibration Factor Current L3	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L1-L2	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L1-N	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L2-L3	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L2-N	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L3-L1	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L3-N	Genset Calibration	Adjust	
Genset Controller Serial Number	Genset Info	View	
Genset Controller Temperature	Engine Metering	View	°C
Genset Controller Total Operation Time	Genset Run Time	View	h
Genset High Battery Voltage Warning Delay	Genset Protection	View	s
Genset High Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset High Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset High Frequency Shutdown Delay	Generator Protection	View	s
Genset High Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset High Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset High Voltage Shutdown Limit	Generator Protection	Adjust	%

Parameter	Parameter Group	View/ Adjust	Units
Genset Long Term Low Frequency Shutdown Delay	Generator Protection	View	s
Genset Low Battery Voltage Warning Delay	Genset Protection	View	s
Genset Low Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset Low Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset Low Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset Low Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset Low Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Model Number	Genset Info	Locked	
Genset Power Rating	Genset System Configuration	Locked	kW
Genset Rated Current	Genset System Configuration	View	A
Genset Serial Number	Genset Info	Locked	
Genset Short Term Low Frequency Shutdown Delay	Generator Protection	View	s
Genset State	Genset Info	View	
Genset System Battery Voltage	Genset System Configuration	Locked	V
Genset System Frequency	Genset System Configuration	Adjust	Hz
Genset System Voltage	Genset System Configuration	Adjust	V
Genset Total Energy	Genset Run Time	View	kW h
Genset Voltage Phase Connection	Genset System Configuration	Adjust	
Intake Air Pressure	Engine Metering	View	kPa
Intake Air Temperature	Engine Metering	View	°C
Local Start Mode	Genset System Configuration	View	
Loss Of AC Sensing Shutdown Delay	Generator Protection	View	s
Lube Oil Temperature	Engine Metering	View	°C
Maximum Alternator Current	Genset Personality Profile	View	A
Measurement System	Genset System Configuration	Adjust	
Modbus Baud Rate	Modbus	Adjust	b/s
Modbus Slave Address	Modbus	Adjust	
Personality Alternator Manufacturer	Genset Personality Profile	Locked	
Personality Alternator Number Of Poles	Genset Personality Profile	Locked	
Personality Alternator Toc Time Constant	Genset Personality Profile	Locked	s
Personality Alternator Type	Genset Personality Profile	Locked	
Personality Fixed Voltage 50 Hz	Genset Personality Profile	Locked	V
Personality Fixed Voltage 60 Hz	Genset Personality Profile	Locked	V
Personality Installed Options	Genset Personality Profile	Locked	
Personality Power Rating 50 Hz 173 346	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 190 380	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 200 400	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 208 415	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 220 440	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz Delta	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 190 380	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 208 416	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 220 440	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 230 460	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 240 480	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz Delta	Genset Personality Profile	Locked	kW
Personality Power Rating Fixed Volt 50 Hz	Genset Personality Profile	Locked	kW
Personality Power Rating Fixed Volt 60 Hz	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 50 Hz 10 PF	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 50 Hz 8 PF	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 60 Hz 10 PF	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 60 Hz 8 PF	Genset Personality Profile	Locked	kW
Prime Power Application	Genset System Configuration	Locked	

Parameter	Parameter Group	View/ Adjust	Units
Product	Identity	View	
Using Voltage Selector Switch	Genset System Configuration	Adjust	
Vendor	Identity	View	
Voltage Regulator Average Voltage Adjustment	Voltage Regulator	Adjust	V
Voltage Regulator Firmware Version	Voltage Regulator	View	
Voltage Regulator Gain	Voltage Regulator	Adjust	
Voltage Regulator Stability Adjust	Voltage Regulator	Adjust	
Voltage Regulator Volts Per Hertz Cut In Frequency	Voltage Regulator	Adjust	Hz
Voltage Regulator Volts Per Hertz Slope	Voltage Regulator	Adjust	%

7.1 Introduction

SiteTech™ software allows viewing and adjustment of most Decision-Maker® 3500 controller settings, including many parameters that are not accessible through the controller's user interface.

SiteTech™ software version 3.6 or higher is required for use with the Decision-Maker® 3500 controller.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech software. If the controller is not powered by the generator set battery, it may drain the battery on the connected laptop PC.

This section provides information specific to the Decision-Maker® 3500 controller. For general software operating instructions, see Section 3, Software Operation. For controller operation instructions, refer to the controller operation manual provided with the generator set. See List of Related Literature on page 9 for the document part number.

7.2 Device Connection

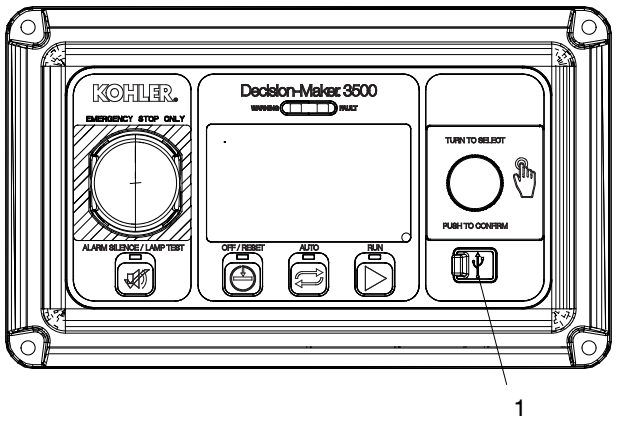
⚠ WARNING

Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Use a USB cable with a mini-B connector to connect the controller to your personal computer. See Figure 7-1 for the USB connector location on the controller. See Section 1.3 for USB cable details.



1. USB Connector

Figure 7-1 Decision-Maker® 3500 Controller

7.3 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

SiteTech™ screens for the Decision-Maker® 3500 controller are shown in the following figures. See Section 7.4 for a summary of controller parameters.

Some parameters shown in SiteTech are not accessible on all models. Support of some parameters is dependent on the controller configuration or generator set model.

7.3.1 Parameter Settings

SiteTech allows viewing and adjustment of many engine and generator set parameters that are not accessible through the controller's user interface. Refer to the screen shots in Section 7.3.3 and parameter list in Section 7.4 to see the individual parameters.

7.3.2 Programmable Inputs and Outputs

Use SiteTech™ to assign functions to digital and analog inputs and outputs. Each input and output corresponds to a controller connection. Verify that the settings are appropriate for the connected sensor, switch, or equipment. Do not change factory-set inputs and

outputs without verifying the input and output connections.

SiteTech™ input and output parameters labeled 119–138 are designated for use on the optional 15-relay dry contact board. See Figure 7-2.

Note: Inputs and outputs labeled 119–138 will only appear after the initial connection of the optional 15-relay dry contact board.

SiteTech I/O Name	Optional Dry Contact Board Connection
Programmable Analog Voltage Input 119	P36 Analog Input VN1/VP1
Programmable Analog Voltage Input 120	P36 Analog Input VN2/VP2
Digital Input 121 Digital Input 122 Digital Input 123 Digital Input 124	TB6
Digital Output 125 Digital Output 126 Digital Output 127 Digital Output 128 Digital Output 129 Digital Output 130 Digital Output 131 Digital Output 132 Digital Output 133 Digital Output 134 Digital Output 135 Digital Output 136 Digital Output 137 Digital Output 138	TB7 or TB8

Figure 7-2 Optional Inputs and Outputs with Dry Contact Kit

Analog Inputs

Click on the Analog Input Event cell to see a list of functions that can be assigned to each analog input.

For each analog input, set the delays and limits and enable or disable protectives by clicking on the cell and selecting or typing in the desired value.

The analog input value and relative value (% of maximum) are displayed.

Digital Inputs

Click on the Digital Input Event cell to see a list of functions that can be selected for each programmable digital input. Enable or disable the input using the Digital Input Enabled setting. Enter the delays and switch type, normally open (NO) or normally closed (NC), as appropriate for the connection.

The Digital Input Enabled cell indicates whether the digital input is on (True) or off (False). Note that this value requires selection of the appropriate switch type (NO or NC).

Programmable Digital Outputs

Click on the Digital Output Event cell to see a list of functions that can be selected for each programmable digital output.

The Digital Output Enabled cell indicates whether the output is on (True) or off (False).

7.3.3 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Figure 7-3 shows the SiteTech Parameters screen for the Decision-Maker® 3500 controller. The parameter groups are shown closed in this illustration. See Section 7.3.4 for illustrations of the parameter groups.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

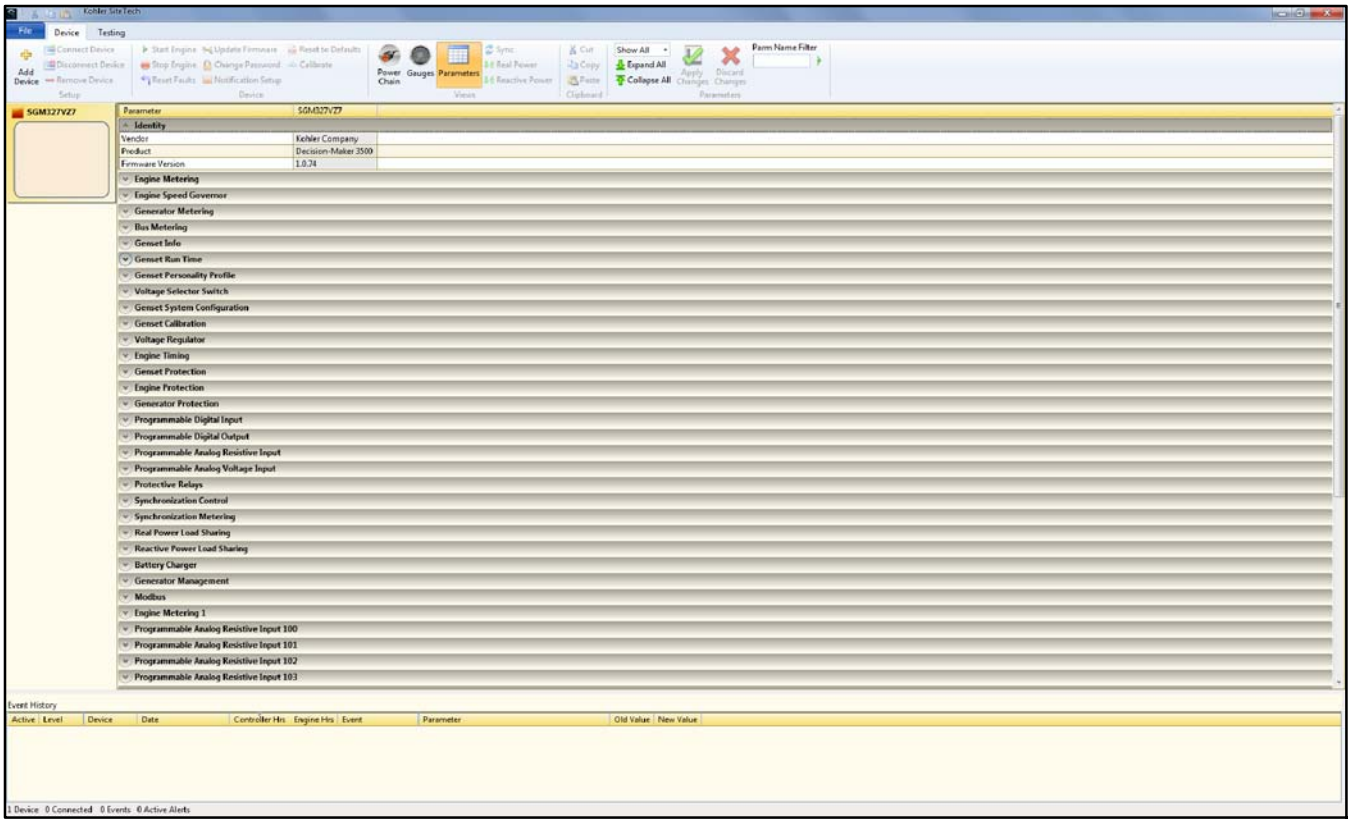


Figure 7-3 SiteTech Parameters Screen Showing Closed Groups for the Decision-Maker® 3500 Controller

7.3.4 Parameter Groups

The parameter groups for the Decision-Maker® 3500 controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 7.4.

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Parameter settings and data shown in the following screen shots are sample values only.

Identity	
Vendor	Kohler Company
Product	Decision-Maker 3500
Firmware Version	1.0.74

Engine Metering	
Engine Speed	
Engine Oil Pressure	
Engine Coolant Temperature	
Engine Oil Level	
Engine Coolant Level	
Engine Fuel Level	
Battery Voltage	
Fuel Temperature	
Fuel Pressure	
Fuel Rate	
Fuel Used Last Run	
Coolant Pressure	
Lube Oil Temperature	
Crankcase Pressure	
Genset Controller Temperature	
Battery Voltage From ECM	
Exhaust Temperature	
Exhaust Pressure	
Intake Air Temperature	
Intake Air Pressure	
Engine Low Oil Pressure Switch	
Engine Oil Level Switch	
Engine High Coolant Temperature Switch	
Engine Low Coolant Temperature Switch	
Engine Low Fuel Level Switch	
Engine Seawater Pressure	
Engine Governor Target Speed	

Engine Speed Governor	
Engine Speed Adjustment	50
Adjusted Engine Run Speed	1800

Generator Metering	
Generator Rotation Actual	
Generator Current Lead/Lag L1	Leading
Generator Current Lead/Lag L2	Leading
Generator Current Lead/Lag L3	Leading
Generator Current Total Lead/Lag	
Generator Power Factor L1	1.00
Generator Power Factor L2	1.00
Generator Power Factor L3	1.00
Generator Total Power Factor	1.00
Generator Apparent Power L1	0.0 VA
Generator Apparent Power L2	0.0 VA
Generator Apparent Power L3	0.0 VA
Generator Total Apparent Power	0.0 VA
Generator Percent Of Rated Apparent Power	0 %
Generator Reactive Power L1	0.0 VAR
Generator Reactive Power L2	0.0 VAR
Generator Reactive Power L3	0.0 VAR
Generator Total Reactive Power	0.0 VAR
Generator Percent Of Rated Reactive Power	0 %
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	0.0 V
Generator Voltage L3-L1	0.0 V
Generator Voltage Average Line To Line	0.0 V
Generator Voltage L1-N	0.0 V
Generator Voltage L2-N	0.0 V
Generator Voltage L3-N	0.0 V
Generator Voltage Average Line To Neutral	0.0 V
Generator Current L1	0.0 A
Generator Current L2	0.0 A
Generator Current L3	0.0 A
Generator Current Average	0.0 A
Generator Metering Firmware Version	0.0.0
Generator Phase Angle AB To L2-L3	0.0 °
Generator Phase Angle AB To L3-L1	0.0 °
Generator Phase Angle Voltage A To Current L	0.0 °
Generator Phase Angle Voltage B To Current L	0.0 °
Generator Phase Angle Voltage C To Current L	0.0 °
AC Frequency	0.00 Hz
Generator Percent Of Rated Real Power	0 %
Generator Real Power L1	0.0 W
Generator Real Power L2	0.0 W
Generator Real Power L3	0.0 W
Generator Total Real Power	0.0 W

Bus Metering	
Bus Voltage L1-L2	0.0 V
Bus Voltage L2-L3	0.0 V
Bus Voltage L3-L1	0.0 V
Bus Voltage Average Line To Line	0.0 V
Bus Total Real Power	0.0 kW
Bus Total Real Power Percentage	0.00 %
Bus Total Reactive Power Percentage	0.00 %
Bus Frequency	0.00 Hz
Bus Rotation Actual	
Phase Angle Generator Voltage AB Bus Voltage	0.0 °
Speed Bias 2	
Voltage Bias 2	
Bus Phase Angle AB To L2-L3	0.0 °
Bus Phase Angle AB To L3-L1	0.0 °

Genset Info	
Genset Model Number	55EOZDJ
Genset Spec Number	GM86211-GA1
Genset Serial Number	SGM327VZ7
Alternator Part Number	GC79429-44
Genset Controller Serial Number	
Engine Part Number	GM85410
Engine Model Number	N/A
Engine Serial Number	N/A
ECM Serial Number	N/A
Genset State	Shutdown
Master Switch Position	Off

Genset Run Time	
Genset Controller Clock Time	1/5/2013 12:42:01 AM
Genset Controller Total Operation Time	95.0 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Run Time Unloaded	0.0 h
Engine Total Number Of Starts	0
Genset Total Energy	0.0 kW·h
Engine Maintenance Period Hours	200.0 h
Genset Date Time Of Last Maintenance	1/1/0001 12:00:00 AM
Engine Run Time At Reset Maintenance	0.0 h
Engine Run Time Until Maintenance	200.0 h
Genset Controller Hours Of Operation Since M	95.0 h
Engine Run Time Since Maintenance	0.0 h
Engine Run Time Loaded Since Maintenance	0.0 h
Engine Run Time Unloaded Since Maintenanc	0.0 h
Engine Number Of Starts Since Maintenance	0
Genset Energy Since Maintenance	0.0 kW·h
Engine Last Start Time	1/1/0001 12:00:00 AM
Last Run Length	
Genset Controller Date Format	Month Date Year
Genset Controller Time Format	Hr 12

Genset Personality Profile	
ECM Model	Deere ECM
Maximum Alternator Current	207 A
Engine Number Of Flywheel Teeth	129
Engine Warmed Up Temperature	100 °F
Engine Cooled Down Temperature	174 °F
Engine Crank Disconnect Speed	750 R/min
Engine Idle Speed	900 R/min
Engine Run Speed	1800 R/min
Engine Coolant Temperature Protectives Enab	Low Warning
Engine Low Coolant Temperature Inhibit Delay	0 s
Engine High Coolant Temperature Inhibit Dela	0 s
Engine Low Coolant Temperature Warning De	5 s
Engine High Coolant Temperature Warning De	0 s
Engine Low Coolant Temperature Shutdown D	0 s
Engine High Coolant Temperature Shutdown I	0 s
Engine Low Coolant Temperature Warning Lin	60.8 °F
Engine High Coolant Temperature Warning Li	226.4 °F
Engine Low Coolant Temperature Shutdown L	
Engine High Coolant Temperature Shutdown I	244.4 °F
Engine Coolant Temperature Deadband	33.8 °F
Personality Alternator Manufacturer	Marathon
Personality Alternator Toc Time Constant	1 s
Personality Alternator Number Of Poles	4
Personality Alternator Type	Reconnectable
Personality Fixed Voltage 50 Hz	0 V
Personality Power Rating Single Phase 50 Hz 1(	50 kW
Personality Power Rating Single Phase 50 Hz 8	30 kW
Personality Power Rating Fixed Volt 50 Hz	0 kW
Personality Power Rating 50 Hz 220 440	0 kW
Personality Power Rating 50 Hz 208 415	46 kW
Personality Power Rating 50 Hz 200 400	54 kW
Personality Power Rating 50 Hz 190 380	56 kW
Personality Power Rating 50 Hz 173 346	0 kW
Personality Power Rating 50 Hz Delta	54 kW
Personality Fixed Voltage 60 Hz	0 V
Personality Power Rating Single Phase 60 Hz 1(	58 kW
Personality Power Rating Single Phase 60 Hz 8	41 kW
Personality Power Rating Fixed Volt 60 Hz	0 kW
Personality Power Rating 60 Hz 240 480	69 kW
Personality Power Rating 60 Hz 230 460	0 kW
Personality Power Rating 60 Hz 220 440	70 kW
Personality Power Rating 60 Hz 208 416	70 kW
Personality Power Rating 60 Hz 190 380	68 kW
Personality Power Rating 60 Hz Delta	70 kW
Personality Installed Options	None
Gen Rating 1 Fuel Type	Diesel
Gen Rating 1 50 H Z 1 Ph	
Gen Rating 1 50 H Z Wye 173 346	
Gen Rating 1 50 H Z Wye 190 380	
Gen Rating 1 50 H Z Wye 200 400	
Gen Rating 1 50 H Z Wye 208 415	
Gen Rating 1 50 H Z Wye 220 440	
Gen Rating 1 50 Hz Delta	
Gen Rating 1 Fixed Voltage 50 Hz	
Gen Rating 1 Fixed Voltage K W 50 Hz	
Gen Rating 1 60 H Z 1 Ph	53 kW
Gen Rating 1 60 H Z Wye 190 380	
Gen Rating 1 60 H Z Wye 208 416	55 kW
Gen Rating 1 60 H Z Wye 220 440	55 kW
Gen Rating 1 60 H Z Wye 230 460	

Genset Personality Profile CONTINUED:

Gen Rating 1 60 H Z Wye 240 480	55 kW
Gen Rating 1 60 Hz Delta	55 kW
Gen Rating 1 Fixed Voltage 60 Hz	
Gen Rating 1 Fixed Voltage K W 60 Hz	
Gen Rating 2 Fuel Type	Unknown Undefined
Gen Rating 2 50 H Z 1 Ph	
Gen Rating 2 50 H Z Wye 173 346	
Gen Rating 2 50 H Z Wye 190 380	
Gen Rating 2 50 H Z Wye 200 400	
Gen Rating 2 50 H Z Wye 208 415	
Gen Rating 2 50 H Z Wye 220 440	
Gen Rating 2 50 Hz Delta	
Gen Rating 2 Fixed Voltage 50 Hz	
Gen Rating 2 Fixed Voltage K W 50 Hz	
Gen Rating 2 60 H Z 1 Ph	
Gen Rating 2 60 H Z Wye 190 380	
Gen Rating 2 60 H Z Wye 208 416	
Gen Rating 2 60 H Z Wye 220 440	
Gen Rating 2 60 H Z Wye 230 460	
Gen Rating 2 60 H Z Wye 240 480	
Gen Rating 2 60 Hz Delta	
Gen Rating 2 Fixed Voltage 60 Hz	
Gen Rating 2 Fixed Voltage K W 60 Hz	
Freq Match P Gain Scaler	1.00
Freq Match I Gain Scaler	1.00
Freq Match D Gain Scaler	300.00
Volt Match P Gain Scaler	1.00
Volt Match I Gain Scaler	1.00
Volt Match D Gain Scaler	300.00
Phase Match P Gain Scaler	1.00
Phase Match I Gain Scaler	1.00
Phase Match D Gain Scaler	300.00
Real Power P Gain Scaler	1.00
Real Power I Gain Scaler	1.00
Real Power D Gain Scaler	3.00
Torque Share P Gain Scaler	1.00
Torque Share I Gain Scaler	1.00
Torque Share D Gain Scaler	300.00
Freq Trim P Gain Scaler	1.00
Freq Trim I Gain Scaler	1.00
Freq Trim D Gain Scaler	300.00
Reactive Power P Gain Scaler	1.00
Reactive Power I Gain Scaler	1.00
Reactive Power D Gain Scaler	300.00
Volt Trim P Gain Scaler	1.00
Volt Trim I Gain Scaler	1.00
Volt Trim D Gain Scaler	300.00

Note: The voltage selector switch menu does not apply to the EOZDJ/EFOZDJ and EOZCJ/EFOZCJ marine models.

Voltage Selector Switch	
Voltage Selector Switch Position	0
Voltage Selector Switch Max Positions	0
Voltage Selector Switch Position 1 Voltage	208.0 V
Voltage Selector Switch Position 1 Frequency	60.0 Hz
Voltage Selector Switch Position 1 Voltage Pha	Three Phase Wye
Voltage Selector Switch Position 2 Voltage	208.0 V
Voltage Selector Switch Position 2 Frequency	60.0 Hz
Voltage Selector Switch Position 2 Voltage Pha	Three Phase Wye
Voltage Selector Switch Position 3 Voltage	208.0 V
Voltage Selector Switch Position 3 Frequency	60.0 Hz
Voltage Selector Switch Position 3 Voltage Pha	Three Phase Wye

Genset System Configuration	
Genset System Voltage	240.0 V
Genset System Frequency	60.0 Hz
Genset Voltage Phase Connection	Three Phase Wye
Genset Power Rating	55.0 kW
Genset Apparent Power Rating	68.7 kVA
Genset Rated Current	165.4 A
Genset System Battery Voltage	12 V
Prime Power Application	Prime
Current Transformer Ratio	400
Local Start Mode	Off
Measurement System	English
Alarm Silence Always Allowed	Always
NFPA 110 Enabled	Off
Cool Down Temperature Override	Off
Oil Sensor Type	Switch
Public CAN Protocol	J1939
Display Contrast	50
Using Voltage Selector Switch	False
Genset System Language	English
Genset Maximum Percent Capacity	70.0 %
Generator Overloaded Percent	85.0 %
Under Frequency Shed Level	0.50 Hz
Base Load Add Time	60.0 s
Base Over Load Shed Time	30.0 s
Base Under Frequency Shed Time	5.0 s
Genset Fuel Type	Diesel
Battle Mode	Off
ECM Powered Mode	Off
Genset Application	Marine

Genset Calibration	
Calibration Factor Voltage L1-L2	1.0000
Calibration Factor Voltage L2-L3	1.0000
Calibration Factor Voltage L3-L1	1.0000
Calibration Factor Voltage L1-N	1.0000
Calibration Factor Voltage L2-N	1.0000
Calibration Factor Voltage L3-N	1.0000
Calibration Factor Current L1	1.0000
Calibration Factor Current L2	1.0000
Calibration Factor Current L3	1.0000
Bus Calibration Factor Voltage L1-L2	1.0000
Bus Calibration Factor Voltage L2-L3	1.0000
Bus Calibration Factor Voltage L3-L1	1.0000

Voltage Regulator	
Voltage Regulator Average Voltage Adjustmen	240.0 V
Voltage Regulator Volts Per Hertz Slope	5 %
Voltage Regulator Volts Per Hertz Cut In Frequ	57.5 Hz
Voltage Regulator Gain	128
Voltage Regulator Stability Adjust	128
Voltage Regulator Firmware Version	0.0.0
Voltage Regulator Target Voltage	0.0 V
Voltage Regulator Normal Ramp Rate	25.0 %/s

Engine Timing	
Engine Idle Duration	
Engine Restart Delay	
Engine Start Delay	
Engine ECM Start Delay	
Engine Cool Down Delay	
Engine Start Aid Delay	
Engine Crank On Delay	
Engine Crank Pause Delay	
Engine Number Of Crank Cycles	

Genset Protection	
After Crank Disconnect Fault Inhibit Delay	
Genset Low Battery Voltage Warning Delay	
Genset High Battery Voltage Warning Delay	
Genset Low Battery Voltage Warning Limit	
Genset High Battery Voltage Warning Limit	
Genset Battery Low Cranking Voltage Warning	
Genset Battery Low Cranking Voltage Warning	

Engine Protection	
Engine Low Coolant Level Shutdown Delay	5 s
Engine Low Oil Pressure Warning Delay	0 s
Engine Low Oil Pressure Shutdown Delay	5 s
Engine Locked Rotor Shutdown Delay	5 s
ECM Communication Loss Shutdown Delay	10 s
Genset Low Engine Speed Shutdown Limit	85 %
Genset High Engine Speed Shutdown Limit	115 %
Engine Oil Pressure Protectives Enabled	Low Warning
Engine Low Oil Pressure Inhibit Delay	30 s
Engine Low Oil Pressure Warning Limit	
Engine Low Oil Pressure Shutdown Limit	
Engine Oil Pressure Deadband	0.1 PSI

Generator Protection	
Loss Of AC Sensing Shutdown Delay	3 s
Genset Low Voltage Shutdown Delay	10 s
Genset High Voltage Shutdown Delay	2 s
Genset Low Voltage Shutdown Limit	80 %
Genset High Voltage Shutdown Limit	120 %
Genset Short Term Low Frequency Shutdown I	10 s
Genset Long Term Low Frequency Shutdown I	60 s
Genset High Frequency Shutdown Delay	10 s
Genset Low Frequency Shutdown Limit	90 %
Genset High Frequency Shutdown Limit	110 %

Programmable Digital Input	
Digital Input Board Number	
Digital Input Io Number	
Digital Input Status	
Digital Input Enabled	
Digital Input Logic	
Digital Input Function	
Digital Input Event	
Digital Input Delay	
Digital Input Inhibit Delay	
Digital Input Description	

Programmable Digital Output	
Digital Output Board Number	
Digital Output Io Number	
Digital Output Status	
Digital Output Enabled	
Digital Output Logic	
Digital Output Function	
Digital Output Event	
Digital Output Description	

Programmable Analog Resistive Input	
Analog Resistive Input Board Number	
Analog Resistive Input Io Number	
Analog Resistive Input Metered Value	
Analog Resistive Input Metered Relative Value	
Analog Resistive Input Enabled	
Analog Resistive Input Switch Logic	
Analog Resistive Input Function	
Analog Resistive Input Protectives Enabled	
Analog Resistive Input Event	
Analog Resistive Input Sensor	
Analog Resistive Input Low Protective Inhibit D	
Analog Resistive Input High Protective Inhibit	
Analog Resistive Input Delay	
Analog Resistive Input Inhibit Delay	
Analog Resistive Input Normal Delay	
Analog Resistive Input Low Warning Delay	
Analog Resistive Input Critically Low Warning	
Analog Resistive Input High Warning Delay	
Analog Resistive Input Critically High Warning	
Analog Resistive Input Low Shutdown Delay	
Analog Resistive Input High Shutdown Delay	
Analog Resistive Input Low Warning Limit	
Analog Resistive Input Critically Low Warning	
Analog Resistive Input Low Shutdown Limit	
Analog Resistive Input High Warning Limit	
Analog Resistive Input Critically High Warning	
Analog Resistive Input High Shutdown Limit	
Analog Resistive Input Deadband	
Analog Resistive Input Relative Upper Range Li	
Analog Resistive Input Relative Lower Range Li	
Analog Resistive Input Relative Range Limit De	
Analog Resistive Input Relative Range High Lir	
Analog Resistive Input Relative Range Low Lim	
Analog Resistive Input Relative Range Limit De	
Analog Resistive Input Description	

Programmable Analog Voltage Input	
Analog Voltage Input Board Number	
Analog Voltage Input Io Number	
Analog Voltage Input Metered Value	
Analog Voltage Input Metered Relative Value	
Analog Voltage Input Enabled	
Analog Voltage Input Switch Logic	
Analog Voltage Input Function	
Analog Voltage Input Protectives Enabled	
Analog Voltage Input Event	
Analog Voltage Input Sensor	
Analog Voltage Input Low Protective Inhibit D	
Analog Voltage Input High Protective Inhibit D	
Analog Voltage Input Delay	
Analog Voltage Input Inhibit Delay	
Analog Voltage Input Normal Delay	
Analog Voltage Input Low Warning Delay	
Analog Voltage Input Critically Low Warning D	
Analog Voltage Input High Warning Delay	
Analog Voltage Input Critically High Warning I	
Analog Voltage Input Low Shutdown Delay	
Analog Voltage Input High Shutdown Delay	
Analog Voltage Input Low Warning Limit	
Analog Voltage Input Critically Low Warning L	
Analog Voltage Input Low Shutdown Limit	
Analog Voltage Input High Warning Limit	
Analog Voltage Input Critically High Warning I	
Analog Voltage Input High Shutdown Limit	
Analog Voltage Input Deadband	
Analog Voltage Input Relative Upper Range Lir	
Analog Voltage Input Relative Lower Range Lir	
Analog Voltage Input Relative Range Limit Dea	
Analog Voltage Input Relative Range High Lim	
Analog Voltage Input Relative Range Low Limi	
Analog Voltage Input Relative Range Limit Del	
Analog Voltage Input Description	

Protective Relays	
PR Over Power Trip	110.0 %
PR Over Power Time Delay	5.0 s
PR Reverse Power Trip	10.0 %
PR Reverse Power Time Delay	5.0 s
PR Over Voltage Trip	110.0 %
PR Over Voltage Time Delay	5.0 s
PR Under Voltage Trip	90.0 %
PR Under Voltage Time Delay	5.0 s
PR Over Frequency Trip	102.0 %
PR Over Frequency Time Delay	5.0 s
PR Under Frequency Trip	96.0 %
PR Under Frequency Time Delay	5.0 s
PR Reverse Var Trip	20.0 %
PR Reverse Var Time Delay	5.0 s
PR Over Current VR Trip	175.0 %
PR Over Current VR Time Delay	5.0 s
Breaker Trip To Shutdown Time Delay	300 s

Synchronization Control	
Voltage Match Window	1.0 %
Sync Frequency Window	2.0 Hz
Phase Match Window	5.0 °
Dwell Time	0.3 s
Fail To Sync Delay	300 s
Breaker Reclose Time	2.0 s
Breaker Close Attempts	3
First On Close Delay	0.5 s
Circuit Breaker Current Fault Limit	5.0 %
Circuit Breaker Current Fault Delay	1.0 s
Volts Hertz Okay Time Delay	0.5 s
Sync Mode In Auto	Active
Sync Mode In Run	Check
Circuit Breaker Phase Angle Fault Limit	30.0 °
Circuit Breaker Phase Angle Fault Delay	1.00 s
Dead Bus Level	10.00 %
Pickup Acceptable Voltage Window	10.00 %
Dropout Acceptable Voltage Window	30.00 %
Pickup Acceptable Frequency Window	2.50 Hz
Dropout Acceptable Frequency Window	30.00 Hz
Stand Alone Operation	Off
P Gen Baud Rate	57600 b/s
P Gen Node Id	1
P Gen Nodes Connected	1
P Gen Nodes Disconnected	0
Fail To Open Delay	0.30 s
Fail To Close Delay	0.30 s
Voltage Match Proportional Gain	1.00
Voltage Match Integral Gain	1.00
Voltage Match Derivative Gain	1.00
Frequency Match Proportional Gain	1.00
Frequency Match Integral Gain	1.00
Frequency Match Derivative Gain	1.00
Phase Match Proportional Gain	1.00
Phase Match Integral Gain	1.00
Phase Match Derivative Gain	1.00
Generator Paralleling Breaker	False
External Bias Inputs Enabled	False

Synchronization Metering	
Sync Time Remaining	
Sync Dwell Time Remaining	
Sync Status Generator V Hz OK	False
Sync Status Voltage Matched	False
Sync Status Frequency Matched	False
Sync Status Phase Matched	False
Sync Check Matched Ok	False

Real Power Load Sharing	
Real Power Baseload Setpoint	50.0 %
Real Power Disconnect Level	5.0 %
Real Power Ramp Rate	10.0 %/s
Real Power Droop Slope	5.0 %@FL
Speed Bias	0.00
Load Enable	On
Base Load Mode	Off
System Load Control	Off
System Sync Control	Off
Trims Enabled	On
Real Power Sharing Proportional Gain	1.00
Real Power Sharing Integral Gain	1.00
Real Power Sharing Derivative Gain	1.00
Torque Sharing Proportional Gain	1.00
Torque Sharing Integral Gain	1.00
Torque Sharing Derivative Gain	1.00
Frequency Trim Proportional Gain	1.00
Frequency Trim Integral Gain	1.00
Frequency Trim Derivative Gain	1.00
Real Power Baseload Proportional Gain	1.00
Real Power Baseload Integral Gain	1.00
Real Power Baseload Derivative Gain	1.00
System Real Load Control Proportional Gain	1.00
System Real Load Control Integral Gain	1.00
System Real Load Control Derivative Gain	1.00

Reactive Power Load Sharing	
Reactive Power Baseload Setpoint	50.0 %
Power Factor Setting	0.80
Reactive Droop Slope	4.0 %@FL
Voltage Bias	0.00
Var Control Mode	Pf Control Mode
Reactive Power Sharing Proportional Gain	1.00
Reactive Power Sharing Integral Gain	1.00
Reactive Power Sharing Derivative Gain	1.00
Voltage Trim Proportional Gain	1.00
Voltage Trim Integral Gain	1.00
Voltage Trim Derivative Gain	1.00
Reactive Power Baseload Proportional Gain	1.00
Reactive Power Baseload Integral Gain	1.00
Reactive Power Baseload Derivative Gain	1.00
Power Factor Baseload Proportional Gain	1.00
Power Factor Baseload Integral Gain	1.00
Power Factor Baseload Derivative Gain	1.00
System Reactive Power Control Proportional G	1.00
System Reactive Power Control Integral Gain	1.00
System Reactive Power Control Derivative Gair	1.00
System Power Factor Control Proportional Gai	1.00
System Power Factor Control Integral Gain	1.00
System Power Factor Control Derivative Gain	1.00

Battery Charger	
Charger Status	
Charger State	Charger Idling
Charger Power Line State	Charger Line Power...
Charger Output Voltage	0.00 V
Charger Output Current	0.00 A
Charger Temperature	32 °F
Charger Number Of Identification Fields	0
Charger Device Number	Battery Charger De...
Charger Temperature Compensation Active	Inactive
Charger Present Charge Curve	Charger Curve Idle
Charger Soft Start Charging Active	Inactive
Charger Reduced Output Active	Inactive
Charger Temp Compensation Sensor	Sensor Not In Range
Charger Low Voltage For Topology	Inactive
Charger High Voltage For Topology	Inactive
Charger Internal Temperature High	Inactive
Charger Absorption Cycle Timed Out	Inactive
Charger Output Connection Reversed	Inactive
Charger Custom Profile Enable	Inactive
Charger Starter Battery Topology	Default
Charger System Battery Voltage	Charger System Vol...
Charger Automatic Equalize Enable	Inactive
Charger Manual Equalize Cycle Activation	Inactive
Charger Temperature Compensation Enable	Inactive
Charger Temperature Compensation Slope	0 mV/C
Charger Battery Number Cells	3
Charger Per Cell Voltage Bulk	0.000 V
Charger Per Cell Voltage Absorption	0.000 V
Charger Per Cell Voltage Float	0.000 V
Charger Per Cell Voltage Equalize	0.000 V
Charger Current Limit	0.0 A
Charger Absorption Current Termination Targ	0.000 A
Charger Depleted Battery Current Limit	0.0 A
Charger Depleted Battery Voltage Per Cell Targ	0.000 V
Charger Return To Bulk State Voltage Per Cell	0.000 V
Charger Maximum Absorption Time Threshol	0 min
Charger Maximum Bulk Time Threshold	0 min
Charger Refresh Charge Cycle Time	0 min
Charger Equalize Stage Duration	0 s
Charger Software Identification	4294967295

Generator Management	
Gen Management Control Mode	Run Time
Gen Management Enabled	Off
Gen Management Order	1
Gen Management Start Percent	80.0 %
Gen Management Stop Percent	60.0 %
Gen Management Start Delay	30 s
Gen Management Stop Delay	300 s
Gen Management Start Accumulator	100.0000
Gen Management Stop Accumulator	0.0000
Gen Management Start KW	0.0 kW
Gen Management Stop KW	0.0 kW
Gen Management Stable Delay	300 s
Gen Management Run Time Threshold	24.0 h
Gen Management Fuel Difference Threshold	10.0 %
Gen Management Min Gens Online	1
Gen Management Min Load Shed Priority	0
Gen Management Stopped By Gen Mgmt	False
Gen Management Total Bus Capacity	0.0 kW

Modbus	
Modbus Baud Rate	19200 b/s
Modbus Slave Address	1

Engine Metering 1	
Engine Oil Pressure	
Engine Coolant Temperature	

Programmable Analog Resistive Input 100	
Analog Resistive Input Board Number	1
Analog Resistive Input Io Number	1
Analog Resistive Input Metered Value	1000000.0
Analog Resistive Input Metered Relative Value	1000000.0
Analog Resistive Input Enabled	On
Analog Resistive Input Switch Logic	Active Low
Analog Resistive Input Function	Use As A System Ev...
Analog Resistive Input Protectives Enabled	None
Analog Resistive Input Event	None
Analog Resistive Input Sensor	None
Analog Resistive Input Low Protective Inhibit D	0 s
Analog Resistive Input High Protective Inhibit	1 s
Analog Resistive Input Delay	0 s
Analog Resistive Input Inhibit Delay	0 s
Analog Resistive Input Normal Delay	0 s
Analog Resistive Input Low Warning Delay	0 s
Analog Resistive Input Critically Low Warning	0 s
Analog Resistive Input High Warning Delay	0 s
Analog Resistive Input Critically High Warning	0 s
Analog Resistive Input Low Shutdown Delay	0 s
Analog Resistive Input High Shutdown Delay	0 s
Analog Resistive Input Low Warning Limit	0.0
Analog Resistive Input Critically Low Warning	0.0
Analog Resistive Input Low Shutdown Limit	0.0
Analog Resistive Input High Warning Limit	0.0
Analog Resistive Input Critically High Warning	0.0
Analog Resistive Input High Shutdown Limit	0.0
Analog Resistive Input Deadband	0.1
Analog Resistive Input Relative Upper Range Li	-3.2
Analog Resistive Input Relative Lower Range Li	-3.2
Analog Resistive Input Relative Range Limit De	0.0
Analog Resistive Input Relative Range High Lir	0 s
Analog Resistive Input Relative Range Low Lim	0 s
Analog Resistive Input Relative Range Limit De	0 s
Analog Resistive Input Description	N/A

Programmable Analog Resistive Input 101	
Analog Resistive Input Board Number	1
Analog Resistive Input Io Number	2
Analog Resistive Input Metered Value	1000000.0
Analog Resistive Input Metered Relative Value	1000000.0
Analog Resistive Input Enabled	On
Analog Resistive Input Switch Logic	Active Low
Analog Resistive Input Function	Use As A System Ev...
Analog Resistive Input Protectives Enabled	None
Analog Resistive Input Event	None
Analog Resistive Input Sensor	None
Analog Resistive Input Low Protective Inhibit D	0 s
Analog Resistive Input High Protective Inhibit	1 s
Analog Resistive Input Delay	0 s
Analog Resistive Input Inhibit Delay	0 s
Analog Resistive Input Normal Delay	0 s
Analog Resistive Input Low Warning Delay	0 s
Analog Resistive Input Critically Low Warning	0 s
Analog Resistive Input High Warning Delay	0 s
Analog Resistive Input Critically High Warning	0 s
Analog Resistive Input Low Shutdown Delay	0 s
Analog Resistive Input High Shutdown Delay	0 s
Analog Resistive Input Low Warning Limit	0.0
Analog Resistive Input Critically Low Warning	0.0
Analog Resistive Input Low Shutdown Limit	0.0
Analog Resistive Input High Warning Limit	0.0
Analog Resistive Input Critically High Warning	0.0
Analog Resistive Input High Shutdown Limit	0.0
Analog Resistive Input Deadband	0.1
Analog Resistive Input Relative Upper Range Li	-3.2
Analog Resistive Input Relative Lower Range Li	-3.2
Analog Resistive Input Relative Range Limit De	0.0
Analog Resistive Input Relative Range High Lir	0 s
Analog Resistive Input Relative Range Low Lim	0 s
Analog Resistive Input Relative Range Limit De	0 s
Analog Resistive Input Description	N/A

Programmable Analog Resistive Input 102	
Analog Resistive Input Board Number	1
Analog Resistive Input Io Number	3
Analog Resistive Input Metered Value	0.0
Analog Resistive Input Metered Relative Value	1000000.0
Analog Resistive Input Enabled	On
Analog Resistive Input Switch Logic	Active Low
Analog Resistive Input Function	Use As A System Ev...
Analog Resistive Input Protectives Enabled	None
Analog Resistive Input Event	None
Analog Resistive Input Sensor	OP 343473 0-100 PSI
Analog Resistive Input Low Protective Inhibit D	0 s
Analog Resistive Input High Protective Inhibit	1 s
Analog Resistive Input Delay	0 s
Analog Resistive Input Inhibit Delay	0 s
Analog Resistive Input Normal Delay	0 s
Analog Resistive Input Low Warning Delay	0 s
Analog Resistive Input Critically Low Warning	0 s
Analog Resistive Input High Warning Delay	0 s
Analog Resistive Input Critically High Warning	0 s
Analog Resistive Input Low Shutdown Delay	0 s
Analog Resistive Input High Shutdown Delay	0 s
Analog Resistive Input Low Warning Limit	0.0
Analog Resistive Input Critically Low Warning	0.0
Analog Resistive Input Low Shutdown Limit	0.0
Analog Resistive Input High Warning Limit	0.0
Analog Resistive Input Critically High Warning	0.0
Analog Resistive Input High Shutdown Limit	0.0
Analog Resistive Input Deadband	0.1
Analog Resistive Input Relative Upper Range Li	-3.2
Analog Resistive Input Relative Lower Range Li	-3.2
Analog Resistive Input Relative Range Limit De	0.0
Analog Resistive Input Relative Range High Lir	0 s
Analog Resistive Input Relative Range Low Lim	0 s
Analog Resistive Input Relative Range Limit De	0 s
Analog Resistive Input Description	N/A

Programmable Analog Resistive Input 103	
Analog Resistive Input Board Number	1
Analog Resistive Input Io Number	4
Analog Resistive Input Metered Value	1000000.0
Analog Resistive Input Metered Relative Value	1000000.0
Analog Resistive Input Enabled	On
Analog Resistive Input Switch Logic	Active Low
Analog Resistive Input Function	Use As A System Ev...
Analog Resistive Input Protectives Enabled	None
Analog Resistive Input Event	None
Analog Resistive Input Sensor	None
Analog Resistive Input Low Protective Inhibit D	0 s
Analog Resistive Input High Protective Inhibit	1 s
Analog Resistive Input Delay	0 s
Analog Resistive Input Inhibit Delay	0 s
Analog Resistive Input Normal Delay	0 s
Analog Resistive Input Low Warning Delay	0 s
Analog Resistive Input Critically Low Warning	0 s
Analog Resistive Input High Warning Delay	0 s
Analog Resistive Input Critically High Warning	0 s
Analog Resistive Input Low Shutdown Delay	0 s
Analog Resistive Input High Shutdown Delay	0 s
Analog Resistive Input Low Warning Limit	0.0
Analog Resistive Input Critically Low Warning	0.0
Analog Resistive Input Low Shutdown Limit	0.0
Analog Resistive Input High Warning Limit	0.0
Analog Resistive Input Critically High Warning	0.0
Analog Resistive Input High Shutdown Limit	0.0
Analog Resistive Input Deadband	0.1
Analog Resistive Input Relative Upper Range Li	-3.2
Analog Resistive Input Relative Lower Range Li	-3.2
Analog Resistive Input Relative Range Limit De	0.0
Analog Resistive Input Relative Range High Lir	0 s
Analog Resistive Input Relative Range Low Lim	0 s
Analog Resistive Input Relative Range Limit De	0 s
Analog Resistive Input Description	N/A

Programmable Analog Resistive Input 104	
Analog Resistive Input Board Number	1
Analog Resistive Input Io Number	5
Analog Resistive Input Metered Value	1000000.0
Analog Resistive Input Metered Relative Value	1000000.0
Analog Resistive Input Enabled	On
Analog Resistive Input Switch Logic	Active Low
Analog Resistive Input Function	Use As A System Ev...
Analog Resistive Input Protectives Enabled	None
Analog Resistive Input Event	None
Analog Resistive Input Sensor	None
Analog Resistive Input Low Protective Inhibit D	0 s
Analog Resistive Input High Protective Inhibit	1 s
Analog Resistive Input Delay	0 s
Analog Resistive Input Inhibit Delay	0 s
Analog Resistive Input Normal Delay	0 s
Analog Resistive Input Low Warning Delay	0 s
Analog Resistive Input Critically Low Warning	0 s
Analog Resistive Input High Warning Delay	0 s
Analog Resistive Input Critically High Warning	0 s
Analog Resistive Input Low Shutdown Delay	0 s
Analog Resistive Input High Shutdown Delay	0 s
Analog Resistive Input Low Warning Limit	0.0
Analog Resistive Input Critically Low Warning	0.0
Analog Resistive Input Low Shutdown Limit	0.0
Analog Resistive Input High Warning Limit	0.0
Analog Resistive Input Critically High Warning	0.0
Analog Resistive Input High Shutdown Limit	0.0
Analog Resistive Input Deadband	0.1
Analog Resistive Input Relative Upper Range Li	-3.2
Analog Resistive Input Relative Lower Range Li	-3.2
Analog Resistive Input Relative Range Limit De	0.0
Analog Resistive Input Relative Range High Lir	0 s
Analog Resistive Input Relative Range Low Lim	0 s
Analog Resistive Input Relative Range Limit De	0 s
Analog Resistive Input Description	N/A

Programmable Analog Resistive Input 105	
Analog Resistive Input Board Number	1
Analog Resistive Input Io Number	6
Analog Resistive Input Metered Value	1000000.0
Analog Resistive Input Metered Relative Value	1000000.0
Analog Resistive Input Enabled	On
Analog Resistive Input Switch Logic	Active Low
Analog Resistive Input Function	Use As A System Ev...
Analog Resistive Input Protectives Enabled	None
Analog Resistive Input Event	None
Analog Resistive Input Sensor	None
Analog Resistive Input Low Protective Inhibit D	0 s
Analog Resistive Input High Protective Inhibit	1 s
Analog Resistive Input Delay	0 s
Analog Resistive Input Inhibit Delay	0 s
Analog Resistive Input Normal Delay	0 s
Analog Resistive Input Low Warning Delay	0 s
Analog Resistive Input Critically Low Warning	0 s
Analog Resistive Input High Warning Delay	0 s
Analog Resistive Input Critically High Warning	0 s
Analog Resistive Input Low Shutdown Delay	0 s
Analog Resistive Input High Shutdown Delay	0 s
Analog Resistive Input Low Warning Limit	0.0
Analog Resistive Input Critically Low Warning	0.0
Analog Resistive Input Low Shutdown Limit	0.0
Analog Resistive Input High Warning Limit	0.0
Analog Resistive Input Critically High Warning	0.0
Analog Resistive Input High Shutdown Limit	0.0
Analog Resistive Input Deadband	0.1
Analog Resistive Input Relative Upper Range Li	-3.2
Analog Resistive Input Relative Lower Range Li	-3.2
Analog Resistive Input Relative Range Limit De	0.0
Analog Resistive Input Relative Range High Lir	0 s
Analog Resistive Input Relative Range Low Lim	0 s
Analog Resistive Input Relative Range Limit De	0 s
Analog Resistive Input Description	N/A

Programmable Analog Voltage Input 106	
Analog Voltage Input Board Number	1
Analog Voltage Input Io Number	7
Analog Voltage Input Metered Value	-3.3
Analog Voltage Input Metered Relative Value	-3.3
Analog Voltage Input Enabled	On
Analog Voltage Input Switch Logic	Active Low
Analog Voltage Input Function	Use As A System Ev...
Analog Voltage Input Protectives Enabled	None
Analog Voltage Input Event	None
Analog Voltage Input Sensor	None
Analog Voltage Input Low Protective Inhibit D	0 s
Analog Voltage Input High Protective Inhibit D	1 s
Analog Voltage Input Delay	0 s
Analog Voltage Input Inhibit Delay	0 s
Analog Voltage Input Normal Delay	0 s
Analog Voltage Input Low Warning Delay	0 s
Analog Voltage Input Critically Low Warning D	0 s
Analog Voltage Input High Warning Delay	0 s
Analog Voltage Input Critically High Warning I	0 s
Analog Voltage Input Low Shutdown Delay	0 s
Analog Voltage Input High Shutdown Delay	0 s
Analog Voltage Input Low Warning Limit	0.0
Analog Voltage Input Critically Low Warning L	0.0
Analog Voltage Input Low Shutdown Limit	0.0
Analog Voltage Input High Warning Limit	0.0
Analog Voltage Input Critically High Warning I	0.0
Analog Voltage Input High Shutdown Limit	0.0
Analog Voltage Input Deadband	0.1
Analog Voltage Input Relative Upper Range Lir	-3.2
Analog Voltage Input Relative Lower Range Lir	-3.2
Analog Voltage Input Relative Range Limit Dea	0.0
Analog Voltage Input Relative Range High Lim	0 s
Analog Voltage Input Relative Range Low Limi	0 s
Analog Voltage Input Relative Range Limit Del	0 s
Analog Voltage Input Description	N/A

Programmable Analog Voltage Input 107	
Analog Voltage Input Board Number	1
Analog Voltage Input Io Number	8
Analog Voltage Input Metered Value	-3.3
Analog Voltage Input Metered Relative Value	-3.3
Analog Voltage Input Enabled	On
Analog Voltage Input Switch Logic	Active Low
Analog Voltage Input Function	Use As A System Ev...
Analog Voltage Input Protectives Enabled	None
Analog Voltage Input Event	None
Analog Voltage Input Sensor	None
Analog Voltage Input Low Protective Inhibit D	0 s
Analog Voltage Input High Protective Inhibit D	1 s
Analog Voltage Input Delay	0 s
Analog Voltage Input Inhibit Delay	0 s
Analog Voltage Input Normal Delay	0 s
Analog Voltage Input Low Warning Delay	0 s
Analog Voltage Input Critically Low Warning D	0 s
Analog Voltage Input High Warning Delay	0 s
Analog Voltage Input Critically High Warning I	0 s
Analog Voltage Input Low Shutdown Delay	0 s
Analog Voltage Input High Shutdown Delay	0 s
Analog Voltage Input Low Warning Limit	0.0
Analog Voltage Input Critically Low Warning L	0.0
Analog Voltage Input Low Shutdown Limit	0.0
Analog Voltage Input High Warning Limit	0.0
Analog Voltage Input Critically High Warning I	0.0
Analog Voltage Input High Shutdown Limit	0.0
Analog Voltage Input Deadband	0.1
Analog Voltage Input Relative Upper Range Lir	-3.2
Analog Voltage Input Relative Lower Range Lir	-3.2
Analog Voltage Input Relative Range Limit Dea	0.0
Analog Voltage Input Relative Range High Lim	0 s
Analog Voltage Input Relative Range Low Limi	0 s
Analog Voltage Input Relative Range Limit Del	0 s
Analog Voltage Input Description	N/A

Programmable Analog Voltage Input 108	
Analog Voltage Input Board Number	1
Analog Voltage Input Io Number	9
Analog Voltage Input Metered Value	-3.2
Analog Voltage Input Metered Relative Value	-3.2
Analog Voltage Input Enabled	On
Analog Voltage Input Switch Logic	Active Low
Analog Voltage Input Function	Use As A System Ev...
Analog Voltage Input Protectives Enabled	None
Analog Voltage Input Event	None
Analog Voltage Input Sensor	None
Analog Voltage Input Low Protective Inhibit D	0 s
Analog Voltage Input High Protective Inhibit D	1 s
Analog Voltage Input Delay	0 s
Analog Voltage Input Inhibit Delay	0 s
Analog Voltage Input Normal Delay	0 s
Analog Voltage Input Low Warning Delay	0 s
Analog Voltage Input Critically Low Warning D	0 s
Analog Voltage Input High Warning Delay	0 s
Analog Voltage Input Critically High Warning I	0 s
Analog Voltage Input Low Shutdown Delay	0 s
Analog Voltage Input High Shutdown Delay	0 s
Analog Voltage Input Low Warning Limit	0.0
Analog Voltage Input Critically Low Warning L	0.0
Analog Voltage Input Low Shutdown Limit	0.0
Analog Voltage Input High Warning Limit	0.0
Analog Voltage Input Critically High Warning I	0.0
Analog Voltage Input High Shutdown Limit	0.0
Analog Voltage Input Deadband	0.1
Analog Voltage Input Relative Upper Range Lir	-3.2
Analog Voltage Input Relative Lower Range Lir	-3.2
Analog Voltage Input Relative Range Limit Dea	0.0
Analog Voltage Input Relative Range High Lim	0 s
Analog Voltage Input Relative Range Low Limi	0 s
Analog Voltage Input Relative Range Limit Del	0 s
Analog Voltage Input Description	N/A

Programmable Digital Input 109	
Digital Input Board Number	1
Digital Input Io Number	1
Digital Input Status	
Digital Input Enabled	On
Digital Input Logic	Active Close
Digital Input Function	Use As A System Ev...
Digital Input Event	None
Digital Input Delay	0 s
Digital Input Inhibit Delay	0 s
Digital Input Description	N/A

Programmable Digital Input 110	
Digital Input Board Number	1
Digital Input Io Number	2
Digital Input Status	
Digital Input Enabled	On
Digital Input Logic	Active Close
Digital Input Function	Use As A System Ev...
Digital Input Event	None
Digital Input Delay	0 s
Digital Input Inhibit Delay	0 s
Digital Input Description	N/A

Programmable Digital Input 111	
Digital Input Board Number	1
Digital Input Io Number	3
Digital Input Status	
Digital Input Enabled	On
Digital Input Logic	Active Close
Digital Input Function	Use As A System Ev...
Digital Input Event	None
Digital Input Delay	0 s
Digital Input Inhibit Delay	0 s
Digital Input Description	N/A

Engine Metering 112	
Exhaust Temperature	32.0 °F

Programmable Digital Input 112	
Digital Input Board Number	1
Digital Input Io Number	4
Digital Input Status	
Digital Input Enabled	On
Digital Input Logic	Active Close
Digital Input Function	Use As A System Ev...
Digital Input Event	Exhaust Temperatu...
Digital Input Delay	0 s
Digital Input Inhibit Delay	0 s
Digital Input Description	N/A

Programmable Digital Input 113	
Digital Input Board Number	1
Digital Input Io Number	5
Digital Input Status	
Digital Input Enabled	On
Digital Input Logic	Active Close
Digital Input Function	Use As A System Ev...
Digital Input Event	None
Digital Input Delay	0 s
Digital Input Inhibit Delay	0 s
Digital Input Description	N/A

Engine Metering 114	
Engine Seawater Pressure	0 PSI

Programmable Digital Input 114	
Digital Input Board Number	1
Digital Input Io Number	6
Digital Input Status	
Digital Input Enabled	On
Digital Input Logic	Active Close
Digital Input Function	Use As A System Ev...
Digital Input Event	Engine Seawater Pr...
Digital Input Delay	0 s
Digital Input Inhibit Delay	0 s
Digital Input Description	N/A

Programmable Digital Output 115	
Digital Output Board Number	1
Digital Output Io Number	1
Digital Output Status	Inactive
Digital Output Enabled	Off
Digital Output Logic	Active On
Digital Output Function	Use As A System Ev...
Digital Output Event	None
Digital Output Description	N/A

Programmable Digital Output 116	
Digital Output Board Number	1
Digital Output Io Number	2
Digital Output Status	Inactive
Digital Output Enabled	Off
Digital Output Logic	Active On
Digital Output Function	Use As A System Ev...
Digital Output Event	None
Digital Output Description	N/A

Programmable Digital Output 117	
Digital Output Board Number	1
Digital Output Io Number	3
Digital Output Status	Inactive
Digital Output Enabled	Off
Digital Output Logic	Active On
Digital Output Function	Use As A System Ev...
Digital Output Event	None
Digital Output Description	N/A

Programmable Digital Output 118	
Digital Output Board Number	1
Digital Output Io Number	4
Digital Output Status	Inactive
Digital Output Enabled	Off
Digital Output Logic	Active On
Digital Output Function	Use As A System Ev...
Digital Output Event	None
Digital Output Description	N/A

Note: If an optional 15-relay dry contact board is connected, additional programmable inputs/outputs (119–138) appear:
Programmable Analog Voltage Inputs (119–120)
Programmable Digital Inputs (121–124)
Programmable Digital Outputs (125–138)

7.4 Parameter Summary

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The Access column in the table indicates whether each parameter can be changed or only monitored.

- Read: View only, no adjustment
- Locked: Adjustable only when resetting the device profile (personality profile). See Section 3.13.5.
- Write: Parameter is adjustable

Some parameters shown in SiteTech are not accessible on all models. Support of some parameters is dependent on the controller configuration or generator set model.

Generator set calibration can be viewed through SiteTech, but changes to the calibration can only be made at the controller.

Group	Parameter	Access	Units
Identity	Vendor	Read	
Identity	Product	Read	
Identity	Firmware Version	Read	
Engine Metering	Engine Speed	Read	R/min
Engine Metering	Engine Oil Pressure	Read	kPa
Engine Metering	Engine Coolant Temperature	Read	°C
Engine Metering	Engine Oil Level	Read	%
Engine Metering	Engine Coolant Level	Read	%
Engine Metering	Engine Fuel Level	Read	%
Engine Metering	Battery Voltage	Read	V
Engine Metering	Fuel Temperature	Read	°C
Engine Metering	Fuel Pressure	Read	kPa
Engine Metering	Fuel Rate	Read	L/h
Engine Metering	Fuel Used Last Run	Read	L
Engine Metering	Coolant Pressure	Read	kPa
Engine Metering	Lube Oil Temperature	Read	°C
Engine Metering	Crankcase Pressure	Read	kPa
Engine Metering	Genset Controller Temperature	Read	°C
Engine Metering	Battery Voltage From ECM	Read	V
Engine Metering	Exhaust Temperature	Read	°C
Engine Metering	Exhaust Pressure	Read	kPa
Engine Metering	Intake Air Temperature	Read	°C
Engine Metering	Intake Air Pressure	Read	kPa
Engine Metering	Engine Low Oil Pressure Switch	Read	
Engine Metering	Engine Oil Level Switch	Read	
Engine Metering	Engine High Coolant Temperature Switch	Read	
Engine Metering	Engine Low Coolant Temperature Switch	Read	
Engine Metering	Engine Low Fuel Level Switch	Read	
Engine Metering	Engine Seawater Pressure	Read	kPa
Engine Metering	Engine Governor Target Speed	Read	R/min
Engine Speed Governor	Engine Speed Adjustment	Write	
Engine Speed Governor	Adjusted Engine Run Speed	Write	
Generator Metering	Generator Rotation Actual	Read	
Generator Metering	Generator Current Lead/Lag L1	Read	
Generator Metering	Generator Current Lead/Lag L2	Read	
Generator Metering	Generator Current Lead/Lag L3	Read	
Generator Metering	Generator Current Total Lead/Lag	Read	

Group	Parameter	Access	Units
Generator Metering	Generator Power Factor L1	Read	
Generator Metering	Generator Power Factor L2	Read	
Generator Metering	Generator Power Factor L3	Read	
Generator Metering	Generator Total Power Factor	Read	
Generator Metering	Generator Apparent Power L1	Read	VA
Generator Metering	Generator Apparent Power L2	Read	VA
Generator Metering	Generator Apparent Power L3	Read	VA
Generator Metering	Generator Total Apparent Power	Read	VA
Generator Metering	Generator Percent Of Rated Apparent Power	Read	%
Generator Metering	Generator Reactive Power L1	Read	VAR
Generator Metering	Generator Reactive Power L2	Read	VAR
Generator Metering	Generator Reactive Power L3	Read	VAR
Generator Metering	Generator Total Reactive Power	Read	VAR
Generator Metering	Generator Percent Of Rated Reactive Power	Read	%
Generator Metering	Generator Voltage L1-L2	Read	V
Generator Metering	Generator Voltage L2-L3	Read	V
Generator Metering	Generator Voltage L3-L1	Read	V
Generator Metering	Generator Voltage Average Line To Line	Read	V
Generator Metering	Generator Voltage L1-N	Read	V
Generator Metering	Generator Voltage L2-N	Read	V
Generator Metering	Generator Voltage L3-N	Read	V
Generator Metering	Generator Voltage Average Line To Neutral	Read	V
Generator Metering	Generator Current L1	Read	A
Generator Metering	Generator Current L2	Read	A
Generator Metering	Generator Current L3	Read	A
Generator Metering	Generator Current Average	Read	A
Generator Metering	Generator Metering Firmware Version	Read	
Generator Metering	Generator Phase Angle AB To L2-L3	Read	°
Generator Metering	Generator Phase Angle AB To L3-L1	Read	°
Generator Metering	Generator Phase Angle Voltage A To Current L1	Read	°
Generator Metering	Generator Phase Angle Voltage B To Current L2	Read	°
Generator Metering	Generator Phase Angle Voltage C To Current L3	Read	°
Generator Metering	AC Frequency	Read	Hz
Generator Metering	Generator Percent Of Rated Real Power	Read	%
Generator Metering	Generator Real Power L1	Read	W
Generator Metering	Generator Real Power L2	Read	W
Generator Metering	Generator Real Power L3	Read	W
Generator Metering	Generator Total Real Power	Read	W
Bus Metering	Bus Voltage L1-L2	Read	V
Bus Metering	Bus Voltage L2-L3	Read	V
Bus Metering	Bus Voltage L3-L1	Read	V
Bus Metering	Bus Voltage Average Line To Line	Read	V
Bus Metering	Bus Total Real Power	Read	kW
Bus Metering	Bus Total Real Power Percentage	Read	%
Bus Metering	Bus Total Reactive Power Percentage	Read	%
Bus Metering	Bus Frequency	Read	Hz
Bus Metering	Bus Rotation Actual	Read	
Bus Metering	Phase Angle Generator Voltage AB Bus Voltage L1-L2	Read	°
Bus Metering	Speed Bias 2	Read	%
Bus Metering	Voltage Bias 2	Read	%
Bus Metering	Bus Phase Angle AB To L2-L3	Read	°

Group	Parameter	Access	Units
Bus Metering	Bus Phase Angle AB To L3-L1	Read	°
Genset Info	Genset Model Number	Locked	
Genset Info	Genset Spec Number	Locked	
Genset Info	Genset Serial Number	Locked	
Genset Info	Alternator Part Number	Locked	
Genset Info	Genset Controller Serial Number	Read	
Genset Info	Engine Part Number	Locked	
Genset Info	Engine Model Number	Locked	
Genset Info	Engine Serial Number	Locked	
Genset Info	ECM Serial Number	Read	
Genset Info	Genset State	Read	
Genset Info	Master Switch Position	Read	
Genset Run Time	Genset Controller Clock Time	Write	
Genset Run Time	Genset Controller Total Operation Time	Read	h
Genset Run Time	Engine Total Run Time	Read	h
Genset Run Time	Engine Total Run Time Loaded	Read	h
Genset Run Time	Engine Total Run Time Unloaded	Read	h
Genset Run Time	Engine Total Number Of Starts	Read	
Genset Run Time	Genset Total Energy	Read	kW-h
Genset Run Time	Engine Maintenance Period Hours	Write	h
Genset Run Time	Genset Date Time Of Last Maintenance	Read	
Genset Run Time	Engine Run Time At Reset Maintenance	Read	h
Genset Run Time	Engine Run Time Until Maintenance	Read	h
Genset Run Time	Genset Controller Hours Of Operation Since Maintenance	Read	h
Genset Run Time	Engine Run Time Since Maintenance	Read	h
Genset Run Time	Engine Run Time Loaded Since Maintenance	Read	h
Genset Run Time	Engine Run Time Unloaded Since Maintenance	Read	h
Genset Run Time	Engine Number Of Starts Since Maintenance	Read	
Genset Run Time	Genset Energy Since Maintenance	Read	kW-h
Genset Run Time	Engine Last Start Time	Read	
Genset Run Time	Last Run Length	Read	h
Genset Run Time	Genset Controller Date Format	Write	
Genset Run Time	Genset Controller Time Format	Write	
Genset Personality Profile	ECM Model	Locked	
Genset Personality Profile	Maximum Alternator Current	Read	A
Genset Personality Profile	Engine Number Of Flywheel Teeth	Locked	
Genset Personality Profile	Engine Warmed Up Temperature	Locked	°C
Genset Personality Profile	Engine Cooled Down Temperature	Locked	°C
Genset Personality Profile	Engine Crank Disconnect Speed	Locked	R/min
Genset Personality Profile	Engine Idle Speed	Locked	R/min
Genset Personality Profile	Engine Run Speed	Write	R/min
Genset Personality Profile	Engine Coolant Temperature Protectives Enabled	Locked	
Genset Personality Profile	Engine Low Coolant Temperature Inhibit Delay	Locked	s
Genset Personality Profile	Engine High Coolant Temperature Inhibit Delay	Locked	s
Genset Personality Profile	Engine Low Coolant Temperature Warning Delay	Locked	s
Genset Personality Profile	Engine High Coolant Temperature Warning Delay	Locked	s
Genset Personality Profile	Engine Low Coolant Temperature Shutdown Delay	Locked	s
Genset Personality Profile	Engine High Coolant Temperature Shutdown Delay	Locked	s
Genset Personality Profile	Engine Low Coolant Temperature Warning Limit	Locked	°C
Genset Personality Profile	Engine High Coolant Temperature Warning Limit	Locked	°C
Genset Personality Profile	Engine Low Coolant Temperature Shutdown Limit	Locked	°C

Group	Parameter	Access	Units
Genset Personality Profile	Engine High Coolant Temperature Shutdown Limit	Locked	°C
Genset Personality Profile	Engine Coolant Temperature Deadband	Locked	°C
Genset Personality Profile	Personality Alternator Manufacturer	Locked	
Genset Personality Profile	Personality Alternator Toc Time Constant	Locked	s
Genset Personality Profile	Personality Alternator Number Of Poles	Locked	
Genset Personality Profile	Personality Alternator Type	Locked	
Genset Personality Profile	Personality Fixed Voltage 50 Hz	Locked	V
Genset Personality Profile	Personality Power Rating Single Phase 50 Hz 10 PF	Locked	kW
Genset Personality Profile	Personality Power Rating Single Phase 50 Hz 8 PF	Locked	kW
Genset Personality Profile	Personality Power Rating Fixed Volt 50 Hz	Locked	kW
Genset Personality Profile	Personality Power Rating 50 Hz 220 440	Locked	kW
Genset Personality Profile	Personality Power Rating 50 Hz 208 415	Locked	kW
Genset Personality Profile	Personality Power Rating 50 Hz 200 400	Locked	kW
Genset Personality Profile	Personality Power Rating 50 Hz 190 380	Locked	kW
Genset Personality Profile	Personality Power Rating 50 Hz 173 346	Locked	kW
Genset Personality Profile	Personality Power Rating 50 Hz Delta	Locked	kW
Genset Personality Profile	Personality Fixed Voltage 60 Hz	Locked	V
Genset Personality Profile	Personality Power Rating Single Phase 60 Hz 10 PF	Locked	kW
Genset Personality Profile	Personality Power Rating Single Phase 60 Hz 8 PF	Locked	kW
Genset Personality Profile	Personality Power Rating Fixed Volt 60 Hz	Locked	kW
Genset Personality Profile	Personality Power Rating 60 Hz 240 480	Locked	kW
Genset Personality Profile	Personality Power Rating 60 Hz 230 460	Locked	kW
Genset Personality Profile	Personality Power Rating 60 Hz 220 440	Locked	kW
Genset Personality Profile	Personality Power Rating 60 Hz 208 416	Locked	kW
Genset Personality Profile	Personality Power Rating 60 Hz 190 380	Locked	kW
Genset Personality Profile	Personality Power Rating 60 Hz Delta	Locked	kW
Genset Personality Profile	Personality Installed Options	Locked	
Genset Personality Profile	Gen Rating 1 Fuel Type	Locked	
Genset Personality Profile	Gen Rating 1 50 H Z 1 Ph	Locked	kW
Genset Personality Profile	Gen Rating 1 50 H Z Wye 173 346	Locked	kW
Genset Personality Profile	Gen Rating 1 50 H Z Wye 190 380	Locked	kW
Genset Personality Profile	Gen Rating 1 50 H Z Wye 200 400	Locked	kW
Genset Personality Profile	Gen Rating 1 50 H Z Wye 208 415	Locked	kW
Genset Personality Profile	Gen Rating 1 50 H Z Wye 220 440	Locked	kW
Genset Personality Profile	Gen Rating 1 50 Hz Delta	Locked	kW
Genset Personality Profile	Gen Rating 1 Fixed Voltage 50 Hz	Locked	V
Genset Personality Profile	Gen Rating 1 Fixed Voltage K W 50 Hz	Locked	kW
Genset Personality Profile	Gen Rating 1 60 H Z 1 Ph	Locked	kW
Genset Personality Profile	Gen Rating 1 60 H Z Wye 190 380	Locked	kW
Genset Personality Profile	Gen Rating 1 60 H Z Wye 208 416	Locked	kW
Genset Personality Profile	Gen Rating 1 60 H Z Wye 220 440	Locked	kW
Genset Personality Profile	Gen Rating 1 60 H Z Wye 230 460	Locked	kW
Genset Personality Profile	Gen Rating 1 60 H Z Wye 240 480	Locked	kW
Genset Personality Profile	Gen Rating 1 60 Hz Delta	Locked	kW
Genset Personality Profile	Gen Rating 1 Fixed Voltage 60 Hz	Locked	V
Genset Personality Profile	Gen Rating 1 Fixed Voltage K W 60 Hz	Locked	kW
Genset Personality Profile	Gen Rating 2 Fuel Type	Locked	
Genset Personality Profile	Gen Rating 2 50 H Z 1 Ph	Locked	kW
Genset Personality Profile	Gen Rating 2 50 H Z Wye 173 346	Locked	kW
Genset Personality Profile	Gen Rating 2 50 H Z Wye 190 380	Locked	kW
Genset Personality Profile	Gen Rating 2 50 H Z Wye 200 400	Locked	kW

Group	Parameter	Access	Units
Genset Personality Profile	Gen Rating 2 50 H Z Wye 208 415	Locked	kW
Genset Personality Profile	Gen Rating 2 50 H Z Wye 220 440	Locked	kW
Genset Personality Profile	Gen Rating 2 50 Hz Delta	Locked	kW
Genset Personality Profile	Gen Rating 2 Fixed Voltage 50 Hz	Locked	V
Genset Personality Profile	Gen Rating 2 Fixed Voltage K W 50 Hz	Locked	kW
Genset Personality Profile	Gen Rating 2 60 H Z 1 Ph	Locked	kW
Genset Personality Profile	Gen Rating 2 60 H Z Wye 190 380	Locked	kW
Genset Personality Profile	Gen Rating 2 60 H Z Wye 208 416	Locked	kW
Genset Personality Profile	Gen Rating 2 60 H Z Wye 220 440	Locked	kW
Genset Personality Profile	Gen Rating 2 60 H Z Wye 230 460	Locked	kW
Genset Personality Profile	Gen Rating 2 60 H Z Wye 240 480	Locked	kW
Genset Personality Profile	Gen Rating 2 60 Hz Delta	Locked	kW
Genset Personality Profile	Gen Rating 2 Fixed Voltage 60 Hz	Locked	V
Genset Personality Profile	Gen Rating 2 Fixed Voltage K W 60 Hz	Locked	kW
Genset Personality Profile	Freq Match P Gain Scaler	Locked	
Genset Personality Profile	Freq Match I Gain Scaler	Locked	
Genset Personality Profile	Freq Match D Gain Scaler	Locked	
Genset Personality Profile	Volt Match P Gain Scaler	Locked	
Genset Personality Profile	Volt Match I Gain Scaler	Locked	
Genset Personality Profile	Volt Match D Gain Scaler	Locked	
Genset Personality Profile	Phase Match P Gain Scaler	Locked	
Genset Personality Profile	Phase Match I Gain Scaler	Locked	
Genset Personality Profile	Phase Match D Gain Scaler	Locked	
Genset Personality Profile	Real Power P Gain Scaler	Locked	
Genset Personality Profile	Real Power I Gain Scaler	Locked	
Genset Personality Profile	Real Power D Gain Scaler	Locked	
Genset Personality Profile	Torque Share P Gain Scaler	Locked	
Genset Personality Profile	Torque Share I Gain Scaler	Locked	
Genset Personality Profile	Torque Share D Gain Scaler	Locked	
Genset Personality Profile	Freq Trim P Gain Scaler	Locked	
Genset Personality Profile	Freq Trim I Gain Scaler	Locked	
Genset Personality Profile	Freq Trim D Gain Scaler	Locked	
Genset Personality Profile	Reactive Power P Gain Scaler	Locked	
Genset Personality Profile	Reactive Power I Gain Scaler	Locked	
Genset Personality Profile	Reactive Power D Gain Scaler	Locked	
Genset Personality Profile	Volt Trim P Gain Scaler	Locked	
Genset Personality Profile	Volt Trim I Gain Scaler	Locked	
Genset Personality Profile	Volt Trim D Gain Scaler	Locked	
Voltage Selector Switch	Voltage Selector Switch Position	Locked	
Voltage Selector Switch	Voltage Selector Switch Max Positions	Locked	
Voltage Selector Switch	Voltage Selector Switch Position 1 Voltage	Locked	V
Voltage Selector Switch	Voltage Selector Switch Position 1 Frequency	Locked	Hz
Voltage Selector Switch	Voltage Selector Switch Position 1 Voltage Phase Connection	Locked	
Voltage Selector Switch	Voltage Selector Switch Position 2 Voltage	Locked	V
Voltage Selector Switch	Voltage Selector Switch Position 2 Frequency	Locked	Hz
Voltage Selector Switch	Voltage Selector Switch Position 2 Voltage Phase Connection	Locked	
Voltage Selector Switch	Voltage Selector Switch Position 3 Voltage	Locked	V
Voltage Selector Switch	Voltage Selector Switch Position 3 Frequency	Locked	Hz
Voltage Selector Switch	Voltage Selector Switch Position 3 Voltage Phase Connection	Locked	
Genset System Configuration	Genset System Voltage	Write	V
Genset System Configuration	Genset System Frequency	Write	Hz

Group	Parameter	Access	Units
Genset System Configuration	Genset Voltage Phase Connection	Write	
Genset System Configuration	Genset Power Rating	Locked	kW
Genset System Configuration	Genset Apparent Power Rating	Write	kVA
Genset System Configuration	Genset Rated Current	Read	A
Genset System Configuration	Genset System Battery Voltage	Write	V
Genset System Configuration	Prime Power Application	Locked	
Genset System Configuration	Current Transformer Ratio	Locked	
Genset System Configuration	Local Start Mode	Read	
Genset System Configuration	Measurement System	Write	
Genset System Configuration	Alarm Silence Always Allowed	Write	
Genset System Configuration	NFPA 110 Enabled	Write	
Genset System Configuration	Cool Down Temperature Override	Write	
Genset System Configuration	Oil Sensor Type	Write	
Genset System Configuration	Public CAN Protocol	Write	
Genset System Configuration	Display Contrast	Write	
Genset System Configuration	Using Voltage Selector Switch	Write	
Genset System Configuration	Genset System Language	Write	
Genset System Configuration	Genset Maximum Percent Capacity	Write	%
Genset System Configuration	Generator Overloaded Percent	Write	%
Genset System Configuration	Under Frequency Shed Level	Write	Hz
Genset System Configuration	Base Load Add Time	Write	s
Genset System Configuration	Base Over Load Shed Time	Write	s
Genset System Configuration	Base Under Frequency Shed Time	Write	s
Genset System Configuration	Genset Fuel Type	Write	
Genset System Configuration	Battle Mode	Write	
Genset System Configuration	ECM Powered Mode	Write	
Genset System Configuration	Genset Application	Locked	
Genset Calibration	Calibration Factor Voltage L1-L2	Write	
Genset Calibration	Calibration Factor Voltage L2-L3	Write	
Genset Calibration	Calibration Factor Voltage L3-L1	Write	
Genset Calibration	Calibration Factor Voltage L1-N	Write	
Genset Calibration	Calibration Factor Voltage L2-N	Write	
Genset Calibration	Calibration Factor Voltage L3-N	Write	
Genset Calibration	Calibration Factor Current L1	Write	
Genset Calibration	Calibration Factor Current L2	Write	
Genset Calibration	Calibration Factor Current L3	Write	
Genset Calibration	Bus Calibration Factor Voltage L1-L2	Write	
Genset Calibration	Bus Calibration Factor Voltage L2-L3	Write	
Genset Calibration	Bus Calibration Factor Voltage L3-L1	Write	
Voltage Regulator	Voltage Regulator Average Voltage Adjustment	Write	V
Voltage Regulator	Voltage Regulator Volts Per Hertz Slope	Write	%
Voltage Regulator	Voltage Regulator Volts Per Hertz Cut In Frequency	Write	Hz
Voltage Regulator	Voltage Regulator Gain	Write	
Voltage Regulator	Voltage Regulator Stability Adjust	Write	
Voltage Regulator	Voltage Regulator Firmware Version	Read	
Voltage Regulator	Voltage Regulator Target Voltage	Read	V
Voltage Regulator	Voltage Regulator Normal Ramp Rate	Write	%/s
Engine Timing	Engine Idle Duration	Write	s
Engine Timing	Engine Restart Delay	Write	s
Engine Timing	Engine Start Delay	Write	s
Engine Timing	Engine ECM Start Delay	Write	s

Group	Parameter	Access	Units
Engine Timing	Engine Cool Down Delay	Write	s
Engine Timing	Engine Start Aid Delay	Write	s
Engine Timing	Engine Crank On Delay	Write	s
Engine Timing	Engine Crank Pause Delay	Write	s
Engine Timing	Engine Number Of Crank Cycles	Write	
Engine Timing	Engine Post Heat Delay Seconds	Write	s
Engine Timing	Engine Start Aid Temperature Limit	Write	°C
Genset Protection	After Crank Disconnect Fault Inhibit Delay	Read	s
Genset Protection	Genset Low Battery Voltage Warning Delay	Read	s
Genset Protection	Genset High Battery Voltage Warning Delay	Read	s
Genset Protection	Genset Low Battery Voltage Warning Limit	Write	%
Genset Protection	Genset High Battery Voltage Warning Limit	Write	%
Genset Protection	Genset Battery Low Cranking Voltage Warning Delay	Read	s
Genset Protection	Genset Battery Low Cranking Voltage Warning Limit	Read	%
Engine Protection	Engine Low Coolant Level Shutdown Delay	Read	s
Engine Protection	Engine Low Oil Pressure Warning Delay	Locked	s
Engine Protection	Engine Low Oil Pressure Shutdown Delay	Locked	s
Engine Protection	Engine Locked Rotor Shutdown Delay	Write	s
Engine Protection	ECM Communication Loss Shutdown Delay	Read	s
Engine Protection	Genset Low Engine Speed Shutdown Limit	Write	%
Engine Protection	Genset High Engine Speed Shutdown Limit	Write	%
Engine Protection	Engine Oil Pressure Protectives Enabled	Locked	
Engine Protection	Engine Low Oil Pressure Inhibit Delay	Locked	s
Engine Protection	Engine Low Oil Pressure Warning Limit	Locked	kPa
Engine Protection	Engine Low Oil Pressure Shutdown Limit	Locked	kPa
Engine Protection	Engine Oil Pressure Deadband	Locked	kPa
Generator Protection	Loss Of AC Sensing Shutdown Delay	Read	s
Generator Protection	Genset Low Voltage Shutdown Delay	Write	s
Generator Protection	Genset High Voltage Shutdown Delay	Write	s
Generator Protection	Genset Low Voltage Shutdown Limit	Write	%
Generator Protection	Genset High Voltage Shutdown Limit	Write	%
Generator Protection	Genset Short Term Low Frequency Shutdown Delay	Read	s
Generator Protection	Genset Long Term Low Frequency Shutdown Delay	Read	s
Generator Protection	Genset High Frequency Shutdown Delay	Read	s
Generator Protection	Genset Low Frequency Shutdown Limit	Write	%
Generator Protection	Genset High Frequency Shutdown Limit	Write	%
Programmable Digital Input	Digital Input Board Number	Read	
Programmable Digital Input	Digital Input Io Number	Read	
Programmable Digital Input	Digital Input Status	Read	
Programmable Digital Input	Digital Input Enabled	Write	
Programmable Digital Input	Digital Input Logic	Write	
Programmable Digital Input	Digital Input Function	Write	
Programmable Digital Input	Digital Input Event	Write	
Programmable Digital Input	Digital Input Delay	Write	s
Programmable Digital Input	Digital Input Inhibit Delay	Write	s
Programmable Digital Input	Digital Input Description	Write	
Programmable Digital Output	Digital Output Board Number	Read	
Programmable Digital Output	Digital Output Io Number	Read	
Programmable Digital Output	Digital Output Status	Read	
Programmable Digital Output	Digital Output Enabled	Write	
Programmable Digital Output	Digital Output Logic	Write	

Group	Parameter	Access	Units
Programmable Digital Output	Digital Output Function	Write	
Programmable Digital Output	Digital Output Event	Write	
Programmable Digital Output	Digital Output Description	Write	
Programmable Analog Resistive Input	Analog Resistive Input Board Number	Read	
Programmable Analog Resistive Input	Analog Resistive Input Io Number	Read	
Programmable Analog Resistive Input	Analog Resistive Input Metered Value	Read	
Programmable Analog Resistive Input	Analog Resistive Input Metered Relative Value	Read	
Programmable Analog Resistive Input	Analog Resistive Input Enabled	Write	
Programmable Analog Resistive Input	Analog Resistive Input Switch Logic	Write	
Programmable Analog Resistive Input	Analog Resistive Input Function	Write	
Programmable Analog Resistive Input	Analog Resistive Input Protectives Enabled	Write	
Programmable Analog Resistive Input	Analog Resistive Input Event	Write	
Programmable Analog Resistive Input	Analog Resistive Input Sensor	Write	
Programmable Analog Resistive Input	Analog Resistive Input Low Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input High Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Inhibit Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Normal Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Low Warning Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Critically Low Warning Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input High Warning Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Critically High Warning Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Low Shutdown Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input High Shutdown Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Low Warning Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input Critically Low Warning Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input Low Shutdown Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input High Warning Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input Critically High Warning Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input High Shutdown Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input Deadband	Write	
Programmable Analog Resistive Input	Analog Resistive Input Relative Upper Range Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input Relative Lower Range Limit	Write	
Programmable Analog Resistive Input	Analog Resistive Input Relative Range Limit Dead Band	Write	
Programmable Analog Resistive Input	Analog Resistive Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Relative Range Limit Delay	Write	s
Programmable Analog Resistive Input	Analog Resistive Input Description	Write	
Programmable Analog Voltage Input	Analog Voltage Input Board Number	Read	
Programmable Analog Voltage Input	Analog Voltage Input Io Number	Read	
Programmable Analog Voltage Input	Analog Voltage Input Metered Value	Read	
Programmable Analog Voltage Input	Analog Voltage Input Metered Relative Value	Read	
Programmable Analog Voltage Input	Analog Voltage Input Enabled	Write	
Programmable Analog Voltage Input	Analog Voltage Input Switch Logic	Write	
Programmable Analog Voltage Input	Analog Voltage Input Function	Write	
Programmable Analog Voltage Input	Analog Voltage Input Protectives Enabled	Write	
Programmable Analog Voltage Input	Analog Voltage Input Event	Write	
Programmable Analog Voltage Input	Analog Voltage Input Sensor	Write	
Programmable Analog Voltage Input	Analog Voltage Input Low Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input High Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Delay	Write	s

Group	Parameter	Access	Units
Programmable Analog Voltage Input	Analog Voltage Input Inhibit Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Normal Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Low Warning Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Critically Low Warning Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input High Warning Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Critically High Warning Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Low Shutdown Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input High Shutdown Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Low Warning Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input Critically Low Warning Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input Low Shutdown Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input High Warning Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input Critically High Warning Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input High Shutdown Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input Deadband	Write	
Programmable Analog Voltage Input	Analog Voltage Input Relative Upper Range Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input Relative Lower Range Limit	Write	
Programmable Analog Voltage Input	Analog Voltage Input Relative Range Limit Dead Band	Write	
Programmable Analog Voltage Input	Analog Voltage Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Relative Range Limit Delay	Write	s
Programmable Analog Voltage Input	Analog Voltage Input Description	Write	
Protective Relays	PR Over Power Trip	Write	%
Protective Relays	PR Over Power Time Delay	Write	s
Protective Relays	PR Reverse Power Trip	Write	%
Protective Relays	PR Reverse Power Time Delay	Write	s
Protective Relays	PR Over Voltage Trip	Write	%
Protective Relays	PR Over Voltage Time Delay	Write	s
Protective Relays	PR Under Voltage Trip	Write	%
Protective Relays	PR Under Voltage Time Delay	Write	s
Protective Relays	PR Over Frequency Trip	Write	%
Protective Relays	PR Over Frequency Time Delay	Write	s
Protective Relays	PR Under Frequency Trip	Write	%
Protective Relays	PR Under Frequency Time Delay	Write	s
Protective Relays	PR Reverse Var Trip	Write	%
Protective Relays	PR Reverse Var Time Delay	Write	s
Protective Relays	PR Over Current VR Trip	Write	%
Protective Relays	PR Over Current VR Time Delay	Write	s
Protective Relays	Breaker Trip To Shutdown Time Delay	Write	s
Synchronization Control	Voltage Match Window	Write	%
Synchronization Control	Sync Frequency Window	Write	Hz
Synchronization Control	Phase Match Window	Write	°
Synchronization Control	Dwell Time	Write	s
Synchronization Control	Fail To Sync Delay	Write	s
Synchronization Control	Breaker Reclose Time	Write	s
Synchronization Control	Breaker Close Attempts	Write	
Synchronization Control	First On Close Delay	Write	s
Synchronization Control	Circuit Breaker Current Fault Limit	Write	%
Synchronization Control	Circuit Breaker Current Fault Delay	Write	s
Synchronization Control	Volts Hertz Okay Time Delay	Write	s
Synchronization Control	Sync Mode In Auto	Write	

Group	Parameter	Access	Units
Synchronization Control	Sync Mode In Run	Write	
Synchronization Control	Circuit Breaker Phase Angle Fault Limit	Write	°
Synchronization Control	Circuit Breaker Phase Angle Fault Delay	Write	s
Synchronization Control	Dead Bus Level	Write	%
Synchronization Control	Pickup Acceptable Voltage Window	Write	%
Synchronization Control	Dropout Acceptable Voltage Window	Write	%
Synchronization Control	Pickup Acceptable Frequency Window	Write	Hz
Synchronization Control	Dropout Acceptable Frequency Window	Write	Hz
Synchronization Control	Stand Alone Operation	Write	
Synchronization Control	P Gen Baud Rate	Write	b/s
Synchronization Control	P Gen Node Id	Read	
Synchronization Control	P Gen Nodes Connected	Read	
Synchronization Control	P Gen Nodes Disconnected	Read	
Synchronization Control	Fail To Open Delay	Write	s
Synchronization Control	Fail To Close Delay	Write	s
Synchronization Control	Voltage Match Proportional Gain	Write	
Synchronization Control	Voltage Match Integral Gain	Write	
Synchronization Control	Voltage Match Derivative Gain	Write	
Synchronization Control	Frequency Match Proportional Gain	Write	
Synchronization Control	Frequency Match Integral Gain	Write	
Synchronization Control	Frequency Match Derivative Gain	Write	
Synchronization Control	Phase Match Proportional Gain	Write	
Synchronization Control	Phase Match Integral Gain	Write	
Synchronization Control	Phase Match Derivative Gain	Write	
Synchronization Control	Generator Paralleling Breaker	Read	
Synchronization Control	External Bias Inputs Enabled	Write	
Synchronization Metering	Sync Time Remaining	Read	s
Synchronization Metering	Sync Dwell Time Remaining	Read	s
Synchronization Metering	Sync Status Generator V Hz OK	Read	
Synchronization Metering	Sync Status Voltage Matched	Read	
Synchronization Metering	Sync Status Frequency Matched	Read	
Synchronization Metering	Sync Status Phase Matched	Read	
Synchronization Metering	Sync Check Matched Ok	Read	
Real Power Load Sharing	Real Power Baseload Setpoint	Write	%
Real Power Load Sharing	Real Power Disconnect Level	Write	%
Real Power Load Sharing	Real Power Ramp Rate	Write	%/s
Real Power Load Sharing	Real Power Droop Slope	Write	%@FL
Real Power Load Sharing	Speed Bias	Read	
Real Power Load Sharing	Load Enable	Write	
Real Power Load Sharing	Base Load Mode	Write	
Real Power Load Sharing	System Load Control	Write	
Real Power Load Sharing	System Sync Control	Write	
Real Power Load Sharing	Trims Enabled	Write	
Real Power Load Sharing	Real Power Sharing Proportional Gain	Write	
Real Power Load Sharing	Real Power Sharing Integral Gain	Write	
Real Power Load Sharing	Real Power Sharing Derivative Gain	Write	
Real Power Load Sharing	Torque Sharing Proportional Gain	Write	
Real Power Load Sharing	Torque Sharing Integral Gain	Write	
Real Power Load Sharing	Torque Sharing Derivative Gain	Write	
Real Power Load Sharing	Frequency Trim Proportional Gain	Write	
Real Power Load Sharing	Frequency Trim Integral Gain	Write	

Group	Parameter	Access	Units
Real Power Load Sharing	Frequency Trim Derivative Gain	Write	
Real Power Load Sharing	Real Power Baseload Proportional Gain	Write	
Real Power Load Sharing	Real Power Baseload Integral Gain	Write	
Real Power Load Sharing	Real Power Baseload Derivative Gain	Write	
Real Power Load Sharing	System Real Load Control Proportional Gain	Write	
Real Power Load Sharing	System Real Load Control Integral Gain	Write	
Real Power Load Sharing	System Real Load Control Derivative Gain	Write	
Reactive Power Load Sharing	Reactive Power Baseload Setpoint	Write	%
Reactive Power Load Sharing	Power Factor Setting	Write	
Reactive Power Load Sharing	Reactive Droop Slope	Write	%@FL
Reactive Power Load Sharing	Voltage Bias	Read	
Reactive Power Load Sharing	Var Control Mode	Write	
Reactive Power Load Sharing	Reactive Power Sharing Proportional Gain	Write	
Reactive Power Load Sharing	Reactive Power Sharing Integral Gain	Write	
Reactive Power Load Sharing	Reactive Power Sharing Derivative Gain	Write	
Reactive Power Load Sharing	Voltage Trim Proportional Gain	Write	
Reactive Power Load Sharing	Voltage Trim Integral Gain	Write	
Reactive Power Load Sharing	Voltage Trim Derivative Gain	Write	
Reactive Power Load Sharing	Reactive Power Baseload Proportional Gain	Write	
Reactive Power Load Sharing	Reactive Power Baseload Integral Gain	Write	
Reactive Power Load Sharing	Reactive Power Baseload Derivative Gain	Write	
Reactive Power Load Sharing	Power Factor Baseload Proportional Gain	Write	
Reactive Power Load Sharing	Power Factor Baseload Integral Gain	Write	
Reactive Power Load Sharing	Power Factor Baseload Derivative Gain	Write	
Reactive Power Load Sharing	System Reactive Power Control Proportional Gain	Write	
Reactive Power Load Sharing	System Reactive Power Control Integral Gain	Write	
Reactive Power Load Sharing	System Reactive Power Control Derivative Gain	Write	
Reactive Power Load Sharing	System Power Factor Control Proportional Gain	Write	
Reactive Power Load Sharing	System Power Factor Control Integral Gain	Write	
Reactive Power Load Sharing	System Power Factor Control Derivative Gain	Write	
Battery Charger	Charger Status	Read	
Battery Charger	Charger State	Read	
Battery Charger	Charger Power Line State	Read	
Battery Charger	Charger Output Voltage	Read	V
Battery Charger	Charger Output Current	Read	A
Battery Charger	Charger Temperature	Read	°C
Battery Charger	Charger Number Of Identification Fields	Read	
Battery Charger	Charger Device Number	Read	
Battery Charger	Charger Temperature Compensation Active	Read	
Battery Charger	Charger Present Charge Curve	Read	
Battery Charger	Charger Soft Start Charging Active	Read	
Battery Charger	Charger Reduced Output Active	Read	
Battery Charger	Charger Temp Compensation Sensor	Read	
Battery Charger	Charger Low Voltage For Topology	Read	
Battery Charger	Charger High Voltage For Topology	Read	
Battery Charger	Charger Internal Temperature High	Read	
Battery Charger	Charger Absorption Cycle Timed Out	Read	
Battery Charger	Charger Output Connection Reversed	Read	
Battery Charger	Charger Custom Profile Enable	Write	
Battery Charger	Charger Starter Battery Topology	Write	
Battery Charger	Charger System Battery Voltage	Write	

Group	Parameter	Access	Units
Battery Charger	Charger Automatic Equalize Enable	Write	
Battery Charger	Charger Manual Equalize Cycle Activation	Write	
Battery Charger	Charger Temperature Compensation Enable	Write	
Battery Charger	Charger Temperature Compensation Slope	Write	mV/C
Battery Charger	Charger Battery Number Cells	Write	
Battery Charger	Charger Per Cell Voltage Bulk	Write	V
Battery Charger	Charger Per Cell Voltage Absorption	Write	V
Battery Charger	Charger Per Cell Voltage Float	Write	V
Battery Charger	Charger Per Cell Voltage Equalize	Write	V
Battery Charger	Charger Current Limit	Write	A
Battery Charger	Charger Absorption Current Termination Target	Write	A
Battery Charger	Charger Depleted Battery Current Limit	Write	A
Battery Charger	Charger Depleted Battery Voltage Per Cell Target	Write	V
Battery Charger	Charger Return To Bulk State Voltage Per Cell Threshold	Write	V
Battery Charger	Charger Maximum Absorption Time Threshold	Write	min
Battery Charger	Charger Maximum Bulk Time Threshold	Write	min
Battery Charger	Charger Refresh Charge Cycle Time	Write	min
Battery Charger	Charger Equalize Stage Duration	Write	s
Battery Charger	Charger Software Identification	Read	
Generator Management	Gen Management Control Mode	Write	
Generator Management	Gen Management Enabled	Write	
Generator Management	Gen Management Order	Write	
Generator Management	Gen Management Start Percent	Write	%
Generator Management	Gen Management Stop Percent	Write	%
Generator Management	Gen Management Start Delay	Write	s
Generator Management	Gen Management Stop Delay	Write	s
Generator Management	Gen Management Start Accumulator	Read	
Generator Management	Gen Management Stop Accumulator	Read	
Generator Management	Gen Management Start KW	Read	kW
Generator Management	Gen Management Stop KW	Read	kW
Generator Management	Gen Management Stable Delay	Write	s
Generator Management	Gen Management Run Time Threshold	Write	h
Generator Management	Gen Management Fuel Difference Threshold	Write	%
Generator Management	Gen Management Min Gens Online	Write	
Generator Management	Gen Management Min Load Shed Priority	Write	
Generator Management	Gen Management Stopped By Gen Mgmt	Read	
Generator Management	Gen Management Total Bus Capacity	Read	kW
Modbus	Modbus Baud Rate	Write	b/s
Modbus	Modbus Slave Address	Write	
Engine Metering 1	Engine Oil Pressure	Read	kPa
Engine Metering 1	Engine Coolant Temperature	Read	°C
Programmable Analog Resistive Input 100	Analog Resistive Input Board Number	Read	
Programmable Analog Resistive Input 100	Analog Resistive Input Io Number	Read	
Programmable Analog Resistive Input 100	Analog Resistive Input Metered Value	Read	
Programmable Analog Resistive Input 100	Analog Resistive Input Metered Relative Value	Read	
Programmable Analog Resistive Input 100	Analog Resistive Input Enabled	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Switch Logic	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Function	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Protectives Enabled	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Event	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Sensor	Write	

Group	Parameter	Access	Units
Programmable Analog Resistive Input 100	Analog Resistive Input Low Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input High Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Inhibit Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Normal Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Low Warning Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Critically Low Warning Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input High Warning Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Critically High Warning Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Low Shutdown Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input High Shutdown Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Low Warning Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Critically Low Warning Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Low Shutdown Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input High Warning Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Critically High Warning Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input High Shutdown Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Deadband	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Relative Upper Range Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Relative Lower Range Limit	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Relative Range Limit Dead Band	Write	
Programmable Analog Resistive Input 100	Analog Resistive Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Relative Range Limit Delay	Write	s
Programmable Analog Resistive Input 100	Analog Resistive Input Description	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Board Number	Read	
Programmable Analog Resistive Input 101	Analog Resistive Input Io Number	Read	
Programmable Analog Resistive Input 101	Analog Resistive Input Metered Value	Read	
Programmable Analog Resistive Input 101	Analog Resistive Input Metered Relative Value	Read	
Programmable Analog Resistive Input 101	Analog Resistive Input Enabled	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Switch Logic	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Function	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Protectives Enabled	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Event	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Sensor	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Low Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input High Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Inhibit Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Normal Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Low Warning Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Critically Low Warning Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input High Warning Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Critically High Warning Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Low Shutdown Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input High Shutdown Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Low Warning Limit	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Critically Low Warning Limit	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Low Shutdown Limit	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input High Warning Limit	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Critically High Warning Limit	Write	

Group	Parameter	Access	Units
Programmable Analog Resistive Input 101	Analog Resistive Input High Shutdown Limit	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Deadband	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Relative Upper Range Limit	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Relative Lower Range Limit	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Relative Range Limit Dead Band	Write	
Programmable Analog Resistive Input 101	Analog Resistive Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Relative Range Limit Delay	Write	s
Programmable Analog Resistive Input 101	Analog Resistive Input Description	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Board Number	Read	
Programmable Analog Resistive Input 102	Analog Resistive Input Io Number	Read	
Programmable Analog Resistive Input 102	Analog Resistive Input Metered Value	Read	
Programmable Analog Resistive Input 102	Analog Resistive Input Metered Relative Value	Read	
Programmable Analog Resistive Input 102	Analog Resistive Input Enabled	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Switch Logic	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Function	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Protectives Enabled	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Event	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Sensor	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Low Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input High Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Inhibit Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Normal Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Low Warning Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Critically Low Warning Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input High Warning Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Critically High Warning Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Low Shutdown Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input High Shutdown Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Low Warning Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Critically Low Warning Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Low Shutdown Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input High Warning Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Critically High Warning Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input High Shutdown Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Deadband	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Relative Upper Range Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Relative Lower Range Limit	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Relative Range Limit Dead Band	Write	
Programmable Analog Resistive Input 102	Analog Resistive Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Relative Range Limit Delay	Write	s
Programmable Analog Resistive Input 102	Analog Resistive Input Description	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Board Number	Read	
Programmable Analog Resistive Input 103	Analog Resistive Input Io Number	Read	
Programmable Analog Resistive Input 103	Analog Resistive Input Metered Value	Read	
Programmable Analog Resistive Input 103	Analog Resistive Input Metered Relative Value	Read	
Programmable Analog Resistive Input 103	Analog Resistive Input Enabled	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Switch Logic	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Function	Write	

Group	Parameter	Access	Units
Programmable Analog Resistive Input 103	Analog Resistive Input Protectives Enabled	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Event	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Sensor	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Low Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input High Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Inhibit Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Normal Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Low Warning Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Critically Low Warning Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input High Warning Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Critically High Warning Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Low Shutdown Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input High Shutdown Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Low Warning Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Critically Low Warning Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Low Shutdown Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input High Warning Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Critically High Warning Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input High Shutdown Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Deadband	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Relative Upper Range Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Relative Lower Range Limit	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Relative Range Limit Dead Band	Write	
Programmable Analog Resistive Input 103	Analog Resistive Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Relative Range Limit Delay	Write	s
Programmable Analog Resistive Input 103	Analog Resistive Input Description	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Board Number	Read	
Programmable Analog Resistive Input 104	Analog Resistive Input Io Number	Read	
Programmable Analog Resistive Input 104	Analog Resistive Input Metered Value	Read	
Programmable Analog Resistive Input 104	Analog Resistive Input Metered Relative Value	Read	
Programmable Analog Resistive Input 104	Analog Resistive Input Enabled	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Switch Logic	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Function	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Protectives Enabled	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Event	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Sensor	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Low Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input High Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Inhibit Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Normal Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Low Warning Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Critically Low Warning Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input High Warning Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Critically High Warning Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Low Shutdown Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input High Shutdown Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Low Warning Limit	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Critically Low Warning Limit	Write	

Group	Parameter	Access	Units
Programmable Analog Resistive Input 104	Analog Resistive Input Low Shutdown Limit	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input High Warning Limit	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Critically High Warning Limit	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input High Shutdown Limit	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Deadband	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Relative Upper Range Limit	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Relative Lower Range Limit	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Relative Range Limit Dead Band	Write	
Programmable Analog Resistive Input 104	Analog Resistive Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Relative Range Limit Delay	Write	s
Programmable Analog Resistive Input 104	Analog Resistive Input Description	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Board Number	Read	
Programmable Analog Resistive Input 105	Analog Resistive Input Io Number	Read	
Programmable Analog Resistive Input 105	Analog Resistive Input Metered Value	Read	
Programmable Analog Resistive Input 105	Analog Resistive Input Metered Relative Value	Read	
Programmable Analog Resistive Input 105	Analog Resistive Input Enabled	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Switch Logic	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Function	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Protectives Enabled	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Event	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Sensor	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Low Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input High Protective Inhibit Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Inhibit Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Normal Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Low Warning Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Critically Low Warning Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input High Warning Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Critically High Warning Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Low Shutdown Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input High Shutdown Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Low Warning Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Critically Low Warning Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Low Shutdown Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input High Warning Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Critically High Warning Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input High Shutdown Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Deadband	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Relative Upper Range Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Relative Lower Range Limit	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Relative Range Limit Dead Band	Write	
Programmable Analog Resistive Input 105	Analog Resistive Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Relative Range Limit Delay	Write	s
Programmable Analog Resistive Input 105	Analog Resistive Input Description	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Board Number	Read	
Programmable Analog Voltage Input 106	Analog Voltage Input Io Number	Read	
Programmable Analog Voltage Input 106	Analog Voltage Input Metered Value	Read	
Programmable Analog Voltage Input 106	Analog Voltage Input Metered Relative Value	Read	

Group	Parameter	Access	Units
Programmable Analog Voltage Input 106	Analog Voltage Input Enabled	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Switch Logic	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Function	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Protectives Enabled	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Event	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Sensor	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Low Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input High Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Inhibit Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Normal Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Low Warning Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Critically Low Warning Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input High Warning Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Critically High Warning Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Low Shutdown Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input High Shutdown Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Low Warning Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Critically Low Warning Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Low Shutdown Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input High Warning Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Critically High Warning Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input High Shutdown Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Deadband	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Relative Upper Range Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Relative Lower Range Limit	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Relative Range Limit Dead Band	Write	
Programmable Analog Voltage Input 106	Analog Voltage Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Relative Range Limit Delay	Write	s
Programmable Analog Voltage Input 106	Analog Voltage Input Description	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Board Number	Read	
Programmable Analog Voltage Input 107	Analog Voltage Input Io Number	Read	
Programmable Analog Voltage Input 107	Analog Voltage Input Metered Value	Read	
Programmable Analog Voltage Input 107	Analog Voltage Input Metered Relative Value	Read	
Programmable Analog Voltage Input 107	Analog Voltage Input Enabled	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Switch Logic	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Function	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Protectives Enabled	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Event	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Sensor	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Low Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input High Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Inhibit Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Normal Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Low Warning Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Critically Low Warning Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input High Warning Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Critically High Warning Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Low Shutdown Delay	Write	s

Group	Parameter	Access	Units
Programmable Analog Voltage Input 107	Analog Voltage Input High Shutdown Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Low Warning Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Critically Low Warning Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Low Shutdown Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input High Warning Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Critically High Warning Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input High Shutdown Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Deadband	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Relative Upper Range Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Relative Lower Range Limit	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Relative Range Limit Dead Band	Write	
Programmable Analog Voltage Input 107	Analog Voltage Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Relative Range Limit Delay	Write	s
Programmable Analog Voltage Input 107	Analog Voltage Input Description	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Board Number	Read	
Programmable Analog Voltage Input 108	Analog Voltage Input Io Number	Read	
Programmable Analog Voltage Input 108	Analog Voltage Input Metered Value	Read	
Programmable Analog Voltage Input 108	Analog Voltage Input Metered Relative Value	Read	
Programmable Analog Voltage Input 108	Analog Voltage Input Enabled	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Switch Logic	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Function	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Protectives Enabled	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Event	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Sensor	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Low Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input High Protective Inhibit Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Inhibit Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Normal Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Low Warning Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Critically Low Warning Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input High Warning Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Critically High Warning Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Low Shutdown Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input High Shutdown Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Low Warning Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Critically Low Warning Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Low Shutdown Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input High Warning Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Critically High Warning Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input High Shutdown Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Deadband	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Relative Upper Range Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Relative Lower Range Limit	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Relative Range Limit Dead Band	Write	
Programmable Analog Voltage Input 108	Analog Voltage Input Relative Range High Limit Inhibit Time	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Relative Range Low Limit Inhibit Time	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Relative Range Limit Delay	Write	s
Programmable Analog Voltage Input 108	Analog Voltage Input Description	Write	
Programmable Digital Input 109	Digital Input Board Number	Read	

Group	Parameter	Access	Units
Programmable Digital Input 109	Digital Input Io Number	Read	
Programmable Digital Input 109	Digital Input Status	Read	
Programmable Digital Input 109	Digital Input Enabled	Write	
Programmable Digital Input 109	Digital Input Logic	Write	
Programmable Digital Input 109	Digital Input Function	Write	
Programmable Digital Input 109	Digital Input Event	Write	
Programmable Digital Input 109	Digital Input Delay	Write	s
Programmable Digital Input 109	Digital Input Inhibit Delay	Write	s
Programmable Digital Input 109	Digital Input Description	Write	
Programmable Digital Input 110	Digital Input Board Number	Read	
Programmable Digital Input 110	Digital Input Io Number	Read	
Programmable Digital Input 110	Digital Input Status	Read	
Programmable Digital Input 110	Digital Input Enabled	Write	
Programmable Digital Input 110	Digital Input Logic	Write	
Programmable Digital Input 110	Digital Input Function	Write	
Programmable Digital Input 110	Digital Input Event	Write	
Programmable Digital Input 110	Digital Input Delay	Write	s
Programmable Digital Input 110	Digital Input Inhibit Delay	Write	s
Programmable Digital Input 110	Digital Input Description	Write	
Programmable Digital Input 111	Digital Input Board Number	Read	
Programmable Digital Input 111	Digital Input Io Number	Read	
Programmable Digital Input 111	Digital Input Status	Read	
Programmable Digital Input 111	Digital Input Enabled	Write	
Programmable Digital Input 111	Digital Input Logic	Write	
Programmable Digital Input 111	Digital Input Function	Write	
Programmable Digital Input 111	Digital Input Event	Write	
Programmable Digital Input 111	Digital Input Delay	Write	s
Programmable Digital Input 111	Digital Input Inhibit Delay	Write	s
Programmable Digital Input 111	Digital Input Description	Write	
Engine Metering 112	Exhaust Temperature	Read	°C
Programmable Digital Input 112	Digital Input Board Number	Read	
Programmable Digital Input 112	Digital Input Io Number	Read	
Programmable Digital Input 112	Digital Input Status	Read	
Programmable Digital Input 112	Digital Input Enabled	Write	
Programmable Digital Input 112	Digital Input Logic	Write	
Programmable Digital Input 112	Digital Input Function	Write	
Programmable Digital Input 112	Digital Input Event	Write	
Programmable Digital Input 112	Digital Input Delay	Write	s
Programmable Digital Input 112	Digital Input Inhibit Delay	Write	s
Programmable Digital Input 112	Digital Input Description	Write	
Programmable Digital Input 113	Digital Input Board Number	Read	
Programmable Digital Input 113	Digital Input Io Number	Read	
Programmable Digital Input 113	Digital Input Status	Read	
Programmable Digital Input 113	Digital Input Enabled	Write	
Programmable Digital Input 113	Digital Input Logic	Write	
Programmable Digital Input 113	Digital Input Function	Write	
Programmable Digital Input 113	Digital Input Event	Write	
Programmable Digital Input 113	Digital Input Delay	Write	s
Programmable Digital Input 113	Digital Input Inhibit Delay	Write	s
Programmable Digital Input 113	Digital Input Description	Write	
Engine Metering 114	Engine Seawater Pressure	Read	kPa

Group	Parameter	Access	Units
Programmable Digital Input 114	Digital Input Board Number	Read	
Programmable Digital Input 114	Digital Input Io Number	Read	
Programmable Digital Input 114	Digital Input Status	Read	
Programmable Digital Input 114	Digital Input Enabled	Write	
Programmable Digital Input 114	Digital Input Logic	Write	
Programmable Digital Input 114	Digital Input Function	Write	
Programmable Digital Input 114	Digital Input Event	Write	
Programmable Digital Input 114	Digital Input Delay	Write	s
Programmable Digital Input 114	Digital Input Inhibit Delay	Write	s
Programmable Digital Input 114	Digital Input Description	Write	
Programmable Digital Output 115	Digital Output Board Number	Read	
Programmable Digital Output 115	Digital Output Io Number	Read	
Programmable Digital Output 115	Digital Output Status	Read	
Programmable Digital Output 115	Digital Output Enabled	Write	
Programmable Digital Output 115	Digital Output Logic	Write	
Programmable Digital Output 115	Digital Output Function	Write	
Programmable Digital Output 115	Digital Output Event	Write	
Programmable Digital Output 115	Digital Output Description	Write	
Programmable Digital Output 116	Digital Output Board Number	Read	
Programmable Digital Output 116	Digital Output Io Number	Read	
Programmable Digital Output 116	Digital Output Status	Read	
Programmable Digital Output 116	Digital Output Enabled	Write	
Programmable Digital Output 116	Digital Output Logic	Write	
Programmable Digital Output 116	Digital Output Function	Write	
Programmable Digital Output 116	Digital Output Event	Write	
Programmable Digital Output 116	Digital Output Description	Write	
Programmable Digital Output 117	Digital Output Board Number	Read	
Programmable Digital Output 117	Digital Output Io Number	Read	
Programmable Digital Output 117	Digital Output Status	Read	
Programmable Digital Output 117	Digital Output Enabled	Write	
Programmable Digital Output 117	Digital Output Logic	Write	
Programmable Digital Output 117	Digital Output Function	Write	
Programmable Digital Output 117	Digital Output Event	Write	
Programmable Digital Output 117	Digital Output Description	Write	
Programmable Digital Output 118	Digital Output Board Number	Read	
Programmable Digital Output 118	Digital Output Io Number	Read	
Programmable Digital Output 118	Digital Output Status	Read	
Programmable Digital Output 118	Digital Output Enabled	Write	
Programmable Digital Output 118	Digital Output Logic	Write	
Programmable Digital Output 118	Digital Output Function	Write	
Programmable Digital Output 118	Digital Output Event	Write	
Programmable Digital Output 118	Digital Output Description	Write	
Special Parameters	Profile		
Special Parameters	Saved Date		
Special Parameters	File Version		
Special Parameters	Address		
Special Parameters	Password		

* If an optional 15-relay dry contact board is connected, additional programmable inputs/outputs (119–138) appear:

Programmable Analog Voltage Inputs (119–120)
Programmable Digital Inputs (121–124)
Programmable Digital Outputs (125–138)

8.1 Introduction

SiteTech™ software allows viewing and adjustment of Decision-Maker® 6000 controller settings. Use SiteTech software when setting up the Decision-Maker® Paralleling System (DPS).

Note: To update firmware on the Decision-Maker® 6000 controller, use Program Loader software. See TT-1285 for instructions.

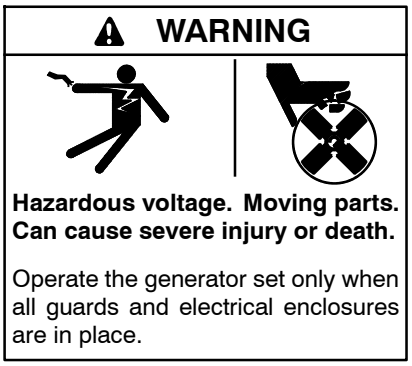
SiteTech™ software version 2.1.97 or higher is required for use with the Decision-Maker® 6000 controller.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech™ software.

This section provides information specific to the Decision-Maker® 6000 controller. For general SiteTech™ software operating instructions, see Section 3, Software Operation.

For controller operation instructions, refer to the controller operation manual provided with the generator set. For information on generator set paralleling, synchronization, and load sharing, refer to the Decision-Maker® Paralleling System (DPS) Installation, Commissioning, and Operation Manual. See List of Related Literature on page 9 for the document part numbers.

8.2 Device Connections



Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Note: In a Decision-Maker® Paralleling System, disconnect the MCP 3000, if equipped, before connecting the PC to the controllers.

If the generator sets are part of a Decision-Maker® Paralleling System that includes an MCP 3000 Master Control Panel, the MCP 3000 must be disconnected from the controllers at the MCP's Modbus port before the PC is connected. The MCP and SiteTech™ should not communicate with the controllers at the same time. See the DPS Installation, Commissioning, and Operation Manual for more information.

8.2.1 Modbus Serial Connection

Figure 8-1 illustrates an RS-485 serial device connection to a personal computer. Also see Section 3.4.1.

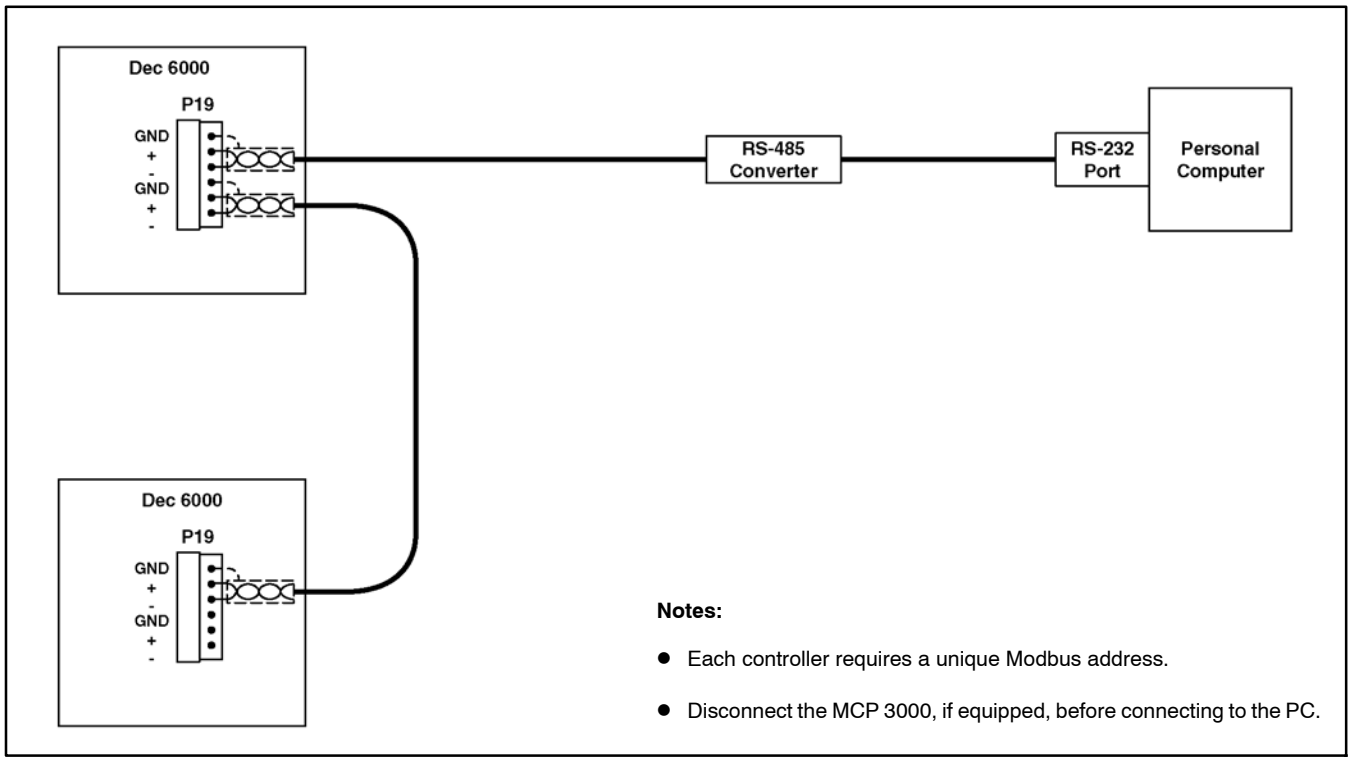


Figure 8-1 Decision-Maker® 6000 RS-485 Serial Connection

8.2.2 Network Connections

Figure 8-2 and Figure 8-3 illustrate network connections using the Modbus/Ethernet converter. See the instructions provided with the Modbus/Ethernet converter for converter connection and setup instructions. Also see Section 3.4.2 of this document.

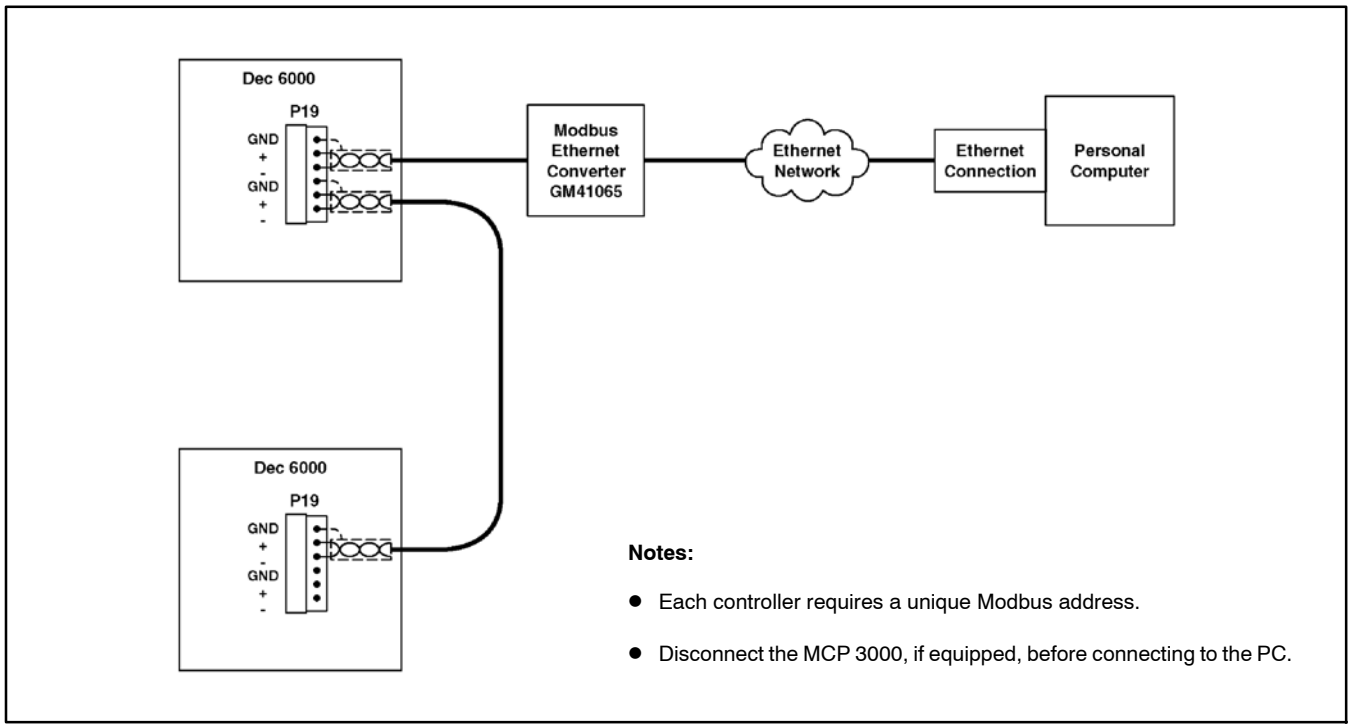


Figure 8-2 Decision-Maker® 6000 Internet Connection with One Modbus/Ethernet Converter

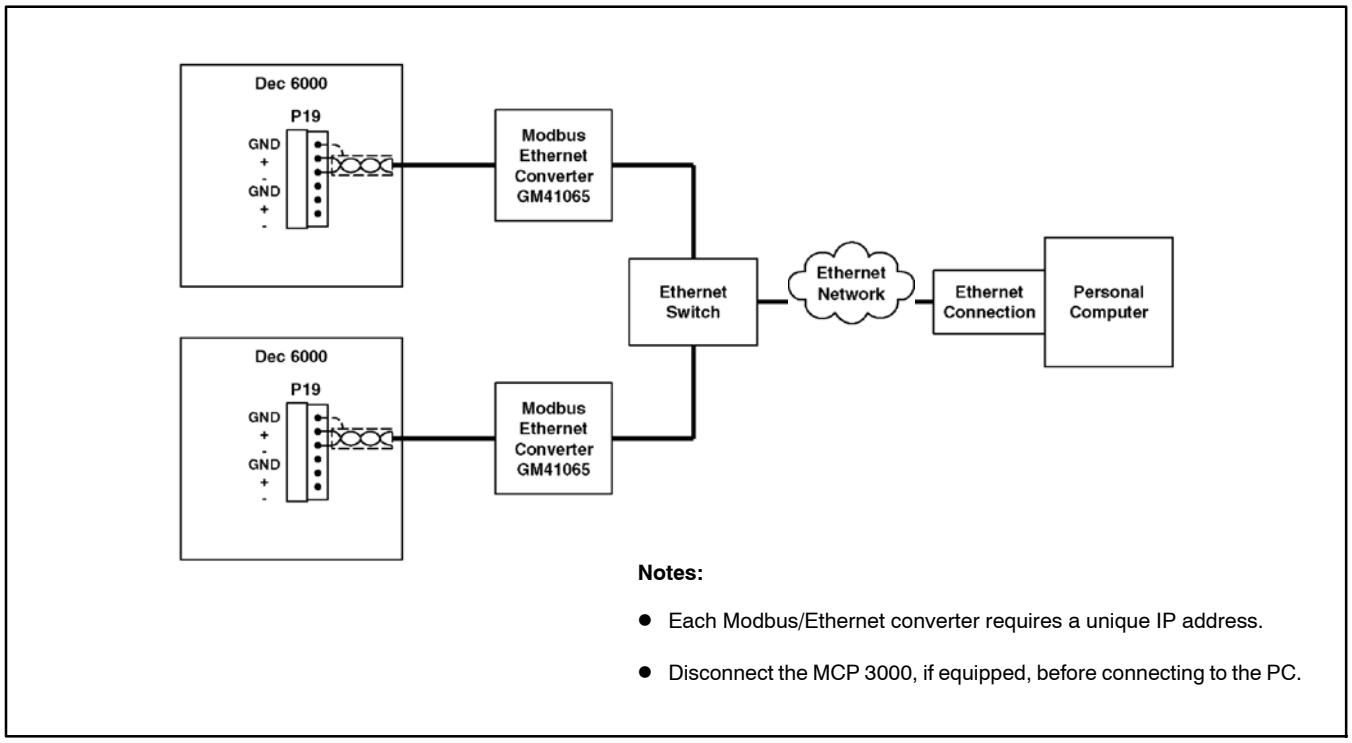


Figure 8-3 Decision-Maker® 6000 Internet Connection with Separate Modbus/Ethernet Converters

8.3 Screens

SiteTech™ screens for the Decision-Maker® 6000 controller are shown in the following figures. See Section 8.8 for a summary of controller parameters.

Refer to the Decision-Maker® 6000 Controller Operation Manual for default settings and adjustment ranges. See List of Related Literature on page 9 for document part numbers.

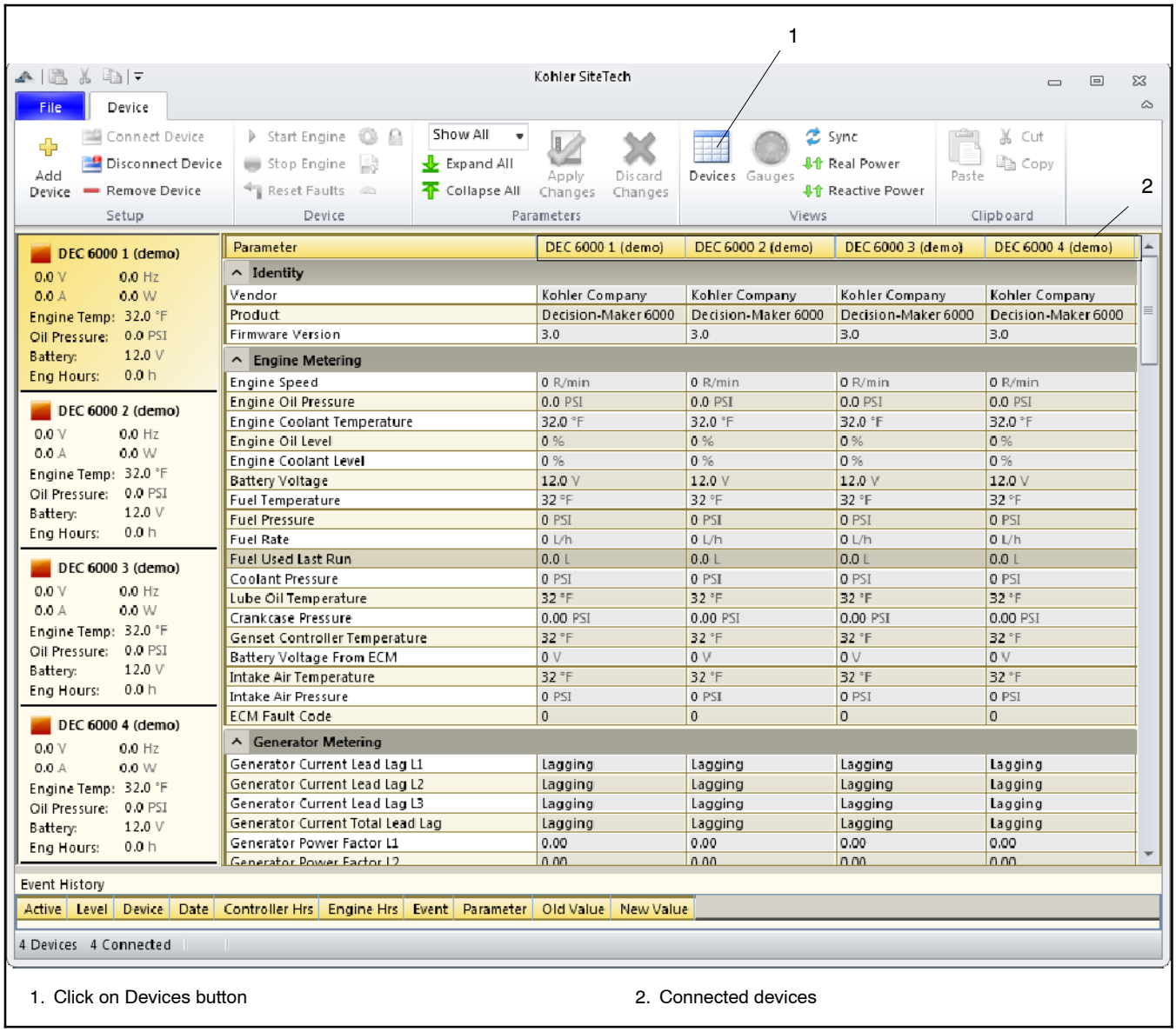
8.4 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Figure 8-4 shows the SiteTech™ Parameters screen for the Decision-Maker® 6000 controller. The Parameters screen shows parameters for all connected devices. See Section 8.8.1 for illustrations of the parameter groups.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

Set the Decision-Maker® 6000 controller's programming mode to Remote to allow setting changes through SiteTech™. Refer to the Decision-Maker® 6000 Controller Operation Manual for instructions, if necessary.



1. Click on Devices button
2. Connected devices

Figure 8-4 SiteTech™ Parameters Screen for the Decision-Maker® 6000 Controller

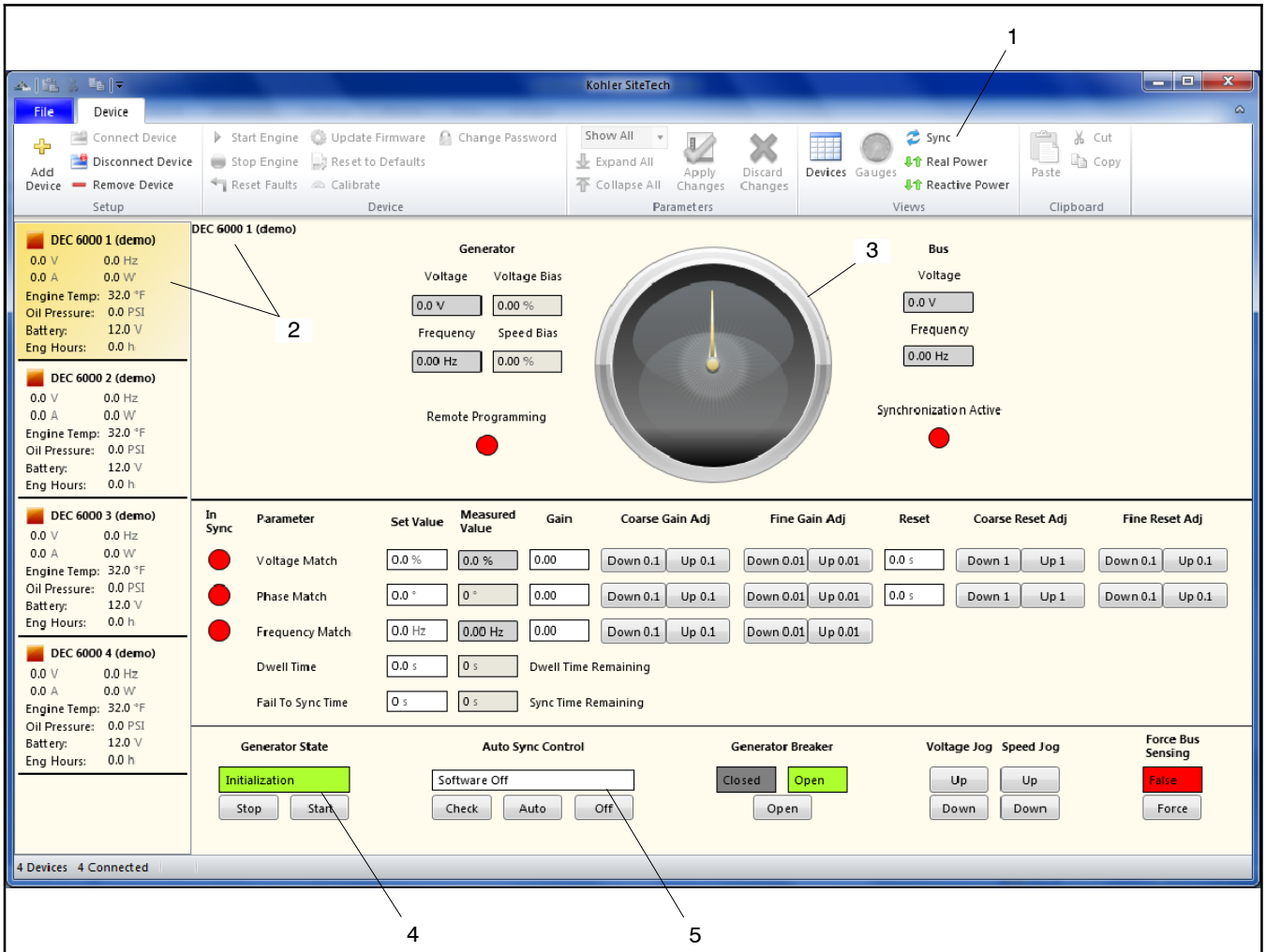
8.5 Sync Screen

Use the Sync screen for paralleling applications. Refer to the Decision-Maker® Paralleling System (DPS) manual for instructions to synchronize generator sets. See the List of Related Materials in the Introduction for the document part number.

Click on the Sync button on the top ribbon to change SiteTech™ to the Sync screen. See Figure 8-5.

Unlike the Devices screen, the Sync screen shows information for only one of the connected controllers at a time. Connected controllers are shown in the navigation panel on the left side of the screen. Click on the desired device to select it for monitoring and adjustment. The name of the selected device is then displayed at the top of the screen. See Figure 8-5.

The controller's programming mode must be set to Remote to adjust settings using SiteTech™.



1. Click on Sync button
2. Selected device is shown at the top and highlighted in the navigation panel
3. Sync scope
4. Generator status box
5. Auto Sync Control box

Other controls and indicators are clearly labeled on the screen.

Figure 8-5 Sample Sync Screen

8.5.1 Adjust Synchronization Parameters

The Voltage Match, Phase Match, and Frequency Match values can be changed in two ways:

- Type a new value into the white box and click Apply Changes at the top of the screen.
- Click on the Coarse and Fine Adj Up and Down buttons to increase or decrease the value immediately. It is not necessary to click the Apply Changes button when the Coarse and Fine Adj buttons are used.

8.5.2 Indicators and Controls

The indicators and status windows shown in the Sync screen are described in Figure 8-6. See Figure 8-7 for the controls available through the Sync screen.

Indicator/ Status Window	Color	Description
Generator Voltage	—	Displays output voltage for the selected generator, VAC.
Generator Voltage Bias	—	Displays voltage bias in %.
Generator Frequency	—	Displays output frequency for the selected generator, Hz.
Generator Speed Bias	—	Displays speed bias in %.
Sync Scope	—	Indicates synchronization of the selected device to the bus. When the needle is stable and pointing up (12:00 position), the device is in synch with the bus.
Bus Voltage	—	Displays the bus voltage, VAC.
Bus Frequency	—	Displays the bus frequency, Hz.
Remote Programming	Green	Controller's programming mode is set to Remote.
	Red	Controller's programming mode is set to Local or Off. Setting changes will not be accepted by the controller.
Synchronization Active	Green	The controller is in the process of actively synchronizing to the live bus.
	Red	Synchronizing is not active.
Voltage Match	Green	The generator voltage is within the specified range of the bus voltage.
	Red	The generator voltage is out of range or unknown.
Phase Match	Green	The phase difference, generator volts to bus volts, is within the specified range.
	Red	The phase difference is out of range or unknown.
Frequency Match	Green	The generator frequency is within range of the bus frequency.
	Red	The generator frequency is out of range or unknown.
Engine Status	Green	Engine is not running. Engine states: Initializing, Off, Auto, or Fault Shutdown.
	Red	Engine is running. Engine states: Starting, Idle, Run, or Cooldown.
Auto Sync Control	—	See Figure 8-8.
Breaker Closed	Red	Generator breaker is closed.
	Gray	Generator breaker is not closed.
Breaker Open	Green	Generator breaker is open.
	Gray	Generator breaker is not open.
Force Bus Sensing	Green (True)	Forced metering of the bus voltage is on.
	Red (False)	Forced metering of the bus voltage is not on.

Figure 8-6 Sync Indicators and Status Windows

Control	Button	Action
Device	Navigation Panel	Click on the desired device in the navigation panel to select the corresponding device for monitoring and adjustment. The pane for the selected device is highlighted.
Coarse Gain Adj	Down 0.1	Click to decrease the corresponding value by 0.1 units.
	Up 0.1	Click to increase the corresponding value by 0.1 units.
Fine Gain Adj	Down 0.01	Click to decrease the corresponding value by 0.01 units.
	Up 0.01	Click to increase the corresponding value by 0.01 units.
Coarse Reset Adj	Down 1	Click to decrease the reset value by 1 second.
	Up 1	Click to increase the reset value by 1 second.
Fine Reset Adj	Down 0.1	Click to decrease the reset value by 0.1 seconds.
	Up 0.1	Click to increase the reset value by 0.1 seconds.
Generator State	Stop	Terminate a remote start via Modbus.
	Start	Initiate a remote start via Modbus.
Auto Sync Control	Check	Click to select Software Test Check and initiate a Sync Check sequence. See Figure 8-8.
	Auto	Click to select Software Auto and initiate an Auto Sync sequence. See Figure 8-8.
	Off	Click to select Software Off and terminate any synchronizing sequence. See Figure 8-8.
Generator Breaker	Open	Click to open the generator paralleling circuit breaker.
Voltage Jog	Up	Increases the voltage a small amount.
	Down	Decreases the voltage a small amount.
Speed Jog	Up	Increases the speed a small amount.
	Down	Decreases the speed a small amount.
Force Bus Sensing	Force	Click to turn on forced metering of the bus voltage.

Figure 8-7 Sync Controls

Auto Sync Control

When the Auto Sync Control box is clicked, a list of control options appears. See Figure 8-8 for the available options.

These options allow control of synchronization and breaker closure. The Software options override any digital input status and are selected via Modbus communication or through the controller's front panel keypad. The Digital Input options allow synchronization control using the digital input lines. The status of the digital input lines will be displayed following the DIGITAL selection.

Auto Sync Control Selection	Description	Selection Method
Software Off	No synchronization or breaker closure.	Modbus or controller keypad entry
Software Auto	Automatic synchronization and breaker closure.	
Software Test Check	Automatic synchronization but no breaker closure.	
Software Permissive	No automatic synchronization but if synchronization is achieved, manual breaker closure is permitted.	
Digital Off (none)	No synchronization or breaker closure.	Digital inputs
Digital Auto	Automatic synchronization and breaker closure.	
Digital Test Check	Automatic synchronization but no breaker closure.	
Digital Permissive	No automatic synchronization but if synchronization is achieved, manual breaker closure is permitted.	

Figure 8-8 Auto Sync Control Selections

8.6 Real Power Load Sharing Screen

Click on the Real Power button on the top ribbon to change SiteTech™ to the Real Power Load Sharing screen. See Figure 8-9.

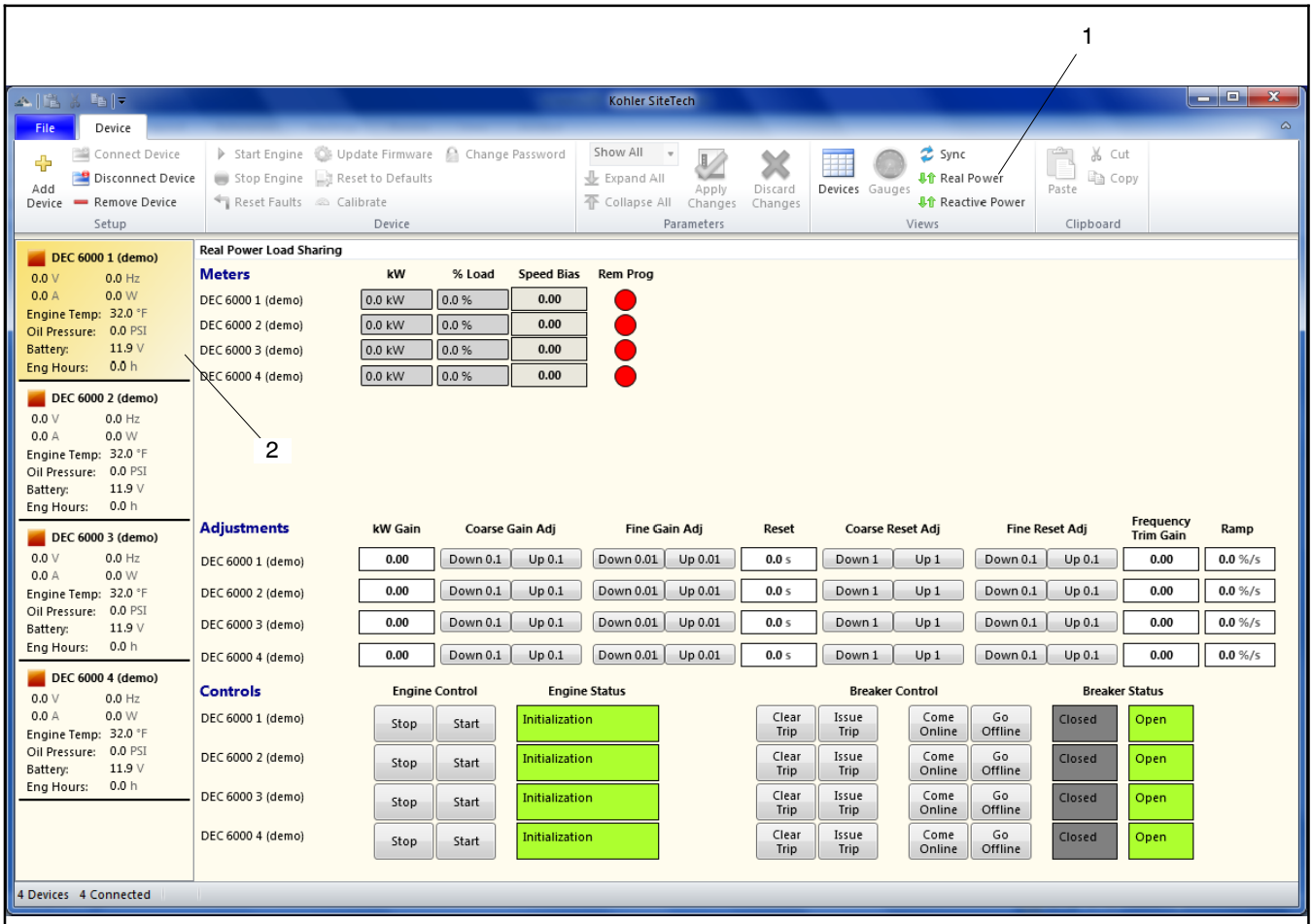
The Real Power Load Sharing screen contains status windows and controls to adjust load sharing based on real power in kW. See Figure 8-10 and Figure 8-11.

The programming mode must be in Remote to change settings using SiteTech™. Set the programming mode at the controller. See the controller Operation Manual for instructions.

The kW Gain and Reset values can be changed in two ways:

- Type a new value into the white box and click Apply Changes at the top of the screen.
- Click on the Coarse and Fine Adj Up and Down buttons to increase or decrease the value immediately. It is not necessary to click the Apply Changes button when the Coarse and Fine Adj buttons are used.

To change the values for Frequency Trim Gain and Ramp rate, type a new value into the white box and click Apply Changes at the top of the screen.



1. Click to select Real Power load sharing screen
2. Selected unit is highlighted in the navigation panel

Figure 8-9 Sample Real Power Load Sharing Screen

Box	Adjust	Description
kW	No	Displays the output kW for each generator set.
% Load	No	Displays % load for each generator set.
Speed Bias	No	Displays speed bias.
Remote Programming Indicator	No	Red = Local Green = Remote
kW Gain	Yes	View and adjust kW gain. Can also use coarse and fine adjust buttons to change.
Reset	Yes	View and adjust reset time in seconds. Can also use coarse and fine adjust buttons to change.
Frequency Trim Gain	Yes	View and adjust frequency trim gain.
Ramp	Yes	View and adjust ramp rate in %/s.

Figure 8-10 Real Power Load Sharing Status Windows and Adjustments

Control	Button	Action
Engine Control	Stop	Terminate a remote start via Modbus.
	Start	Initiate a remote start via Modbus.
Breaker Control	Go Offline	Click to initiate the ramp-down sequence to unload the generator.
	Come Online	Click to initiate loading the generator.
	Clear Trip	Click to reset the controller after a breaker trip.
	Issue Trip	Click to open the generator paralleling circuit breaker.

Figure 8-11 Load Sharing Control Buttons

8.7 Reactive Power Load Sharing Screen

Click on the Reactive Power button on the top ribbon to change SiteTech™ to the Reactive Power Load Sharing screen. See Figure 8-12.

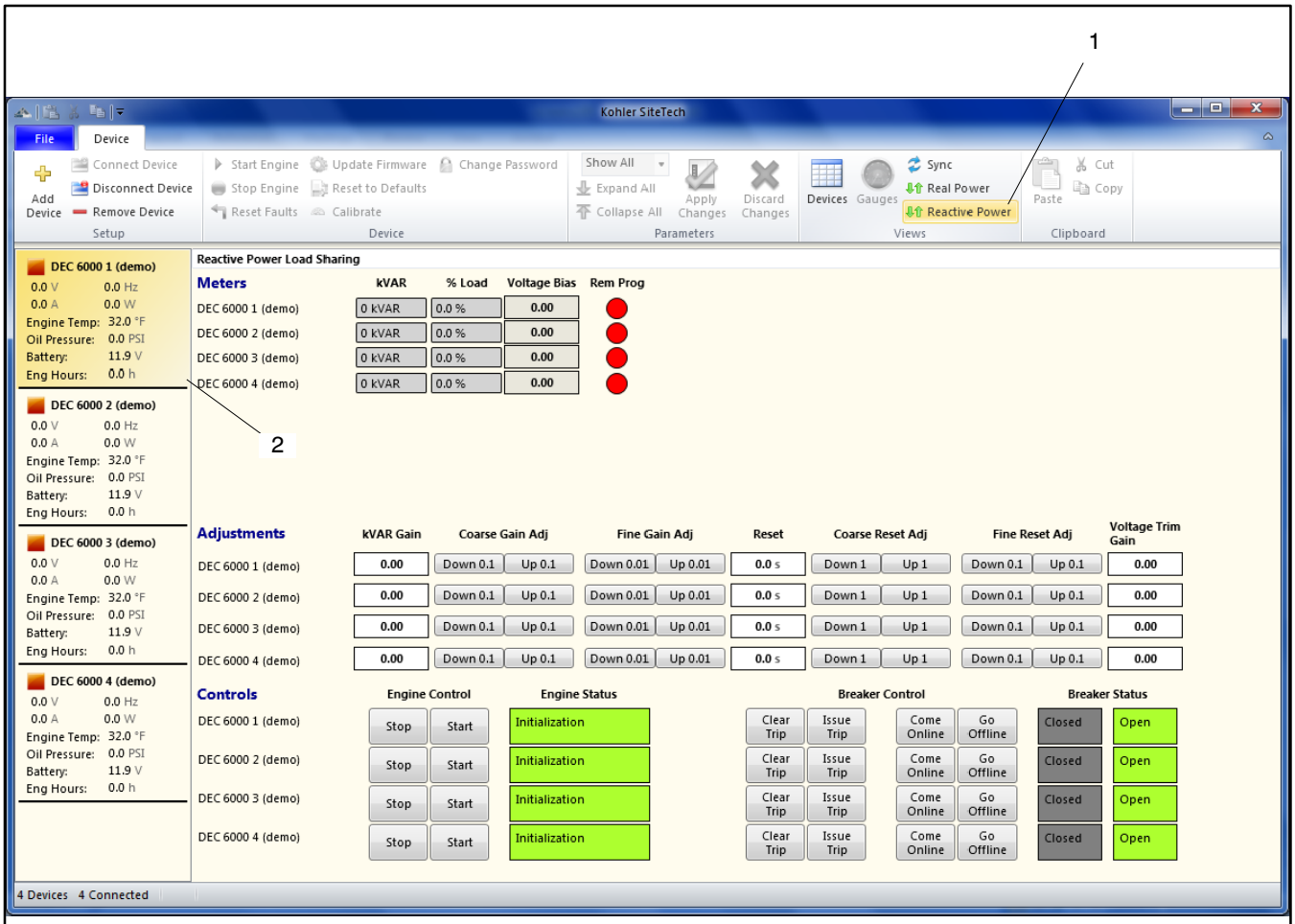
The Reactive Power Load Sharing screen contains status windows and controls to adjust load sharing based on reactive power in kVAR. See Figure 8-13 for information about the status windows in the Reactive Power load sharing screen. See Figure 8-11 for a description of the control buttons in the load sharing screens.

The programming mode must be in Remote to change settings using SiteTech™. Set the programming mode at the controller. See the controller Operation Manual for instructions.

The kVAR Gain and Reset values can be changed in two ways:

- Type a new value into the white box and click Apply Changes at the top of the screen.
- Click on the Coarse and Fine Adj Up and Down buttons to increase or decrease the value immediately. It is not necessary to click the Apply Changes button when the Coarse and Fine Adj buttons are used.

To change the values for Voltage Trim Gain, type a new value into the white box and click Apply Changes at the top of the screen.



1. Click to select Reactive Power load sharing screen.
2. Selected unit is highlighted in the navigation panel

Figure 8-12 Sample Reactive Power Load Sharing Screen

Box	Adjust	Description
kVAR	No	Displays the output kVAR for each generator set.
% Load	No	Displays % load for each generator set.
Remote Programming Indicator	No	Red = Local Green = Remote
Voltage Bias	No	Displays voltage bias.
kVAR Gain	Yes	View and adjust kW gain. Can also use coarse and fine adjust buttons to change.
Reset	Yes	View and adjust reset time in seconds. Can also use coarse and fine adjust buttons to change.
Voltage Trim Gain	Yes	View and adjust frequency trim gain.

Figure 8-13 Reactive Power Load Sharing Status Windows and Adjustments

8.8 Parameter Summary

8.8.1 Parameter Groups

The individual parameter groups for the Decision-Maker® 6000 controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 8.8.

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Some parameters shown in SiteTech are not accessible on all models. Support of some parameters is dependent on the controller configuration or generator set model.

Identity	
Vendor	Kohler Company
Product	Decision-Maker 6000
Firmware Version	0.0.0

Engine Metering	
Engine Speed	0 R/min
Engine Oil Pressure	0.0 kPa
Engine Coolant Temperature	0.0 °C
Engine Oil Level	0 %
Engine Coolant Level	0 %
Battery Voltage	0.0 V
Fuel Temperature	0 °C
Fuel Pressure	0 kPa
Fuel Rate	0 L/h
Fuel Used Last Run	0.0 L
Coolant Pressure	0 kPa
Lube Oil Temperature	0 °C
Crankcase Pressure	0.00 kPa
Ambient Temperature	0 °C
Battery Voltage From ECM	0 V
Intake Air Temperature	0 °C
Intake Air Pressure	0 kPa
MDEC Fault Code	0

Generator Metering	
Generator Current Lead Lag L1	Lagging
Generator Current Lead Lag L2	Lagging
Generator Current Lead Lag L3	Lagging
Generator Current Total Lead Lag	Lagging
Generator Power Factor L1	0.00
Generator Power Factor L2	0.00
Generator Power Factor L3	0.00
Generator Total Power Factor	0.00
Generator Apparent Power L1	0.0 VA
Generator Apparent Power L2	0.0 VA
Generator Apparent Power L3	0.0 VA
Generator Total Apparent Power	0.0 VA
Generator Reactive Power L1	0.0 VAR
Generator Reactive Power L2	0.0 VAR
Generator Reactive Power L3	0.0 VAR
Generator Total Reactive Power	0.0 VAR
Generator True Power L1	0.0 W
Generator True Power L2	0.0 W
Generator True Power L3	0.0 W
Generator True Total Power	0.0 W
Generator True Percent Of Rated Power	0 %
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	0.0 V
Generator Voltage L3-L1	0.0 V
Generator Voltage L1-N	0.0 V
Generator Voltage L2-N	0.0 V
Generator Voltage L3-N	0.0 V
Generator Current L1	0.0 A
Generator Current L2	0.0 A
Generator Current L3	0.0 A
Generator Frequency	0.0 Hz
Generator State	Initialization

Genset Info	
Genset Model Number	
Genset Spec Number	
Genset Serial Number	
Alternator Part Number	
Genset Controller Serial Number	0
Engine Part Number	
Engine Model Number	
Engine Serial Number	
ECM Status	0
ECM Unit Number	
ECM Serial Number	
Master Switch Position	
Programming Mode Status	
Final Assembly Date	5/18/2010 12:49:41 PM
Final Assembly Clock Number	0
Genset Designation	
Genset Load	
Genset Location	

Genset Run Time	
Controller Clock Time	5/18/2010 12:49:41 PM
Controller Total Operation Time	0.0 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Run Time Unloaded	0.00 h
Engine Total Number Of Starts	0
Genset Total Energy	0.0 kW·h
Genset Date Time Of Last Maintenance	5/18/2010 12:49:41 PM
Controller Hours Of Operation Since Maintenance	0.0 h
Engine Run Time Since Maintenance	0.0 h
Engine Run Time Loaded Since Maintenance	0.0 h
Engine Run Time Unloaded Since Maintenance	0 h
Engine Number Of Starts Since Maintenance	0
Genset Energy Since Maintenance	0.0 kW·h
Engine Last Start Time	5/18/2010 12:49:41 PM
Last Run Length	0 h
Last Run Loaded	False
Timed Run Time	0.0 h
Timed Run Time Remaining	0.0 h
Timed Run Active	False

Genset Personality Profile	
Configuration Locked	False

Genset System Configuration	
Genset System Voltage	0.0 V
Genset System Frequency	50.0 Hz
Genset Voltage Phase Connection	Single Phase
Genset Power Rating	0.0 kW
Genset Rated Current	0.0 A
Genset System Battery Voltage	12 V
Display Measurement Units	English
NFPA 110 Enabled	False
Cool Down Temperature Override	False

Voltage Regulator	
Voltage Regulator Average Voltage Adjustment	0.0 V
Under Frequency Unload Enabled	False
Under Frequency Unload Cut-in	0.0 Hz
Under Frequency Slope	0.0
Reactive Droop Enabled	False
Reactive Droop Adjust	0.0 %
Reactive Power Control Enabled	False
Reactive Power Adjustment	0.0 kVAR
Reactive Power Control	Absorbing
Power Factor Control Enabled	False
Power Factor Adjustment	0.00
Power Factor Control Lead Lag	Leading
Regulator Gain	0
Utility Gain	0

Engine Timing	
Engine Start Delay	0 s
Engine Cool Down Delay	0 s
Engine Start Aid Delay	0 s
Engine Crank On Delay	0 s
Engine Crank Pause Delay	0 s
Engine Number Of Crank Cycles	0

Genset Protection	
Genset Low Battery Voltage Warning Voltage	0 V
Genset High Battery Voltage Warning Voltage	0 V

Engine Protection	
Genset High Engine Speed Shutdown Frequency	0 Hz

Generator Protection	
Genset Low Voltage Shutdown Delay	0 s
Genset High Voltage Shutdown Delay	0 s
Genset Low Voltage Shutdown Limit	0 %
Genset High Voltage Shutdown Limit	0 %
Genset Low Frequency Shutdown Limit	0 %
Genset High Frequency Shutdown Limit	0 %

Digital Input A1	
Digital Input A1 Value	False
Digital Input A1 Enabled	False
Digital Input A1 Function	Warning
Digital Input A1 Inhibit Delay	0 s
Digital Input A1 Delay	0 s
Digital Input A1 Description	

The parameters shown above are available for all digital inputs, A1 – A21.

Analog Input A1	
Analog Input A1 Value	0.0
Analog Input A1 Shutdown Enabled	False
Analog Input A1 Warning Enabled	False
Analog Input A1 Inhibit Delay	0 s
Analog Input A1 Warning Delay	0 s
Analog Input A1 Shutdown Delay	0 s
Analog Input A1 Low Warning Limit	0.0
Analog Input A1 Low Shutdown Limit	0.0
Analog Input A1 High Warning Limit	0.0
Analog Input A1 High Shutdown Limit	0.0
Analog Input A1 Description	

The parameters shown above are available for all analog inputs, A1 – A7.

Relay Driver Output A1	
Relay Driver Output A1 Selection	Emergency Stop
Relay Driver Output A1 Setpoint	None

The parameters shown above are available for all relay driver outputs, A1 – A31.

Load Shedding	
Genset Load Shed Power Delay	0 s
Genset Load Shed Power Limit	0 %

Protective Relays	
PR Over Power Trip	0 %
PR Over Power Time Delay	0 s
PR Reverse Power Trip	0 %
PR Reverse Power Time Delay	0 s
PR Over Voltage Trip	0 %
PR Over Voltage Time Delay	0 s
PR Under Voltage Trip	0 %
PR Under Voltage Time Delay	0 s
PR Over Frequency Trip	0 %
PR Over Frequency Time Delay	0 s
PR Under Frequency Trip	0 %
PR Under Frequency Time Delay	0 s
PR Reverse Var Trip	0 %
PR Reverse Var Time Delay	0 s
PR Over Current VR Trip	0 %
PR Over Current VR Time Delay	0 s
SD Over Power Trip	0 %
SD Over Power Time Delay	0 s
SD Reverse Power Trip	0 %
SD Reverse Power Time Delay	0 s
SD Reverse Var Trip	0 %
SD Reverse Var Time Delay	0 s
SD Over Current VR Trip	0 %
SD Over Current VR Time Delay	0 s
Synch Check Relay Magnitude	0 V
Synch Check Relay Frequency	0 Hz
Synch Check Relay Phase Angle	0 °
Synch Check Relay Time Delay	0 s

Synchronization Control	
Generator Id	Offline
Bus Id	Offline
Bus 1 Number Of Nodes	0
Bus 2 Number Of Nodes	0
Voltage Match Window	0.0 %
Voltage Match Gain	0.00
Voltage Match Reset	0.0 s
Sync Frequency Window	0.0 Hz
Sync Frequency Gain	0.00
Phase Match Window	0.0 °
Phase Match Gain	0.00
Phase Match Reset	0.0 s
Dwell Time	0.0 s
Fail To Sync Delay	0 s
Breaker Energize Time	0.0 s
Breaker Reclose Time	0.0 s
Breaker Reclose Attempts	0
First On Close Delay	0.0 s
Auto Sync Control	Software Off
Run Sync Control	Software Off
Circuit Breaker Current Fault Limit	0.0 %
Circuit Breaker Current Fault Delay	0.0 s
Transformer Phase Compensation	0.0 °
Remote Start	False
Reset Sync Control Defaults	False
Breaker Trip	False
Breaker Close	False
Sync Fail Reset	False
Firston Fail Reset	False
Circuit Breaker Common Fault Reset	False
Remote Protect Relay Reset	False
Remote Shutdown	False
Remote Shutdown Reset	False
Volts Hertz Okay Time Delay	0
Force Bus Sensing	0

Synchronization Metering	
Sync Gen Bus Phase Difference	0 °
Sync Bus Voltage	0 %
Sync Genset Voltage	0 %
Sync Bus Frequency	0 Hz
Sync Genset Frequency	0 Hz
Sync Time Remaining	0 s
Sync Dwell Time Remaining	0 s
Sync Status Generator V Hz OK	False
Sync Status Voltage Matched	False
Sync Status Frequency Matched	False
Sync Status Phase Matched	False
Sync Status Sync Active	False
Sync Status Alternate Sequence Metering On	False
Sync Status Breaker Trip	False
Sync Status Breaker Close	False
Sync Status Genset Breaker Closed	False
Sync Status Utility Breaker Closed	False
Sync Status Pgen Warning	False
Sync Status Common Sync Warning	False
Sync Status Common Sync Fault	False
Sync Status Remote Programming Mode	False
Sync Metering Generator State	Initialization
Sync Metering Circuit Breaker Closed	Open
Sync Metering Speed Bias	0 %
Sync Metering Voltage Bias	0 %

Real Power Load Sharing	
Real Power Sharing Gain	0.00
Real Power Baseload Setpoint	0.0 %
Real Power Baseload Gain	0.00
Real Power Baseload Reset	0.0 s
Real Power Droop Slope	0.0 %
Real Power Ramp Rate	0.0 %/s
Real Power Up Down Rate	0.0 %/s
Real Power Disconnect Level	0.0 %
Frequency Adjustment	0.0 Hz
Frequency Up Down	0
Phase Up Down	0
Speed Bias	0.00
Reset Kw Load Control Defaults	False
Percent Kw Load	0.0 %
Kw Sharing Signal	0.0 %
Real Power Generator State	Initialization
Real Power Circuit Breaker Closed	Open

Reactive Power Load Sharing	
Reactive Power Sharing Gain	0.00
Reactive Power Sharing Reset	0.0 s
Reactive Power Sharing Deadband	0.0 %
Voltage Trim Gain	0.00
Voltage Trim Deadband	0.0 %
Reactive Power Baseload Setpoint	0.0 %
Reactive Power Baseload Gain	0.00
Reactive Power Baseload Reset	0.0 s
Reactive Power Baseload Deadband	0.0 %
Percent Reactive Power Up Down Rate	0.0 %
Power Factor Setting	0.00
Power Factor Gain	0.00
Power Factor Reset	0.0 s
Power Factor Deadband	0.00
Power Factor Up Down Rate	0.000
Reactive Droop Slope	0.0 %
Voltage Adjustment	0.0 V
Voltage Bias	0.00
Reset Kvar Load Control Defaults	False
Percent Kvar Load	0.0 %
Kvar Sharing Signal	0.0 %
Reactive Power Generator State	Initialization
Reactive Power Circuit Breaker Closed	Open

Paralleling Control Sources	
First On Enable Control Source	Software Off
Load Enable Control Source	Software Off
Real Power Baseload Control Source	Software Off
Real Power Import Export Control Source	Software Off
Real Power Ramp Hold Control Source	Software Off
Frequency Trim Disable Control Source	Software Off
Voltage Trim Disable Control Source	Software Off
Relay Driver Control Source	Software Off
Real Power System Control Source	Software Off
Reactive Power System Control Source	Software Off
Power Factor System Control Source	Software Off
External Real Power Control Source	Software Off
External Reactive Power Control Source	Software Off
External Power Factor Control Source	Software Off
Reactive Power Control Source	Software Off
Power Factor Control Source	Software Off

8.8.2 Parameter Summary Table

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The View/Adjust column in the table indicates whether each parameter can be changed or only monitored.

- View: View only, no adjustment
- Adjust: Parameter is adjustable
- Locked: Not adjustable using SiteTech™ software.

Locked personality profile parameters can only be changed by using Program Loader to load the personality profile. See TT-1285, Program Loader Instructions.

Generator set calibration can be viewed through SiteTech™, but changes to the calibration can only be made at the controller.

Refer to the Decision-Maker® 6000 Controller Operation Manual for default settings and adjustment ranges.

Parameter	Parameter Group	View/ Adjust	Units
Alternator Part Number	Genset Info	Locked	
Analog Input Description (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input High Shutdown Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input High Warning Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Inhibit Delay (A1 – A7)	Analog Input A1 – A7	Adjust	s
Analog Input Low Shutdown Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Low Warning Limit (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Shutdown Delay (A1 – A7)	Analog Input A1 – A7	Adjust	s
Analog Input Shutdown Enabled (A1 – A7)	Analog Input A1 – A7	Adjust	
Analog Input Value (A1 – A7)	Analog Input A1 – A7	View	
Analog Input Warning Delay (A1 – A7)	Analog Input A1 – A7	Adjust	s
Analog Input Warning Enabled (A1 – A7)	Analog Input A1 – A7	Adjust	
Auto Sync Control Source	Synchronization Control	Adjust	
Battery Voltage	Engine Metering	View	V
Battery Voltage From ECM	Engine Metering	View	V
Breaker Close Attempts	Synchronization Control	Adjust	
Breaker Energize Time	Synchronization Control	Adjust	s
Breaker Reclose Time	Synchronization Control	Adjust	s
Bus 1 Number Of Nodes	Synchronization Control	Adjust	
Bus 2 Number Of Nodes	Synchronization Control	Adjust	
Bus Id	Synchronization Control	Adjust	
Circuit Breaker Current Fault Delay	Synchronization Control	Adjust	s
Circuit Breaker Current Fault Limit	Synchronization Control	Adjust	%
Configuration Locked	Genset Personality Profile	View	
Cool Down Temperature Override	Genset System Configuration	Adjust	
Coolant Pressure	Engine Metering	View	kPa
Crankcase Pressure	Engine Metering	View	kPa
Digital Input Delay (A1 – A21)	Digital Input A1 – A21	Adjust	s
Digital Input Description (A1 – A21)	Digital Input A1 – A21	Adjust	
Digital Input Enabled (A1 – A21)	Digital Input A1 – A21	Adjust	
Digital Input Function (A1 – A21)	Digital Input A1 – A21	Adjust	
Digital Input Inhibit Delay (A1 – A21)	Digital Input A1 – A21	Adjust	s
Digital Input Value (A1 – A21)	Digital Input A1 – A21	View	
Dwell Time	Synchronization Control	Adjust	s
ECM Fault Code	Engine Metering	View	
ECM Serial Number	Genset Info	View	
ECM Status	Genset Info	View	
ECM Unit Number	Genset Info	View	
Engine Cool Down Delay	Engine Timing	Adjust	s
Engine Coolant Level	Engine Metering	View	%

Parameter	Parameter Group	View/ Adjust	Units
Engine Coolant Temperature	Engine Metering	View	°C
Engine Crank On Delay	Engine Timing	Adjust	s
Engine Crank Pause Delay	Engine Timing	Adjust	s
Engine Last Start Time	Genset Run Time	View	
Engine Model Number	Genset Info	Locked	
Engine Number Of Crank Cycles	Engine Timing	Adjust	
Engine Number Of Starts Since Maintenance	Genset Run Time	View	
Engine Oil Level	Engine Metering	View	%
Engine Oil Pressure	Engine Metering	View	kPa
Engine Part Number	Genset Info	Locked	
Engine Run Time Loaded Since Maintenance	Genset Run Time	View	h
Engine Run Time Since Maintenance	Genset Run Time	View	h
Engine Run Time Unloaded Since Maintenance	Genset Run Time	View	h
Engine Serial Number	Genset Info	Locked	
Engine Speed	Engine Metering	View	R/min
Engine Start Aid Delay	Engine Timing	Adjust	s
Engine Start Delay	Engine Timing	Adjust	s
Engine Total Number Of Starts	Genset Run Time	View	
Engine Total Run Time	Genset Run Time	View	h
Engine Total Run Time Loaded	Genset Run Time	View	h
Engine Total Run Time Unloaded	Genset Run Time	View	h
External Reactive Power Control Enable Source	Paralleling Control Sources	Adjust	
External Real Power Control Enable Source	Paralleling Control Sources	Adjust	
Fail To Sync Delay	Synchronization Control	Adjust	s
Final Assembly Clock Number	Genset Info	Adjust	
Final Assembly Date	Genset Info	View	
Firmware Version	Identity	View	
First On Close Delay	Synchronization Control	Adjust	s
First On Enable Control Source	Paralleling Control Sources	Adjust	
Force Bus Sensing	Synchronization Control	Adjust	
Frequency Match Gain	Synchronization Control	Adjust	
Frequency Trim Deadband	Real Power Load Sharing	Adjust	%
Frequency Trim Enable Control Source	Paralleling Control Sources	Adjust	
Frequency Trim Gain	Real Power Load Sharing	Adjust	
Frequency Up Down	Real Power Load Sharing	Adjust	
Fuel Pressure	Engine Metering	View	kPa
Fuel Rate	Engine Metering	View	L/h
Fuel Temperature	Engine Metering	View	°C
Fuel Used Last Run	Engine Metering	View	L
Generator Apparent Power L1	Generator Metering	View	VA
Generator Apparent Power L2	Generator Metering	View	VA
Generator Apparent Power L3	Generator Metering	View	VA
Generator Current L1	Generator Metering	View	A
Generator Current L2	Generator Metering	View	A
Generator Current L3	Generator Metering	View	A
Generator Current Lead Lag L1	Generator Metering	View	
Generator Current Lead Lag L2	Generator Metering	View	
Generator Current Lead Lag L3	Generator Metering	View	
Generator Current Total Lead Lag	Generator Metering	View	
Generator Frequency	Generator Metering	View	Hz
Generator Id	Synchronization Control	Adjust	
Generator Power Factor L1	Generator Metering	View	
Generator Power Factor L2	Generator Metering	View	

Parameter	Parameter Group	View/ Adjust	Units
Generator Power Factor L3	Generator Metering	View	
Generator Reactive Power L1	Generator Metering	View	VAR
Generator Reactive Power L2	Generator Metering	View	VAR
Generator Reactive Power L3	Generator Metering	View	VAR
Generator State	Generator Metering	View	
Generator Total Apparent Power	Generator Metering	View	VA
Generator Total Power Factor	Generator Metering	View	
Generator Total Reactive Power	Generator Metering	View	VAR
Generator True Percent Of Rated Power	Generator Metering	View	%
Generator True Power L1	Generator Metering	View	W
Generator True Power L2	Generator Metering	View	W
Generator True Power L3	Generator Metering	View	W
Generator True Total Power	Generator Metering	View	W
Generator Voltage L1-L2	Generator Metering	View	V
Generator Voltage L1-N	Generator Metering	View	V
Generator Voltage L2-L3	Generator Metering	View	V
Generator Voltage L2-N	Generator Metering	View	V
Generator Voltage L3-L1	Generator Metering	View	V
Generator Voltage L3-N	Generator Metering	View	V
Genset Controller Clock Time	Genset Run Time	View	
Genset Controller Hours Of Operation Since Maintenance	Genset Run Time	View	h
Genset Controller Serial Number	Genset Info	View	
Genset Controller Temperature	Engine Metering	View	°C
Genset Controller Total Operation Time	Genset Run Time	View	h
Genset Date Time Of Last Maintenance	Genset Run Time	View	
Genset Designation	Genset Info	Adjust	
Genset Energy Since Maintenance	Genset Run Time	View	kW-h
Genset High Battery Voltage Warning Voltage	Genset Protection	Adjust	V
Genset High Engine Speed Shutdown Frequency	Engine Protection	Adjust	Hz
Genset High Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset High Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset High Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Load	Genset Info	Adjust	
Genset Load Shed Power Delay	Load Shedding	Adjust	s
Genset Load Shed Power Limit	Load Shedding	Adjust	%
Genset Location	Genset Info	Adjust	
Genset Low Battery Voltage Warning Voltage	Genset Protection	Adjust	V
Genset Low Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset Low Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset Low Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Model Number	Genset Info	Locked	
Genset Power Rating	Genset System Configuration	Locked	kW
Genset Rated Current	Genset System Configuration	View	A
Genset Serial Number	Genset Info	Locked	
Genset Spec Number	Genset Info	Locked	
Genset System Battery Voltage	Genset System Configuration	Locked	V
Genset System Frequency	Genset System Configuration	Adjust	Hz
Genset System Voltage	Genset System Configuration	Adjust	V
Genset Total Energy	Genset Run Time	View	kW-h
Genset Voltage Phase Connection	Genset System Configuration	Adjust	
Intake Air Pressure	Engine Metering	View	kPa
Intake Air Temperature	Engine Metering	View	°C
Kvar Sharing Signal	Reactive Power Load Sharing	View	%

Parameter	Parameter Group	View/ Adjust	Units
Kw Sharing Signal	Real Power Load Sharing	View	%
Last Run Length	Genset Run Time	View	h
Last Run Loaded	Genset Run Time	View	
Load Enable Control Source	Paralleling Control Sources	Adjust	
Lube Oil Temperature	Engine Metering	View	°C
Master Switch Position	Genset Info	View	
Measurement System	Genset System Configuration	Adjust	
NFPA 110 Enabled	Genset System Configuration	Adjust	
Percent Kvar Load	Reactive Power Load Sharing	View	%
Percent Kw Load	Real Power Load Sharing	View	%
Phase Match Gain	Synchronization Control	Adjust	
Phase Match Reset	Synchronization Control	Adjust	s
Phase Match Window	Synchronization Control	Adjust	Degrees
Power Factor Adjustment	Voltage Regulator	Adjust	
Power Factor Control Deadband	Reactive Power Load Sharing	Adjust	
Power Factor Control Enable Source	Paralleling Control Sources	Adjust	
Power Factor Control Enabled	Voltage Regulator	Adjust	
Power Factor Control Gain	Reactive Power Load Sharing	Adjust	
Power Factor Control Lead Lag	Voltage Regulator	Adjust	
Power Factor Control Reset	Reactive Power Load Sharing	Adjust	s
Power Factor Setting	Reactive Power Load Sharing	Adjust	
Power Factor Up Down Rate	Reactive Power Load Sharing	Adjust	PF/s
PR Over Current VR Time Delay	Protective Relays	Adjust	s
PR Over Current VR Trip	Protective Relays	Adjust	%
PR Over Frequency Time Delay	Protective Relays	Adjust	s
PR Over Frequency Trip	Protective Relays	Adjust	%
PR Over Power Time Delay	Protective Relays	Adjust	s
PR Over Power Trip	Protective Relays	Adjust	%
PR Over Voltage Time Delay	Protective Relays	Adjust	s
PR Over Voltage Trip	Protective Relays	Adjust	%
PR Reverse Power Time Delay	Protective Relays	Adjust	s
PR Reverse Power Trip	Protective Relays	Adjust	%
PR Reverse VAR Time Delay	Protective Relays	Adjust	s
PR Reverse VAR Trip	Protective Relays	Adjust	%
PR Under Frequency Time Delay	Protective Relays	Adjust	s
PR Under Frequency Trip	Protective Relays	Adjust	%
PR Under Voltage Time Delay	Protective Relays	Adjust	s
PR Under Voltage Trip	Protective Relays	Adjust	%
Product	Identity	View	
Programming Mode Status	Genset Info	View	
Reactive Droop Adjust	Voltage Regulator	Adjust	%
Reactive Droop Control Source	Paralleling Control Sources	Adjust	
Reactive Droop Enabled	Voltage Regulator	Adjust	
Reactive Droop Slope	Reactive Power Load Sharing	Adjust	%/Hz
Reactive Power Adjustment	Voltage Regulator	Adjust	kVAR
Reactive Power Baseload Deadband	Reactive Power Load Sharing	Adjust	%
Reactive Power Baseload Gain	Reactive Power Load Sharing	Adjust	
Reactive Power Baseload Reset	Reactive Power Load Sharing	Adjust	s
Reactive Power Baseload Setpoint	Reactive Power Load Sharing	Adjust	%
Reactive Power Circuit Breaker Closed	Reactive Power Load Sharing	View	
Reactive Power Control	Voltage Regulator	Adjust	
Reactive Power Control Enable Source	Paralleling Control Sources	Adjust	
Reactive Power Control Enabled	Voltage Regulator	Adjust	

Parameter	Parameter Group	View/ Adjust	Units
Reactive Power Generator State	Reactive Power Load Sharing	View	
Reactive Power Sharing Deadband	Reactive Power Load Sharing	Adjust	%
Reactive Power Sharing Gain	Reactive Power Load Sharing	Adjust	
Reactive Power Sharing Reset	Reactive Power Load Sharing	Adjust	s
Reactive Power System Control Enable Source	Paralleling Control Sources	Adjust	
Reactive Power Up Down Rate	Reactive Power Load Sharing	Adjust	%/s
Real Power Baseload Control Source	Paralleling Control Sources	Adjust	
Real Power Baseload Deadband	Real Power Load Sharing	Adjust	%
Real Power Baseload Gain	Real Power Load Sharing	Adjust	
Real Power Baseload Reset	Real Power Load Sharing	Adjust	s
Real Power Baseload Setpoint	Real Power Load Sharing	Adjust	%
Real Power Circuit Breaker Closed	Real Power Load Sharing	View	
Real Power Disconnect Level	Real Power Load Sharing	Adjust	%
Real Power Droop Slope	Real Power Load Sharing	Adjust	%RPM
Real Power Generator State	Real Power Load Sharing	View	
Real Power Import Export Control Source	Paralleling Control Sources	Adjust	
Real Power Ramp Hold Control Source	Paralleling Control Sources	Adjust	
Real Power Ramp Rate	Real Power Load Sharing	Adjust	%/s
Real Power Sharing Deadband	Real Power Load Sharing	Adjust	%
Real Power Sharing Gain	Real Power Load Sharing	Adjust	
Real Power Sharing Reset	Real Power Load Sharing	Adjust	s
Real Power Up Down Rate	Real Power Load Sharing	Adjust	%/s
Relay Driver Output A1 Selection (A1 – A31)	Relay Driver Output A1 – A31	Adjust	
Relay Driver Output A1 Setpoint (A1 – A31)	Relay Driver Output A1 – A31	Adjust	
Run Sync Control Source	Synchronization Control	Adjust	
SD Over Current VR Time Delay	Protective Relays	Adjust	s
SD Over Current VR Trip	Protective Relays	Adjust	%
SD Over Power Time Delay	Protective Relays	Adjust	s
SD Over Power Trip	Protective Relays	Adjust	%
SD Reverse Power Time Delay	Protective Relays	Adjust	s
SD Reverse Power Trip	Protective Relays	Adjust	%
SD Reverse VAR Time Delay	Protective Relays	Adjust	s
SD Reverse VAR Trip	Protective Relays	Adjust	%
Speed Bias	Real Power Load Sharing	View	
Sync Bus Frequency	Synchronization Metering	View	Hz
Sync Bus Voltage	Synchronization Metering	View	%
Sync Dwell Time Remaining	Synchronization Metering	View	s
Sync Frequency Window	Synchronization Control	Adjust	Hz
Sync Gen Bus Phase Difference	Synchronization Metering	View	Degrees
Sync Genset Frequency	Synchronization Metering	View	Hz
Sync Genset Voltage	Synchronization Metering	View	%
Sync Metering Circuit Breaker Closed	Synchronization Metering	View	
Sync Metering Generator State	Synchronization Metering	View	
Sync Metering Speed Bias	Synchronization Metering	View	%
Sync Metering Voltage Bias	Synchronization Metering	View	%
Sync Status Alternate Sequence Metering On	Synchronization Metering	View	
Sync Status Breaker Close	Synchronization Metering	View	
Sync Status Breaker Trip	Synchronization Metering	View	
Sync Status Common Sync Fault	Synchronization Metering	View	
Sync Status Common Sync Warning	Synchronization Metering	View	
Sync Status Frequency Matched	Synchronization Metering	View	
Sync Status Generator V Hz OK	Synchronization Metering	View	
Sync Status Genset Breaker Closed	Synchronization Metering	View	

Parameter	Parameter Group	View/ Adjust	Units
Sync Status Pgen Warning	Synchronization Metering	View	
Sync Status Phase Matched	Synchronization Metering	View	
Sync Status Remote Programming Mode	Synchronization Metering	View	
Sync Status Sync Active	Synchronization Metering	View	
Sync Status Utility Breaker Closed	Synchronization Metering	View	
Sync Status Voltage Matched	Synchronization Metering	View	
Sync Time Remaining	Synchronization Metering	View	s
Synch Check Relay Frequency	Protective Relays	Adjust	Hz
Synch Check Relay Magnitude	Protective Relays	Adjust	V
Synch Check Relay Phase Angle	Protective Relays	Adjust	Degrees
Synch Check Relay Time Delay	Protective Relays	Adjust	s
Timed Run Active	Genset Run Time	View	
Timed Run Time	Genset Run Time	Adjust	h
Timed Run Time Remaining	Genset Run Time	View	h
Torque Share Enable	Paralleling Control Sources	Adjust	
Torque Sharing Deadband	Real Power Load Sharing	Adjust	%
Torque Sharing Gain	Real Power Load Sharing	Adjust	
Torque Sharing Reset	Real Power Load Sharing	Adjust	s
Transformer Phase Shift	Synchronization Control	Adjust	Degrees
Under Frequency Slope	Voltage Regulator	Adjust	
Under Frequency Unload Cut-in	Voltage Regulator	Adjust	Hz
Under Frequency Unload Enabled	Voltage Regulator	Adjust	
Utility Gain	Voltage Regulator	Adjust	
VAR Power Factor Mode Control Enable Source	Paralleling Control Sources	Adjust	
Vendor	Identity	View	
Voltage Bias	Reactive Power Load Sharing	View	
Voltage Match Gain	Synchronization Control	Adjust	
Voltage Match Reset	Synchronization Control	Adjust	s
Voltage Match Window	Synchronization Control	Adjust	%
Voltage Regulator Average Voltage Adjustment	Voltage Regulator	Adjust	V
Voltage Regulator Gain	Voltage Regulator	Adjust	
Voltage Trim Deadband	Reactive Power Load Sharing	Adjust	%
Voltage Trim Enable Control Source	Paralleling Control Sources	Adjust	
Voltage Trim Gain	Reactive Power Load Sharing	Adjust	
Voltage Up Down	Reactive Power Load Sharing	Adjust	
Volts Hertz Okay Time Delay	Synchronization Control	Adjust	s

9.1 Introduction

SiteTech™ software allows viewing and adjustment of many settings on the following Decision-Maker® MPAC transfer switch controllers:

- Decision-Maker® MPAC 750
- Decision-Maker® MPAC 1200
- Decision-Maker® MPAC 1500

SiteTech™ software can also be used to view the transfer switch status and event history, update the controller firmware, save controller settings to a file, and load settings from a file to the controller.

SiteTech™ software version 4.0 or higher is required for use with the Decision-Maker® MPAC controllers.

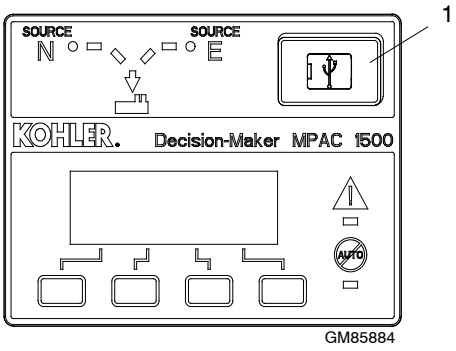
The controller must have power to allow communication with the PC that is connected to the controller and running SiteTech software. A laptop PC that can be taken to the transfer switch site is recommended.

This section provides information specific to the Decision-Maker® MPAC transfer switch controllers. For general software operating instructions, see Section 3, Software Operation.

For controller operation instructions, refer to the controller operation manual provided with the generator set. For specific information on controller settings, including default settings and adjustment ranges, see the controller operation manual. See List of Related Literature on page 9 for the document part numbers. For transfer switch or controller troubleshooting and service, also see the transfer switch service manual.

9.2 Device Connection

Use a USB cable to connect a laptop computer to the the MPAC controller's USB port. The cable should have a male mini-B connector on one end for the controller and the appropriate connector for your computer's USB port on the other end. The USB port is located on the front of the controller. See Figure 9-1 for the USB port location on the controller. It is not necessary to open the ATS enclosure to connect your computer.



1. USB port (behind cover)

Figure 9-1 USB Port Location on Decision-Maker® MPAC Controllers (1500 shown)

9.3 Screens

Click on the tabs in the MPAC Device bar to select from the following groups of settings:

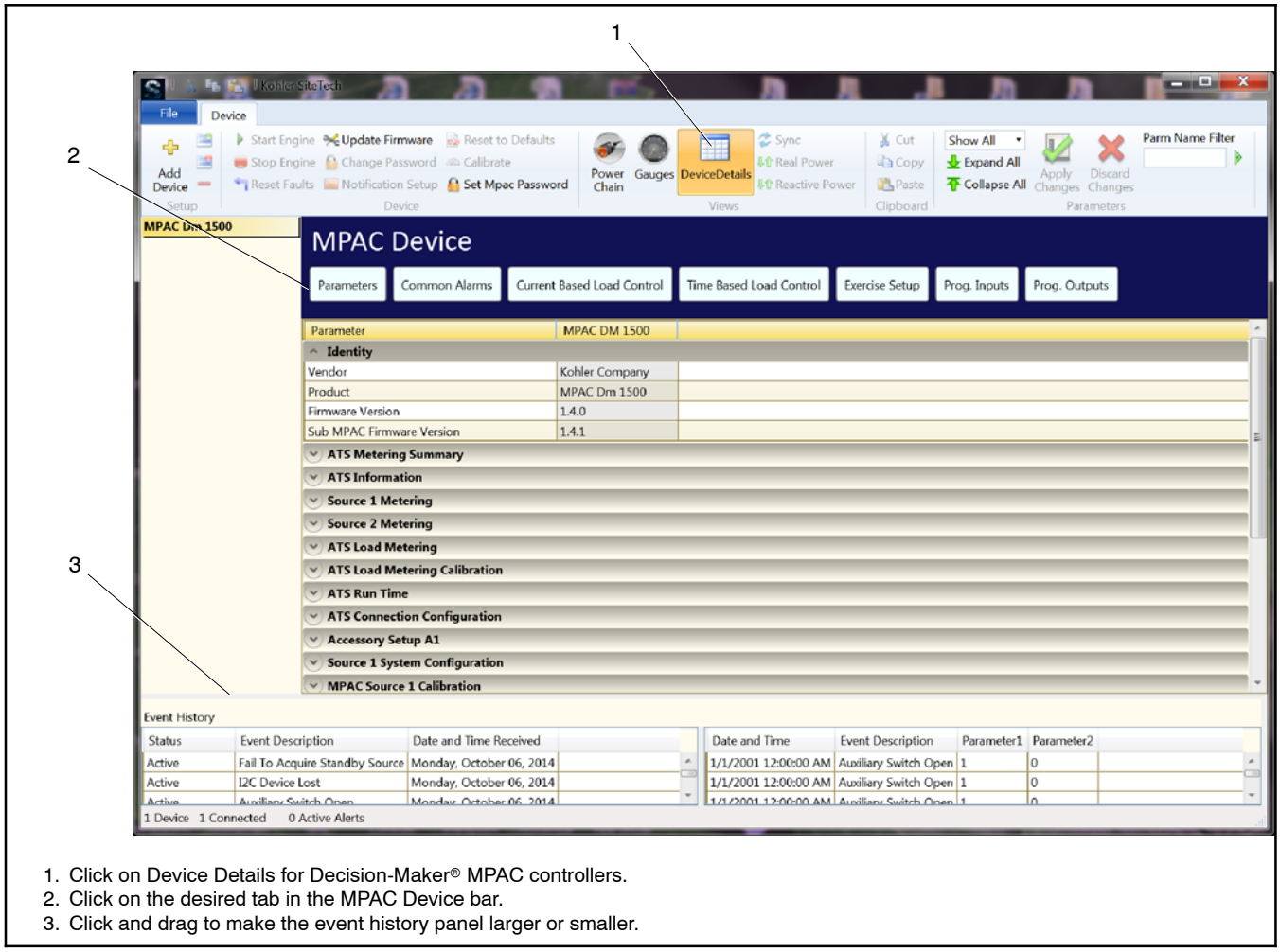
- Parameters
- Common Alarms
- Exercise Setup
- Programmable Inputs
- Programmable Outputs
- Time-Based Load Control (MPAC 1200 and 1500 only)
- Current-Based Load Control (MPAC 1500 only)

See Figure 9-2 through Figure 9-4 to see the tabs for each controller.

9.3.1 Event History

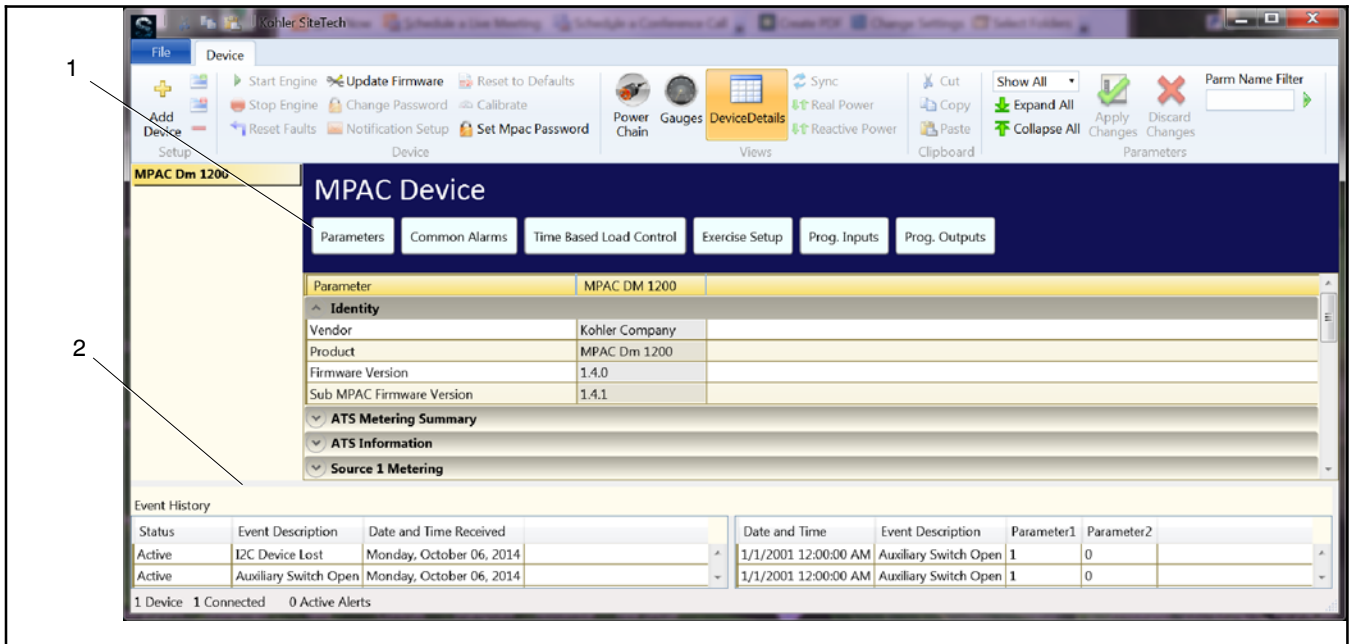
The Event History appears at the bottom of every screen. Click and drag the top of the window up or down to make the window larger or smaller.

Active events are shown on the left side of the screen. Events on the right are recorded in the event log.



1. Click on Device Details for Decision-Maker® MPAC controllers.
2. Click on the desired tab in the MPAC Device bar.
3. Click and drag to make the event history panel larger or smaller.

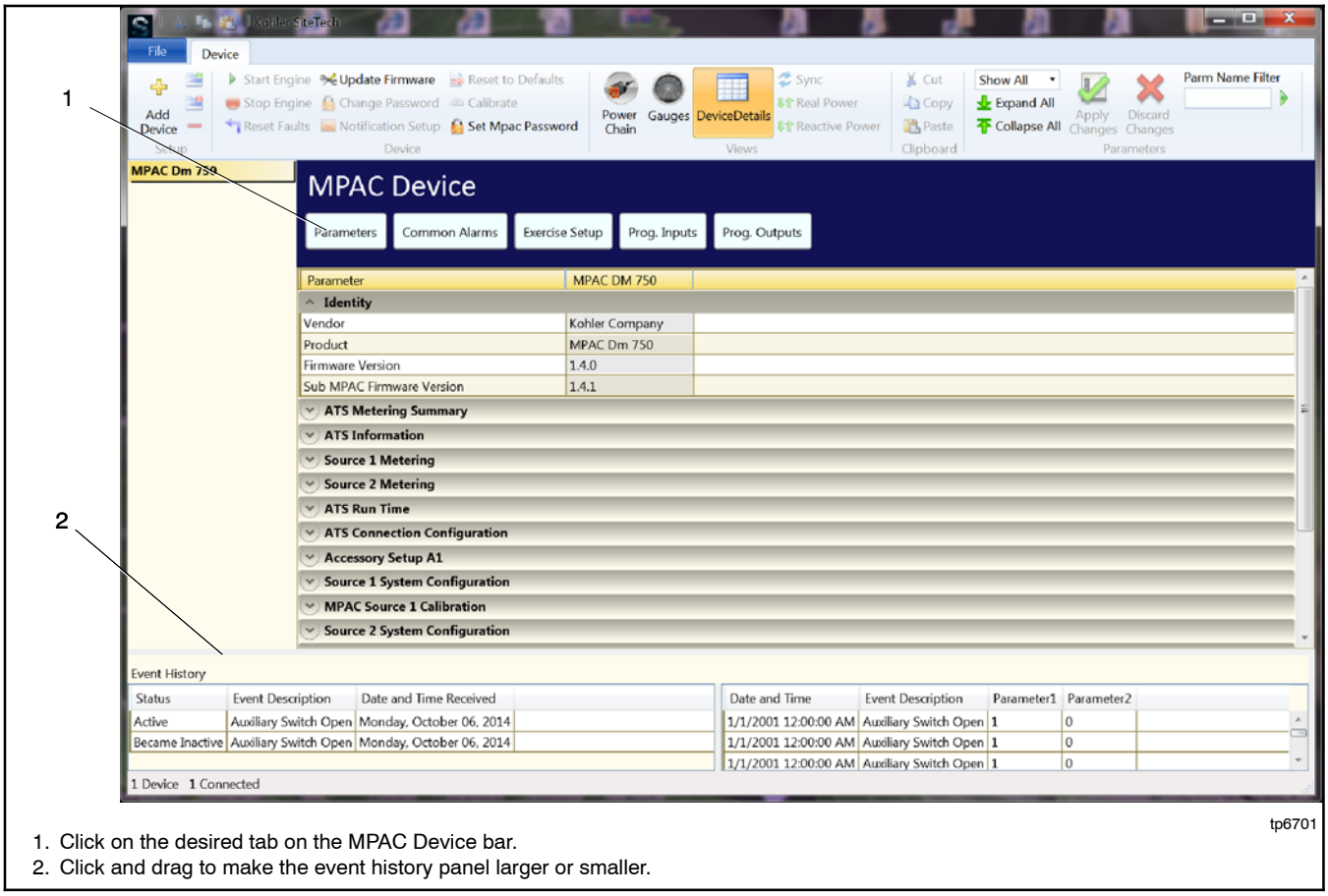
Figure 9-2 Sample SiteTech Screen with Decision-Maker® MPAC 1500 Controller



tp6701

1. Click on the desired tab in the MPAC Device bar.
2. Click and drag to make the event history panel larger or smaller.

Figure 9-3 Sample SiteTech Screen with Decision-Maker® MPAC 1200 Controller



1. Click on the desired tab on the MPAC Device bar.
2. Click and drag to make the event history panel larger or smaller.

Figure 9-4 Sample SiteTech Screen with Decision-Maker® MPAC 750 Controller

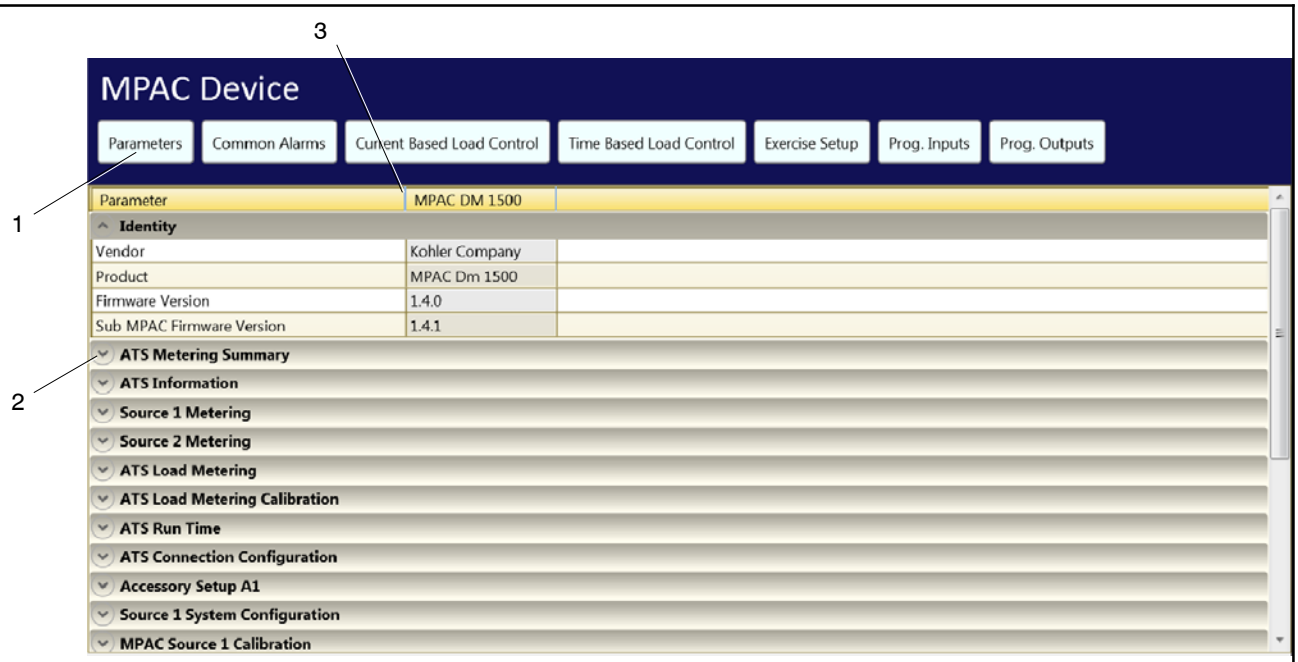
9.3.2 Parameter Groups

The individual parameter groups for the Decision-Maker® MPAC controllers are shown in order as they appear on the Parameters screen. Scroll up and down to see the parameter groups on the screen. Click on the down arrow next to each group to reveal the individual settings in that group. Click on the arrow again to hide the parameters. For help in locating a specific parameter, see Section 9.4.

Some parameters shown in SiteTech are not accessible on all models. Support of some parameters is dependent on the controller type (1500, 1200, or 750), transfer switch model, or installed accessories.

Some parameters are for monitoring only and are not adjustable. For example, Metering and Run Time data are read only and not adjustable. Settings that cannot be changed have a gray background.

To change a setting, click on the cell in the second column and type in the new value for the setting. New settings appear in boldface on the screen. New settings for more than one parameter can be entered. Then click Apply Changes near the top of the screen. If the setting is accepted by the controller, the new setting appears in normal (non-bold) text. If the setting is not accepted, the old setting reappears in the cell. Refer to the controller operation manual for default settings and adjustment ranges.



1. Click on Parameters in the MPAC Device bar.
2. Click on the down arrow for each group to reveal the parameters in that group.
3. Click and drag side-to-side to resize columns, if necessary.

Figure 9-5 Parameters Screen (Decision-Maker® MPAC 1500 shown)

Parameter	MPAC DM 1500
Identity	
Vendor	Kohler Company
Product	MPAC Dm 1500
Firmware Version	1.4.0
Sub MPAC Firmware Version	1.4.1

Note: Parameters in this screen are not adjustable.

ATS Metering Summary	
MPAC ATS Contactor Position	Off
Key Switch Press Status	0
Preferred Source	Source 1
Preferred Source Available	False
Standby Source Available	False
Exercise In Progress	False
In Phase Monitor Active	False
Load Control In Progress	False
Peak Shave In Progress	False
Loaded Test Occurring	False
Unloaded Test Occurring	False
Auto Loaded Test Occurring	False
Synchronous Check Occurring	False
User Forcing To Off	False
Dip Switch Status	2
Closed Transition In Phase Delta	1 °

Note: Parameters in this screen are not adjustable.

ATS Information

Serial numbers are read by the controller or factory-set.

Change the ATS Designation, ATS Load, ATS Branch, and ATS Location to identify the transfer switch, if desired. Click on the cell in the second column and type in your description. Descriptions are limited to 20 characters. Click on Apply Changes at the top of the screen to save the new descriptions.

ATS Information	
ATS Serial Number	NOT SET
Controller Serial Number	NOT SET
Contactor Serial Number	NOT SET
Fpga Firmware Version	0.5.6
ATS Designation	MPAC1
ATS Load	NOT SET
ATS Branch	NOT SET
ATS Location	NOT SET

Source 1 Metering	
MPAC Source 1 Rotation Actual	BAC
Source 1 Voltage L1-L2	0.0 V
Source 1 Voltage L2-L3	0.0 V
Source 1 Voltage L3-L1	0.0 V
Source 1 Voltage L1-N	0.0 V
Source 1 Voltage L2-N	0.0 V
Source 1 Voltage L3-N	0.0 V
Source 1 Frequency	0.0 Hz

Note: Parameters in this screen are not adjustable.

Source 2 Metering	
MPAC Source 2 Rotation Actual	BAC
Source 2 Voltage L1-L2	0.0 V
Source 2 Voltage L2-L3	0.0 V
Source 2 Voltage L3-L1	0.0 V
Source 2 Voltage L1-N	0.0 V
Source 2 Voltage L2-N	0.0 V
Source 2 Voltage L3-N	0.0 V
Source 2 Frequency	0.0 Hz

Note: Parameters in this screen are not adjustable.

ATS Load Metering	
Load Current L1	0.0 A
Load Current L2	0.0 A
Load Current L3	0.0 A

Note: Parameters in this screen are not adjustable.

ATS Load Metering Calibration	
Calibration Factor Load Current L1	
Calibration Factor Load Current L2	
Calibration Factor Load Current L3	

Note: See the transfer switch installation or service manual for calibration instructions.

ATS Run Time	
ATS Controller Clock Date Time	1/1/2001 12:07:00...
ATS Total Hours Of Operation	498.2 h
ATS Total Hours Not In Preferred	71.7 h
ATS Total Hours In Standby	51.0 h
ATS Total Switch Transfers	172755532
ATS Total Failure To Transfers	5
ATS Total Loss Of Preferred Transfers	1379
Transfer Time Source 1 To Source 2	68 ms
Transfer Time Source 2 To Source 1	48 ms
MPAC ATS Date Of Last Maintenance	
ATS Hours Of Operation Since Maintenance	498.2 h
ATS Hours Not In Preferred Since Maintenance	71.7 h
ATS Hours In Standby Since Maintenance	51.0 h
ATS Switch Transfers Since Maintenance	2636
ATS Failure To Transfers Since Maintenance	5
ATS Loss Of Preferred Transfers Since Mainten	1379
Last Outage Date Time	1/1/2001 12:00:00...
Last Outage Duration	458752 h
System Start Date	1/1/2001
Daylight Saving Adjust Enabled	False
Move Forward Date Day Of Week	Sunday
Move Forward Date Week Of Month	Second
Move Forward Date Month Of Year	March
Move Backward Day Of Week	Sunday
Move Backward Week Of Month	First
Move Backward Month Of Year	November
Closed Transition Dual Source Connected Time	120 ms
Source 1 To Open Time	4720 ms
Source 1 To Close Time	80 ms
Source 2 To Open Time	0 ms
Source 2 To Close Time	100 ms

Note: Parameters in this screen are not adjustable.

ATS Connection Configuration	
MPAC ATS Phase Rotation Setting	ABC
ATS Contactor Rating	104 A
Fail To Synchronize Enabled	True
Manual Transfer Mode	Auto Override
Transition Mode	Closed
Mode Of Operation	Utility To Genset Ge...
Manual Transfer Switch Position	Auto
Closed Programmed Transition Override Mod	Auto Override
Synchronous Voltage Phase Angle	10 °
Synchronous Voltage Differential	5 %
Synchronous Frequency Differential	0.1 Hz
Service Entrance Configuration	Molded Case Circui...
Save Configuration Parameters	
MPAC Dm ATS Preferred Source	Source 2

Accessory Setup A1	
Accessory Setup A1 Extended Engine Start Timer Enabled	False
Accessory Setup A1 Inphase Monitor Enabled	True
Accessory Setup A1 Remote Test Loaded	Loaded
Accessory Setup A1 Commit To Transfer	False
Accessory Setup A1 Peak Shave Retransfer Delay Bypass	False
Accessory Setup A1 Three Source Simultaneous Engine Start Mode	False
Accessory Setup A1 Three Source Preferred Source Toggle	False
Accessory Setup A1 Inphase Monitor Transfer Angle	5

Source 1 System Configuration	
Source 1 System Voltage	240.0 V
Source 1 System Frequency	60.0 Hz
Source 1 Number Of Phases	3
Source 1 Voltage Debounce Delay	0.5 s
Source 1 Unbalance Enabled	True
Source 1 Unbalance Voltage Dropout	20 %
Source 1 Unbalance Voltage Pickup	10 %
Source 1 High Voltage Pickup	95 %
Source 1 High Voltage Dropout	115 %
Source 1 Low Voltage Pickup	90 %
Source 1 Low Voltage Dropout	90 %
Source 1 Frequency Debounce Delay	3.0 s
Source 1 High Frequency Pickup	110 %
Source 1 High Frequency Dropout	101 %
Source 1 Low Frequency Pickup	90 %
Source 1 Low Frequency Dropout	99 %

Note: Frequency pickup and dropout settings are available for the 1500 only.

MPAC Source 1 Calibration	
MPAC Source 1 Calibration Factor Voltage L1-L2	
MPAC Source 1 Calibration Factor Voltage L2-L3	
MPAC Source 1 Calibration Factor Voltage L3-L1	
MPAC Source 1 Calibration Factor Voltage L1-N	
MPAC Source 1 Calibration Factor Voltage L2-N	
MPAC Source 1 Calibration Factor Voltage L3-N	

Note: See the transfer switch installation or service manual for calibration instructions.

Source 2 System Configuration	
Source 2 System Voltage	240.0 V
Source 2 System Frequency	60.0 Hz
Source 2 Number Of Phases	3
Source 2 Voltage Debounce Delay	0.5 s
Source 2 Unbalance Enabled	True
Source 2 Unbalance Voltage Dropout	20 %
Source 2 Unbalance Voltage Pickup	10 %
Source 2 High Voltage Pickup	95 %
Source 2 High Voltage Dropout	115 %
Source 2 Low Voltage Pickup	90 %
Source 2 Low Voltage Dropout	90 %
Source 2 Frequency Debounce Delay	3.0 s
Source 2 High Frequency Pickup	110 %
Source 2 High Frequency Dropout	101 %
Source 2 Low Frequency Pickup	90 %
Source 2 Low Frequency Dropout	99 %

MPAC Source 2 Calibration	
MPAC Source 2 Calibration Factor Voltage L1-L2	
MPAC Source 2 Calibration Factor Voltage L2-L3	
MPAC Source 2 Calibration Factor Voltage L3-L1	
MPAC Source 2 Calibration Factor Voltage L1-N	
MPAC Source 2 Calibration Factor Voltage L2-N	
MPAC Source 2 Calibration Factor Voltage L3-N	

Note: See the transfer switch installation or service manual for calibration instructions.

ATS Delays	
ATS Transfer From Preferred Delay	2 s
ATS Transfer From Standby Delay	13 s
ATS Transfer Off To Preferred Delay	1 s
ATS Transfer Off To Standby Delay	1 s
ATS Source 2 Engine Start Delay	0 s
ATS Source 2 Engine Cool Down Delay	3 s
ATS Fail To Acquire Standby Delay	60 s
ATS Fail To Acquire Preferred Delay	60 s
ATS Source 2 Extended Engine Start Delay	4 s
ATS Source 1 Extended Engine Start Delay*	4 s
ATS Source 1 Engine Start Delay *	0 s
ATS Source 1 Engine Cool Down Delay *	2 s
ATS Fail To Synchronize Delay	60 s
Active Time Delay	No Active Time Del...
Active Delay Time Remaining	0 s
Active Delay Time Delay Preset	0.0 s

* Source 1 engine delays are available on the 1500 controller only.

ATS Prime Power	
Source 1 Prime Power Duration	0.1 h
Source 2 Prime Power Duration	0.1 h
Source 1 Prime Powerevent Countdown	0 min
Source 2 Prime Powerevent Countdown	0 min
Prime Power Start Stop	False

Modbus	
Modbus Enabled	True
MPAC Modbus Baud Rate	19200 b/s
Modbus Slave Address	2
Modbus Parity	0
Modbus Stop Bits	1

Network Configuration	
DHCP Enabled	True
Static IP Address	10.4.116.5
Static Subnet Mask	255.255.255.0
Static Default Gateway	10.4.116.1
DHCP Server	192.168.0.35
Modbus Tcp Unit Id	2
Modbus Tcp Server Enabled	True
Network Status	
MAC Address	00-14-6F-12-D0-19

Note: Sample settings shown. See the controller operation manual for communication setup instructions.

Digital Input and Output Descriptions

Click on the cell in the second column and type in a description to identify the input or output, if desired. Descriptions are limited to 19 characters. Click Apply Changes at the top of the screen to save the new descriptions.

Digital Input Output Descriptions	
Software Controlled Output 1 Description	USER OUTPUT 1
Software Controlled Output 2 Description	USER OUTPUT 2
Software Controlled Output 3 Description	USER OUTPUT 3
Software Controlled Output 4 Description	USER OUTPUT 4
Remote Monitored Input 1 Description	USER INPUT 1
Remote Monitored Input 2 Description	USER INPUT 2
Remote Monitored Input 3 Description	USER INPUT 3
Remote Monitored Input 4 Description	USER INPUT 4

Installed Boards	
Expansion Board 1	None
Expansion Board 2	Standard
Expansion Board 3	None
Expansion Board 4	None
Alarm Board	Normal
Battery Option Board Installed	False

Note: Parameters in this screen are not adjustable.

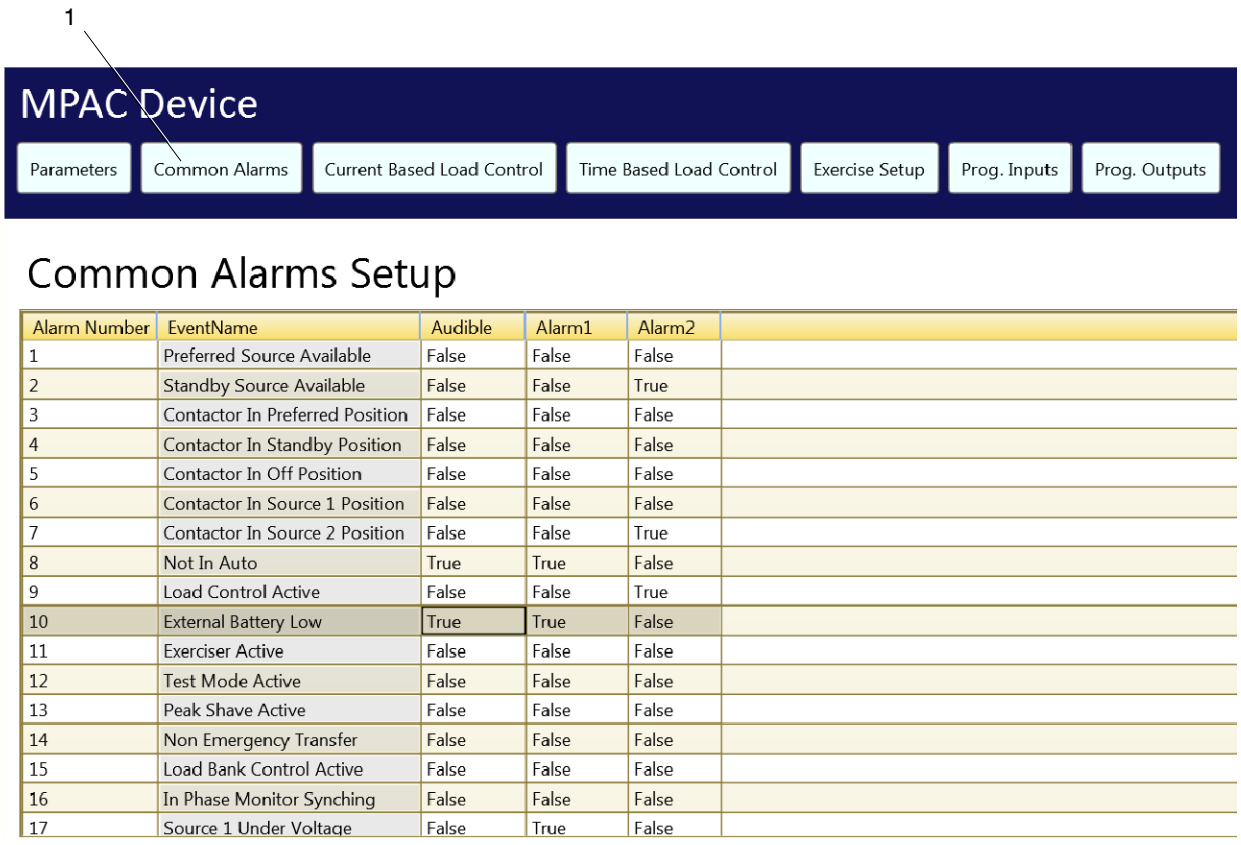
MPAC Dm Digital Input Output Status	
Main Logic Board User Outputs	0
Main Logic Board User Inputs	1
Expansion Board 1 User Outputs	0
Expansion Board 2 User Outputs	0
Expansion Board 3 User Outputs	0
Expansion Board 4 User Outputs	0
Expansion Board 1 User Inputs	0
Expansion Board 2 User Inputs	0
Expansion Board 3 User Inputs	0
Expansion Board 4 User Inputs	0
Software Controlled User Outputs	0
Software Controlled User Outputs Assigned	0
Remote Monitoring User Inputs	0
Remote Monitoring User Inputs Assigned	0
Main Logic Board Hardware Outputs	Source 2 Engine St...

Note: This screen is under development.

9.3.3 Common Alarms

Click on the Common Alarms tab in the MPAC Device bar to view or set common alarms. The illustration shows only a portion of the events that can be assigned to common alarm 1 or common alarm 2.

- Audible: Set this value to True for any events that should sound the audible alarm (alarm accessory module is required on the ATS for audible alarms).
- Alarm1: Set this value to True to assign any events to Common Alarm 1. Common Alarm 1 can be assigned to an output on the MPAC controller or accessory I/O Module using the appropriate I/O parameter screen.
- Alarm2: Set this value to True to assign any events to Common Alarm 2. Common Alarm 2 can be assigned to an output on the MPAC controller or accessory I/O Module using the appropriate I/O parameter screen.



Alarm Number	EventName	Audible	Alarm1	Alarm2
1	Preferred Source Available	False	False	False
2	Standby Source Available	False	False	True
3	Contactor In Preferred Position	False	False	False
4	Contactor In Standby Position	False	False	False
5	Contactor In Off Position	False	False	False
6	Contactor In Source 1 Position	False	False	False
7	Contactor In Source 2 Position	False	False	True
8	Not In Auto	True	True	False
9	Load Control Active	False	False	True
10	External Battery Low	True	True	False
11	Exerciser Active	False	False	False
12	Test Mode Active	False	False	False
13	Peak Shave Active	False	False	False
14	Non Emergency Transfer	False	False	False
15	Load Bank Control Active	False	False	False
16	In Phase Monitor Synching	False	False	False
17	Source 1 Under Voltage	False	True	False

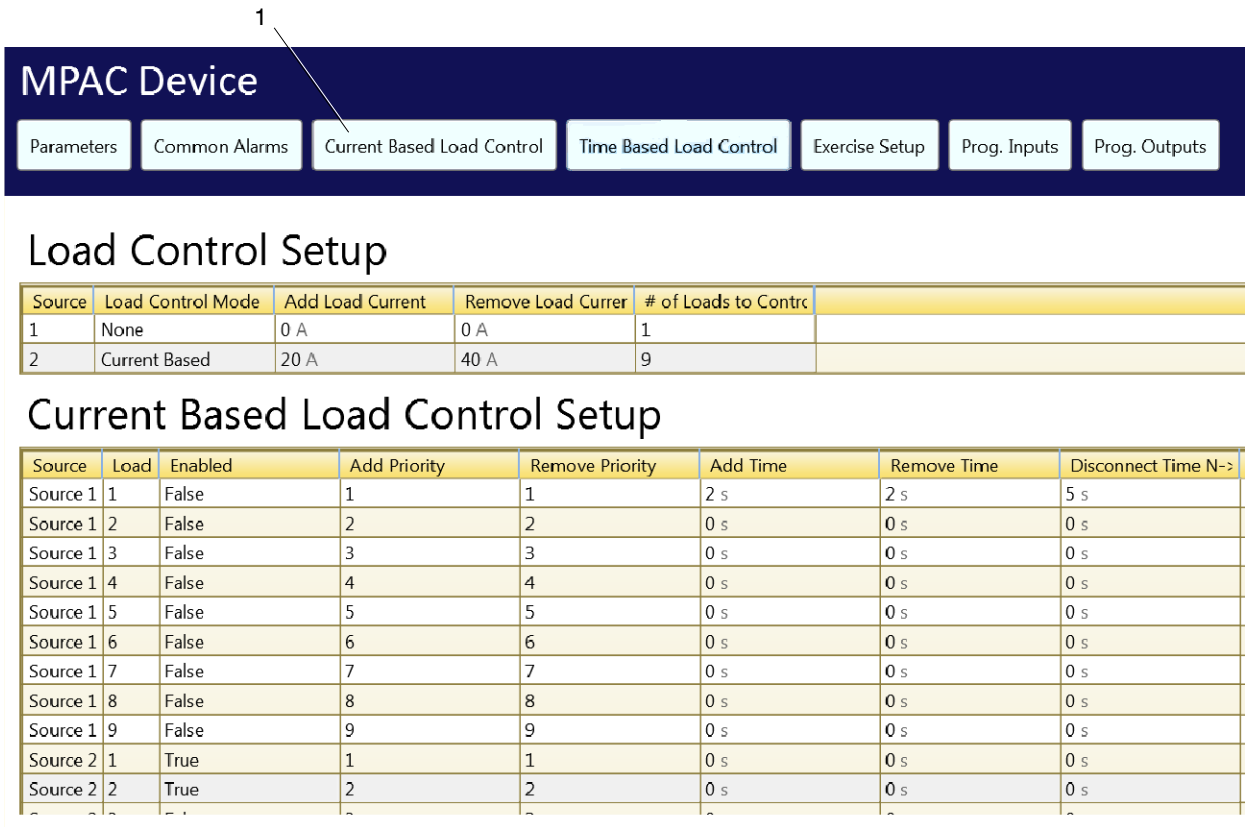
1. Click on the Common Alarms tab in the MPAC Device bar.

Figure 9-6 Common Alarms Setup Screen

9.3.4 Current-Based Load Control

Current-based load control is only available on the Decision-Maker® MPAC 1500 controller. Refer to the Controller Operation Manual for instructions to set up current-based load control.

Click on the desired cell and enter the setting. Click Apply Changes at the top to save the settings.



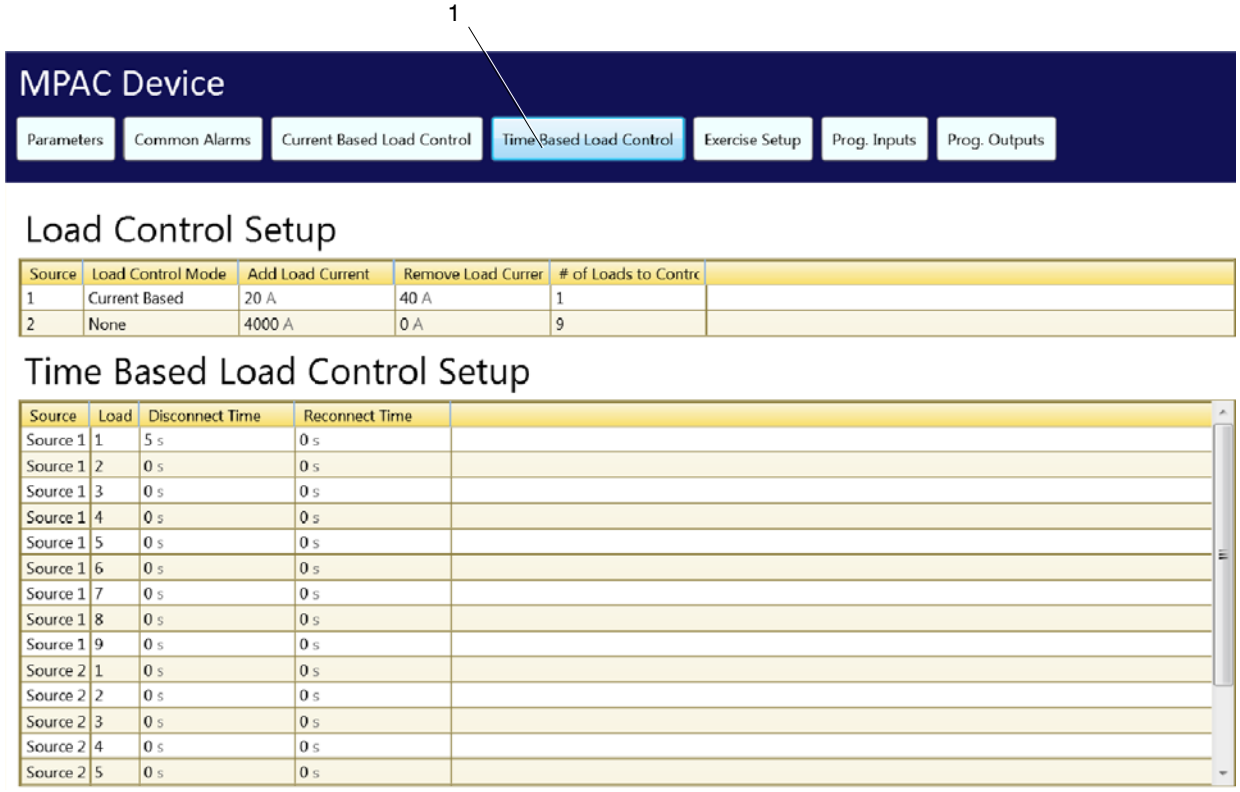
1. Click on the Current Based Load Control tab in the MPAC Device bar.

Note: Refer to the controller operation manual for instructions to set up current-based load control.

Figure 9-7 Current-Based Load Control Setup Screen (1500 controller only)

9.3.5 Time-Based Load Control

Time-based load control is available on the Decision-Maker® MPAC 1200 and 1500 controllers. Refer to the Controller Operation Manual for instructions to set up time-based load control.



1. Click on the Time Based Load Control tab in the MPAC Device bar.

Note: Refer to the controller operation manual for time-based load control setup instructions.

Figure 9-8 Time-Based Load Control Setup Screen

9.3.6 Exercise Setup

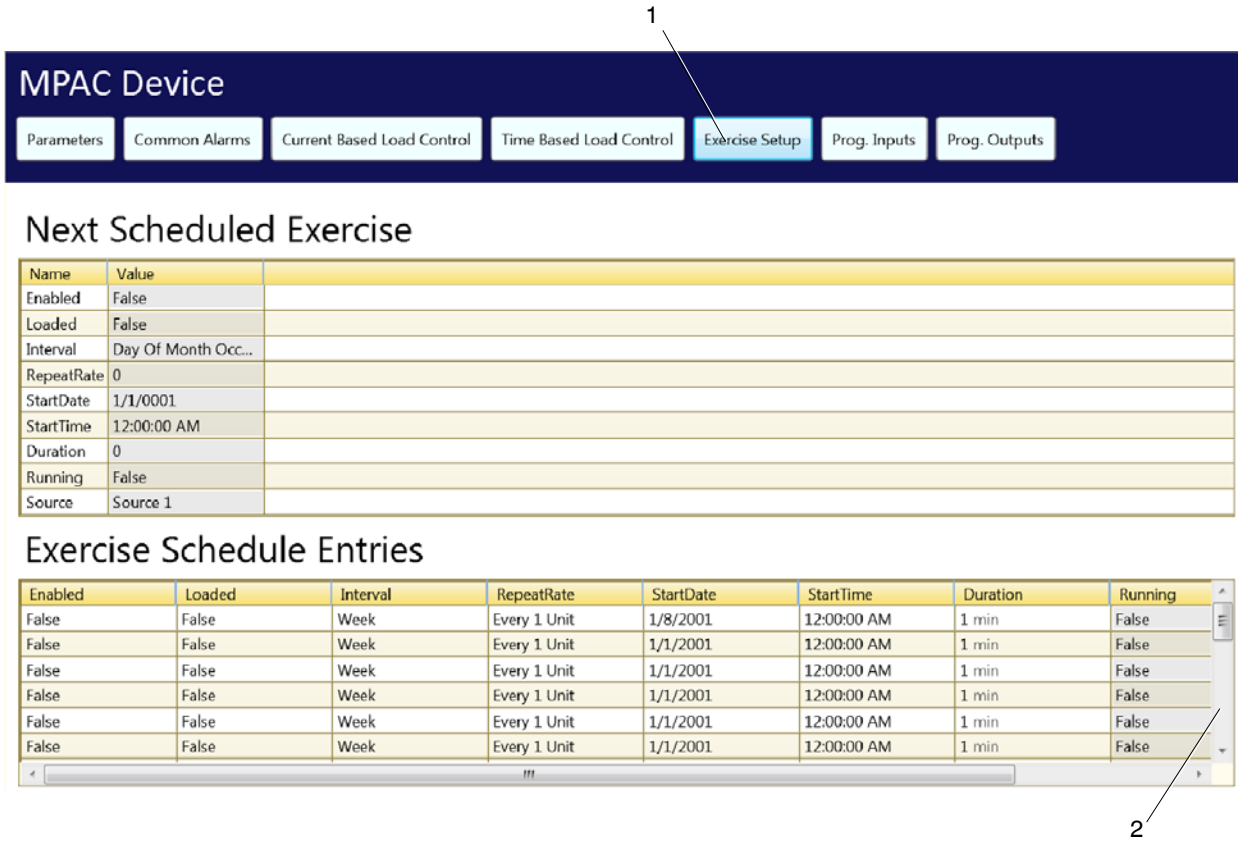
Click on the Exercise Setup tab to view the settings for the next scheduled exercise and to program up to 21 exercise events. Use the Exercise Schedule Entries menu to program up to 21 different exercises with varying intervals, duration, and exercise types (loaded or unloaded). Use the drop-down arrows or type in values where permitted.

Note: See the transfer switch controller operation manuals for details about the exercise sequence of operation.

For each exercise, set the following:

- Select loaded or unloaded exercise. A loaded exercise starts the generator and then transfers the load. The load is transferred back to the preferred source at the end of the exercise period, before the generator is signalled to shut down. An unloaded exercise runs the generator set without transferring the load.
- Select the exercise interval: daily, weekly, monthly, or on a given day (e.g. Monday). The day will be determined by the start date. Refer to the generator set documentation for the recommended exercise interval.
- Select a repeat rate from 1 to 12 units, where units = the interval selected in the previous column. For example, selecting an interval of Day and a repeat rate of 10 units will exercise the system every 10 days.
- Enter the start date and start time.
- Set the exercise duration in minutes. Refer to the generator set documentation for the recommended exercise duration.
- In the first column, set Enabled to True to activate the schedule for each programmed event. More than one exercise schedule can be enabled. An exercise event can be suspended by setting Enabled to False. In this way, multiple events can be entered and then enabled or disabled to vary the exercise schedule if desired.

Click Apply Changes to save the exercise settings.



1. Click on Exercise Setup.
2. Use the scroll bar to access more exercise events.

Figure 9-9 Exercise Setup Screen

9.3.7 Programmable Inputs

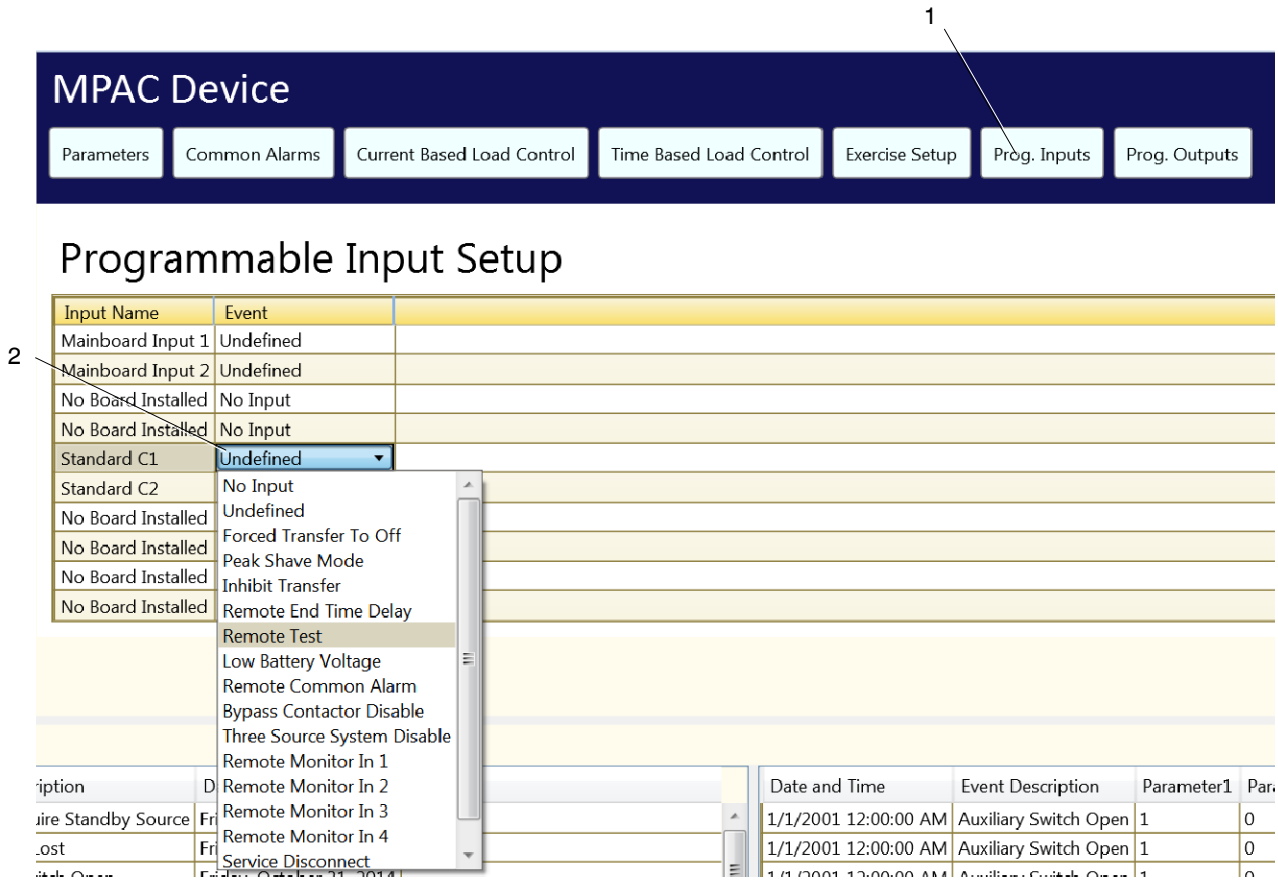
Click on the Prog. Inputs tab to assign input events on the controller and optional I/O modules. Click in the event column for the desired input and select the appropriate input event from the drop-down list. Make sure that the assigned event corresponds to the equipment connected to that input on the controller or optional I/O module. Click on Apply Changes at the top of the screen to save the settings.

Mainboard Input 1 is labeled IN1 on the controller's terminal block TB1. Mainboard Input 2 is labeled IN2 on TB1.

If optional I/O modules are installed and connected to the transfer switch controller, input events for each module will appear in the Input Name column.

Refer to the controller operation manual for information about available input events.

Some inputs may be factory set for specific transfer switch models or options. Do not change these factory-set inputs. See the transfer switch documentation for more information.



1. Click on Prog. Inputs.
2. Click in the Event cell and select from the drop-down list.

Figure 9-10 Programmable Input Setup Screen

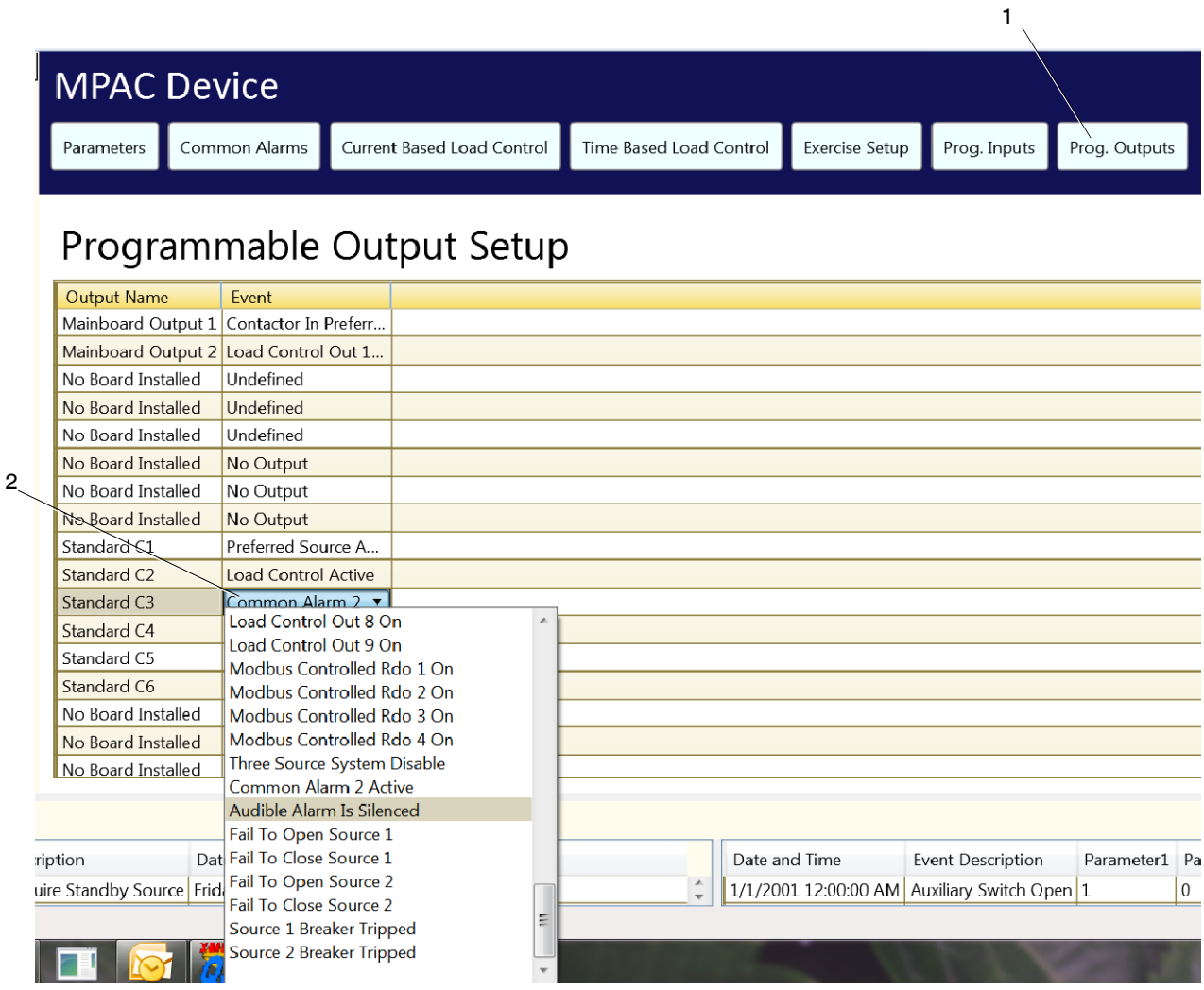
9.3.8 Programmable Outputs

Click on the Prog. Outputs tab to assign output events on the controller and optional I/O modules. Select the appropriate output event from the drop–down list. Make sure that the assigned event corresponds to the equipment connected to that output on the controller or optional I/O module. Click Apply Changes at the top of the screen to save the settings.

Mainboard Output 1 is labeled OUT1 on the controller's terminal block TB1. Mainboard Output 2 is labeled OUT2 on TB1.

If optional I/O modules are installed and connected to the transfer switch controller, output events for each module will appear in the Output Name column. Use the scroll bar on the right side of the menu to access all I/O module outputs, if necessary.

Refer to the controller operation manual for information about available output events.



1. Click on Prog. Outputs.
2. Click on the Event cell and select from the drop–down list.

Figure 9-11 Programmable Output Screen

9.4 Parameter Summary

The following table lists parameters in alphabetical order. Use the table to:

- Find the parameter group and tab where a specific parameter is located;
- Check whether a specific setting is adjustable (Write) or not (Read);
- Check the units for a specific setting (e.g minutes or seconds).

The table lists all parameters available for the Decision-Maker® MPAC 1500 controller. Some parameters are not available on the MPAC 1200 and MPAC 750 controllers.

The Tab column uses the following abbreviations for the tabs in the MPAC Device bar on the SiteTech screen.

P: Parameters Tab
CA: Common Alarms Tab
CBLC: Current Based Load Control Tab
TBLC: Time Based Load Control Tab
ES: Exercise Setup Tab
PI: Programmable Inputs Tab
PO: Programmable Outputs Tab

Parameter	Parameter Group	Tab	Access	Units
Accessory Setup A1 Commit To Transfer	Accessory Setup A1	P	Write	
Accessory Setup A1 Extended Engine Start Timer Enabled	Accessory Setup A1		Write	
Accessory Setup A1 Inphase Monitor Enabled	Accessory Setup A1		Write	
Accessory Setup A1 Inphase Monitor Transfer Angle	Accessory Setup A1		Write	
Accessory Setup A1 Peak Shave Retransfer Delay Bypass	Accessory Setup A1		Write	
Accessory Setup A1 Remote Test Loaded	Accessory Setup A1		Write	
Accessory Setup A1 Three Source Preferred Source Toggle	Accessory Setup A1		Write	
Accessory Setup A1 Three Source Simultaneous Engine Start Mode	Accessory Setup A1		Write	
Active Delay Time Delay Preset	ATS Delays	P	Read	s
Active Delay Time Remaining	ATS Delays		Read	s
Active Time Delay	ATS Delays		Read	
Alarm Board	Installed Boards	P	Read	
ATS Branch	ATS Information	P	Write	
ATS Contactor Rating	ATS Connection Configuration	P	Write	A
ATS Controller Clock Date Time	ATS Run Time	P	Write	
ATS Designation	ATS Information	P	Write	
ATS Fail To Acquire Preferred Delay	ATS Delays	P	Write	s
ATS Fail To Acquire Standby Delay	ATS Delays		Write	s
ATS Fail To Synchronize Delay	ATS Delays		Write	s
ATS Failure To Transfers Since Maintenance	ATS Run Time	P	Read	
ATS Hours In Standby Since Maintenance	ATS Run Time		Read	h
ATS Hours Not In Preferred Since Maintenance	ATS Run Time		Read	h
ATS Hours Of Operation Since Maintenance	ATS Run Time		Read	h
ATS Load	ATS Information	P	Write	
ATS Location	ATS Information		Write	
ATS Loss Of Preferred Transfers Since Maintenance	ATS Run Time	P	Read	
ATS Serial Number	ATS Information	P	Write	
ATS Source 1 Engine Cool Down Delay	ATS Delays	P	Write	s
ATS Source 1 Engine Start Delay	ATS Delays		Write	s
ATS Source 1 Extended Engine Start Delay	ATS Delays		Write	s
ATS Source 2 Engine Cool Down Delay	ATS Delays		Write	s
ATS Source 2 Engine Start Delay	ATS Delays		Write	s
ATS Source 2 Extended Engine Start Delay	ATS Delays		Write	s
ATS Switch Transfers Since Maintenance	ATS Run Time	P	Read	
ATS Total Failure To Transfers	ATS Run Time		Read	
ATS Total Hours In Standby	ATS Run Time		Read	h
ATS Total Hours Not In Preferred	ATS Run Time		Read	h
ATS Total Hours Of Operation	ATS Run Time		Read	h
ATS Total Loss Of Preferred Transfers	ATS Run Time		Read	
ATS Total Switch Transfers	ATS Run Time		Read	
ATS Transfer From Preferred Delay	ATS Delays	P	Write	s
ATS Transfer From Standby Delay	ATS Delays		Write	s
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
ATS Transfer Off To Preferred Delay	ATS Delays	P	Write	s
ATS Transfer Off To Standby Delay	ATS Delays		Write	s
Auto Loaded Test Occurring	ATS Metering Summary	P	Read	
Battery Option Board Installed	Installed Boards	P	Read	
Calibration Factor Load Current L1	ATS Load Metering Calibration	P	Write	
Calibration Factor Load Current L2	ATS Load Metering Calibration		Write	
Calibration Factor Load Current L3	ATS Load Metering Calibration		Write	
Closed Programmed Transition Override Mode	ATS Connection Configuration	P	Write	
Closed Transition Dual Source Connected Time	ATS Run Time	P	Read	ms
Closed Transition In Phase Delta	ATS Metering Summary	P	Read	degrees
Contactor Serial Number	ATS Information	P	Write	
Controller Serial Number	ATS Information		Write	
Current Based Add LCR 1 To Source 1 Time Delay	ATS Current Based Load Control	CBLC	Write	s
Current Based Add LCR 1 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 2 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 2 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 3 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 3 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 4 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 4 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 5 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 5 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 6 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 6 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 7 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 7 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 8 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 8 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 9 To Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Add LCR 9 To Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 1 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 1 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 2 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 2 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 3 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 3 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 4 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 4 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 5 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 5 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 6 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 6 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 7 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 7 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 8 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 8 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 9 From Source 1 Time Delay	ATS Current Based Load Control		Write	s
Current Based Remove LCR 9 From Source 2 Time Delay	ATS Current Based Load Control		Write	s
Daylight Saving Adjust Enabled	ATS Run Time	P	Write	
DHCP Enabled	Network Configuration	P	Write	
DHCP Server	Network Configuration		Write	
Dip Switch Status	ATS Metering Summary	P	Read	
Enabled	Exerciser Summary	ES	Read	
Event Run Duration	Exerciser Summary		Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
Exercise In Progress	ATS Metering Summary	P	Read	
Expansion Board 1	Installed Boards	P	Read	
Expansion Board 1 User Inputs	MPAC Dm Digital Input Output Status	P	Read	
Expansion Board 1 User Outputs	MPAC Dm Digital Input Output Status		Read	
Expansion Board 2	Installed Boards	P	Read	
Expansion Board 2 User Inputs	MPAC Dm Digital Input Output Status	P	Read	
Expansion Board 2 User Outputs	MPAC Dm Digital Input Output Status		Read	
Expansion Board 3	Installed Boards	P	Read	
Expansion Board 3 User Inputs	MPAC Dm Digital Input Output Status	P	Read	
Expansion Board 3 User Outputs	MPAC Dm Digital Input Output Status		Read	
Expansion Board 4	Installed Boards	P	Read	
Expansion Board 4 User Inputs	MPAC Dm Digital Input Output Status	P	Read	
Expansion Board 4 User Outputs	MPAC Dm Digital Input Output Status		Read	
Fail To Synchronize Enabled	ATS Connection Configuration	P	Write	
Firmware Version	Identity	P	Read	
Fpga Firmware Version	ATS Information	P	Read	
In Phase Monitor Active	ATS Metering Summary	P	Read	
Interval	Exerciser Summary	ES	Read	
Key Switch Press Status	ATS Metering Summary	P	Read	
Last Outage Date Time	ATS Run Time	P	Read	
Last Outage Duration	ATS Run Time		Read	h
Load Control In Progress	ATS Metering Summary	P	Read	
Load Current L1	ATS Load Metering	P	Read	A
Load Current L2	ATS Load Metering		Read	A
Load Current L3	ATS Load Metering		Read	A
Loaded	Exerciser Summary	ES	Read	
Loaded Test Occurring	ATS Metering Summary	P	Read	
MAC Address	Network Status	P	Read	
Main Logic Board Hardware Outputs	MPAC Dm Digital Input Output Status	P	Read	
Main Logic Board User Inputs	MPAC Dm Digital Input Output Status		Read	
Main Logic Board User Outputs	MPAC Dm Digital Input Output Status		Read	
Manual Transfer Mode	ATS Connection Configuration	P	Write	
Manual Transfer Switch Position	ATS Connection Configuration		Write	
Modbus Enabled	Modbus	P	Write	
Modbus Parity	Modbus		Read	
Modbus Slave Address	Modbus		Write	
Modbus Stop Bits	Modbus		Read	
Modbus Tcp Server Enabled	Network Configuration	P	Write	
Modbus Tcp Unit Id	Network Configuration		Write	
Mode Of Operation	ATS Connection Configuration	P	Write	
Move Backward Day Of Week	ATS Run Time	P	Write	
Move Backward Month Of Year	ATS Run Time		Write	
Move Backward Week Of Month	ATS Run Time		Write	
Move Forward Date Day Of Week	ATS Run Time		Write	
Move Forward Date Month Of Year	ATS Run Time		Write	
Move Forward Date Week Of Month	ATS Run Time		Write	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC 1500 Common Alarm A1 Alarm Audible	MPAC 1500 Common Alarm A1	CA	Write	
MPAC 1500 Common Alarm A1 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A1		Write	
MPAC 1500 Common Alarm A1 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A1		Write	
MPAC 1500 Common Alarm A1 Common Alarm	MPAC 1500 Common Alarm A1		Read	
MPAC 1500 Common Alarm A10 Alarm Audible	MPAC 1500 Common Alarm A10		Write	
MPAC 1500 Common Alarm A10 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A10		Write	
MPAC 1500 Common Alarm A10 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A10		Write	
MPAC 1500 Common Alarm A10 Common Alarm	MPAC 1500 Common Alarm A10		Read	
MPAC 1500 Common Alarm A11 Alarm Audible	MPAC 1500 Common Alarm A11		Write	
MPAC 1500 Common Alarm A11 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A11		Write	
MPAC 1500 Common Alarm A11 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A11		Write	
MPAC 1500 Common Alarm A11 Common Alarm	MPAC 1500 Common Alarm A11		Read	
MPAC 1500 Common Alarm A12 Alarm Audible	MPAC 1500 Common Alarm A12		Write	
MPAC 1500 Common Alarm A12 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A12		Write	
MPAC 1500 Common Alarm A12 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A12		Write	
MPAC 1500 Common Alarm A12 Common Alarm	MPAC 1500 Common Alarm A12		Read	
MPAC 1500 Common Alarm A13 Alarm Audible	MPAC 1500 Common Alarm A13		Write	
MPAC 1500 Common Alarm A13 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A13		Write	
MPAC 1500 Common Alarm A13 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A13		Write	
MPAC 1500 Common Alarm A13 Common Alarm	MPAC 1500 Common Alarm A13		Read	
MPAC 1500 Common Alarm A14 Alarm Audible	MPAC 1500 Common Alarm A14		Write	
MPAC 1500 Common Alarm A14 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A14		Write	
MPAC 1500 Common Alarm A14 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A14		Write	
MPAC 1500 Common Alarm A14 Common Alarm	MPAC 1500 Common Alarm A14		Read	
MPAC 1500 Common Alarm A15 Alarm Audible	MPAC 1500 Common Alarm A15		Write	
MPAC 1500 Common Alarm A15 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A15		Write	
MPAC 1500 Common Alarm A15 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A15		Write	
MPAC 1500 Common Alarm A15 Common Alarm	MPAC 1500 Common Alarm A15		Read	
MPAC 1500 Common Alarm A16 Alarm Audible	MPAC 1500 Common Alarm A16		Write	
MPAC 1500 Common Alarm A16 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A16		Write	
MPAC 1500 Common Alarm A16 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A16		Write	
MPAC 1500 Common Alarm A16 Common Alarm	MPAC 1500 Common Alarm A16		Read	
MPAC 1500 Common Alarm A17 Alarm Audible	MPAC 1500 Common Alarm A17		Write	
MPAC 1500 Common Alarm A17 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A17		Write	
MPAC 1500 Common Alarm A17 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A17		Write	
MPAC 1500 Common Alarm A17 Common Alarm	MPAC 1500 Common Alarm A17		Read	
MPAC 1500 Common Alarm A18 Alarm Audible	MPAC 1500 Common Alarm A18		Write	
MPAC 1500 Common Alarm A18 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A18		Write	
MPAC 1500 Common Alarm A18 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A18		Write	
MPAC 1500 Common Alarm A18 Common Alarm	MPAC 1500 Common Alarm A18		Read	
MPAC 1500 Common Alarm A19 Alarm Audible	MPAC 1500 Common Alarm A19		Write	
MPAC 1500 Common Alarm A19 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A19		Write	
MPAC 1500 Common Alarm A19 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A19		Write	
MPAC 1500 Common Alarm A19 Common Alarm	MPAC 1500 Common Alarm A19		Read	
MPAC 1500 Common Alarm A2 Alarm Audible	MPAC 1500 Common Alarm A2		Write	
MPAC 1500 Common Alarm A2 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A2		Write	
MPAC 1500 Common Alarm A2 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A2		Write	
MPAC 1500 Common Alarm A2 Common Alarm	MPAC 1500 Common Alarm A2		Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC 1500 Common Alarm A20 Alarm Audible	MPAC 1500 Common Alarm A20	CA	Write	
MPAC 1500 Common Alarm A20 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A20		Write	
MPAC 1500 Common Alarm A20 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A20		Write	
MPAC 1500 Common Alarm A20 Common Alarm	MPAC 1500 Common Alarm A20		Read	
MPAC 1500 Common Alarm A21 Alarm Audible	MPAC 1500 Common Alarm A21		Write	
MPAC 1500 Common Alarm A21 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A21		Write	
MPAC 1500 Common Alarm A21 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A21		Write	
MPAC 1500 Common Alarm A21 Common Alarm	MPAC 1500 Common Alarm A21		Read	
MPAC 1500 Common Alarm A22 Alarm Audible	MPAC 1500 Common Alarm A22		Write	
MPAC 1500 Common Alarm A22 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A22		Write	
MPAC 1500 Common Alarm A22 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A22		Write	
MPAC 1500 Common Alarm A22 Common Alarm	MPAC 1500 Common Alarm A22		Read	
MPAC 1500 Common Alarm A23 Alarm Audible	MPAC 1500 Common Alarm A23		Write	
MPAC 1500 Common Alarm A23 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A23		Write	
MPAC 1500 Common Alarm A23 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A23		Write	
MPAC 1500 Common Alarm A23 Common Alarm	MPAC 1500 Common Alarm A23		Read	
MPAC 1500 Common Alarm A24 Alarm Audible	MPAC 1500 Common Alarm A24		Write	
MPAC 1500 Common Alarm A24 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A24		Write	
MPAC 1500 Common Alarm A24 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A24		Write	
MPAC 1500 Common Alarm A24 Common Alarm	MPAC 1500 Common Alarm A24		Read	
MPAC 1500 Common Alarm A25 Alarm Audible	MPAC 1500 Common Alarm A25		Write	
MPAC 1500 Common Alarm A25 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A25		Write	
MPAC 1500 Common Alarm A25 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A25		Write	
MPAC 1500 Common Alarm A25 Common Alarm	MPAC 1500 Common Alarm A25		Read	
MPAC 1500 Common Alarm A26 Alarm Audible	MPAC 1500 Common Alarm A26		Write	
MPAC 1500 Common Alarm A26 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A26		Write	
MPAC 1500 Common Alarm A26 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A26		Write	
MPAC 1500 Common Alarm A26 Common Alarm	MPAC 1500 Common Alarm A26		Read	
MPAC 1500 Common Alarm A27 Alarm Audible	MPAC 1500 Common Alarm A27		Write	
MPAC 1500 Common Alarm A27 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A27		Write	
MPAC 1500 Common Alarm A27 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A27		Write	
MPAC 1500 Common Alarm A27 Common Alarm	MPAC 1500 Common Alarm A27		Read	
MPAC 1500 Common Alarm A28 Alarm Audible	MPAC 1500 Common Alarm A28		Write	
MPAC 1500 Common Alarm A28 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A28		Write	
MPAC 1500 Common Alarm A28 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A28		Write	
MPAC 1500 Common Alarm A28 Common Alarm	MPAC 1500 Common Alarm A28		Read	
MPAC 1500 Common Alarm A29 Alarm Audible	MPAC 1500 Common Alarm A29		Write	
MPAC 1500 Common Alarm A29 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A29		Write	
MPAC 1500 Common Alarm A29 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A29		Write	
MPAC 1500 Common Alarm A29 Common Alarm	MPAC 1500 Common Alarm A29		Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC 1500 Common Alarm A3 Alarm Audible	MPAC 1500 Common Alarm A3	CA	Write	
MPAC 1500 Common Alarm A3 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A3		Write	
MPAC 1500 Common Alarm A3 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A3		Write	
MPAC 1500 Common Alarm A3 Common Alarm	MPAC 1500 Common Alarm A3		Read	
MPAC 1500 Common Alarm A30 Alarm Audible	MPAC 1500 Common Alarm A30		Write	
MPAC 1500 Common Alarm A30 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A30		Write	
MPAC 1500 Common Alarm A30 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A30		Write	
MPAC 1500 Common Alarm A30 Common Alarm	MPAC 1500 Common Alarm A30		Read	
MPAC 1500 Common Alarm A31 Alarm Audible	MPAC 1500 Common Alarm A31		Write	
MPAC 1500 Common Alarm A31 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A31		Write	
MPAC 1500 Common Alarm A31 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A31		Write	
MPAC 1500 Common Alarm A31 Common Alarm	MPAC 1500 Common Alarm A31		Read	
MPAC 1500 Common Alarm A32 Alarm Audible	MPAC 1500 Common Alarm A32		Write	
MPAC 1500 Common Alarm A32 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A32		Write	
MPAC 1500 Common Alarm A32 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A32		Write	
MPAC 1500 Common Alarm A32 Common Alarm	MPAC 1500 Common Alarm A32		Read	
MPAC 1500 Common Alarm A33 Alarm Audible	MPAC 1500 Common Alarm A33		Write	
MPAC 1500 Common Alarm A33 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A33		Write	
MPAC 1500 Common Alarm A33 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A33		Write	
MPAC 1500 Common Alarm A33 Common Alarm	MPAC 1500 Common Alarm A33		Read	
MPAC 1500 Common Alarm A34 Alarm Audible	MPAC 1500 Common Alarm A34		Write	
MPAC 1500 Common Alarm A34 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A34		Write	
MPAC 1500 Common Alarm A34 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A34		Write	
MPAC 1500 Common Alarm A34 Common Alarm	MPAC 1500 Common Alarm A34		Read	
MPAC 1500 Common Alarm A35 Alarm Audible	MPAC 1500 Common Alarm A35		Write	
MPAC 1500 Common Alarm A35 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A35		Write	
MPAC 1500 Common Alarm A35 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A35		Write	
MPAC 1500 Common Alarm A35 Common Alarm	MPAC 1500 Common Alarm A35		Read	
MPAC 1500 Common Alarm A36 Alarm Audible	MPAC 1500 Common Alarm A36		Write	
MPAC 1500 Common Alarm A36 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A36		Write	
MPAC 1500 Common Alarm A36 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A36		Write	
MPAC 1500 Common Alarm A36 Common Alarm	MPAC 1500 Common Alarm A36		Read	
MPAC 1500 Common Alarm A37 Alarm Audible	MPAC 1500 Common Alarm A37		Write	
MPAC 1500 Common Alarm A37 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A37		Write	
MPAC 1500 Common Alarm A37 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A37		Write	
MPAC 1500 Common Alarm A37 Common Alarm	MPAC 1500 Common Alarm A37		Read	
MPAC 1500 Common Alarm A38 Alarm Audible	MPAC 1500 Common Alarm A38		Write	
MPAC 1500 Common Alarm A38 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A38		Write	
MPAC 1500 Common Alarm A38 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A38		Write	
MPAC 1500 Common Alarm A38 Common Alarm	MPAC 1500 Common Alarm A38		Read	
MPAC 1500 Common Alarm A39 Alarm Audible	MPAC 1500 Common Alarm A39		Write	
MPAC 1500 Common Alarm A39 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A39		Write	
MPAC 1500 Common Alarm A39 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A39		Write	
MPAC 1500 Common Alarm A39 Common Alarm	MPAC 1500 Common Alarm A39		Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC 1500 Common Alarm A4 Alarm Audible	MPAC 1500 Common Alarm A4	CA	Write	
MPAC 1500 Common Alarm A4 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A4		Write	
MPAC 1500 Common Alarm A4 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A4		Write	
MPAC 1500 Common Alarm A4 Common Alarm	MPAC 1500 Common Alarm A4		Read	
MPAC 1500 Common Alarm A40 Alarm Audible	MPAC 1500 Common Alarm A40		Write	
MPAC 1500 Common Alarm A40 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A40		Write	
MPAC 1500 Common Alarm A40 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A40		Write	
MPAC 1500 Common Alarm A40 Common Alarm	MPAC 1500 Common Alarm A40		Read	
MPAC 1500 Common Alarm A41 Alarm Audible	MPAC 1500 Common Alarm A41		Write	
MPAC 1500 Common Alarm A41 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A41		Write	
MPAC 1500 Common Alarm A41 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A41		Write	
MPAC 1500 Common Alarm A41 Common Alarm	MPAC 1500 Common Alarm A41		Read	
MPAC 1500 Common Alarm A42 Alarm Audible	MPAC 1500 Common Alarm A42		Write	
MPAC 1500 Common Alarm A42 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A42		Write	
MPAC 1500 Common Alarm A42 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A42		Write	
MPAC 1500 Common Alarm A42 Common Alarm	MPAC 1500 Common Alarm A42		Read	
MPAC 1500 Common Alarm A43 Alarm Audible	MPAC 1500 Common Alarm A43		Write	
MPAC 1500 Common Alarm A43 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A43		Write	
MPAC 1500 Common Alarm A43 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A43		Write	
MPAC 1500 Common Alarm A43 Common Alarm	MPAC 1500 Common Alarm A43		Read	
MPAC 1500 Common Alarm A44 Alarm Audible	MPAC 1500 Common Alarm A44		Write	
MPAC 1500 Common Alarm A44 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A44		Write	
MPAC 1500 Common Alarm A44 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A44		Write	
MPAC 1500 Common Alarm A44 Common Alarm	MPAC 1500 Common Alarm A44		Read	
MPAC 1500 Common Alarm A45 Alarm Audible	MPAC 1500 Common Alarm A45		Write	
MPAC 1500 Common Alarm A45 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A45		Write	
MPAC 1500 Common Alarm A45 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A45		Write	
MPAC 1500 Common Alarm A45 Common Alarm	MPAC 1500 Common Alarm A45		Read	
MPAC 1500 Common Alarm A46 Alarm Audible	MPAC 1500 Common Alarm A46		Write	
MPAC 1500 Common Alarm A46 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A46		Write	
MPAC 1500 Common Alarm A46 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A46		Write	
MPAC 1500 Common Alarm A46 Common Alarm	MPAC 1500 Common Alarm A46		Read	
MPAC 1500 Common Alarm A47 Alarm Audible	MPAC 1500 Common Alarm A47		Write	
MPAC 1500 Common Alarm A47 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A47		Write	
MPAC 1500 Common Alarm A47 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A47		Write	
MPAC 1500 Common Alarm A47 Common Alarm	MPAC 1500 Common Alarm A47		Read	
MPAC 1500 Common Alarm A48 Alarm Audible	MPAC 1500 Common Alarm A48		Write	
MPAC 1500 Common Alarm A48 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A48		Write	
MPAC 1500 Common Alarm A48 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A48		Write	
MPAC 1500 Common Alarm A48 Common Alarm	MPAC 1500 Common Alarm A48		Read	
MPAC 1500 Common Alarm A49 Alarm Audible	MPAC 1500 Common Alarm A49		Write	
MPAC 1500 Common Alarm A49 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A49		Write	
MPAC 1500 Common Alarm A49 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A49		Write	
MPAC 1500 Common Alarm A49 Common Alarm	MPAC 1500 Common Alarm A49		Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC 1500 Common Alarm A5 Alarm Audible	MPAC 1500 Common Alarm A5	CA	Write	
MPAC 1500 Common Alarm A5 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A5		Write	
MPAC 1500 Common Alarm A5 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A5		Write	
MPAC 1500 Common Alarm A5 Common Alarm	MPAC 1500 Common Alarm A5		Read	
MPAC 1500 Common Alarm A50 Alarm Audible	MPAC 1500 Common Alarm A50		Write	
MPAC 1500 Common Alarm A50 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A50		Write	
MPAC 1500 Common Alarm A50 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A50		Write	
MPAC 1500 Common Alarm A50 Common Alarm	MPAC 1500 Common Alarm A50		Read	
MPAC 1500 Common Alarm A51 Alarm Audible	MPAC 1500 Common Alarm A51		Write	
MPAC 1500 Common Alarm A51 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A51		Write	
MPAC 1500 Common Alarm A51 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A51		Write	
MPAC 1500 Common Alarm A51 Common Alarm	MPAC 1500 Common Alarm A51		Read	
MPAC 1500 Common Alarm A52 Alarm Audible	MPAC 1500 Common Alarm A52		Write	
MPAC 1500 Common Alarm A52 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A52		Write	
MPAC 1500 Common Alarm A52 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A52		Write	
MPAC 1500 Common Alarm A52 Common Alarm	MPAC 1500 Common Alarm A52		Read	
MPAC 1500 Common Alarm A53 Alarm Audible	MPAC 1500 Common Alarm A53		Write	
MPAC 1500 Common Alarm A53 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A53		Write	
MPAC 1500 Common Alarm A53 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A53		Write	
MPAC 1500 Common Alarm A53 Common Alarm	MPAC 1500 Common Alarm A53		Read	
MPAC 1500 Common Alarm A54 Alarm Audible	MPAC 1500 Common Alarm A54		Write	
MPAC 1500 Common Alarm A54 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A54		Write	
MPAC 1500 Common Alarm A54 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A54		Write	
MPAC 1500 Common Alarm A54 Common Alarm	MPAC 1500 Common Alarm A54		Read	
MPAC 1500 Common Alarm A55 Alarm Audible	MPAC 1500 Common Alarm A55		Write	
MPAC 1500 Common Alarm A55 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A55		Write	
MPAC 1500 Common Alarm A55 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A55		Write	
MPAC 1500 Common Alarm A55 Common Alarm	MPAC 1500 Common Alarm A55		Read	
MPAC 1500 Common Alarm A56 Alarm Audible	MPAC 1500 Common Alarm A56		Write	
MPAC 1500 Common Alarm A56 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A56		Write	
MPAC 1500 Common Alarm A56 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A56		Write	
MPAC 1500 Common Alarm A56 Common Alarm	MPAC 1500 Common Alarm A56		Read	
MPAC 1500 Common Alarm A57 Alarm Audible	MPAC 1500 Common Alarm A57		Write	
MPAC 1500 Common Alarm A57 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A57		Write	
MPAC 1500 Common Alarm A57 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A57		Write	
MPAC 1500 Common Alarm A57 Common Alarm	MPAC 1500 Common Alarm A57		Read	
MPAC 1500 Common Alarm A58 Alarm Audible	MPAC 1500 Common Alarm A58		Write	
MPAC 1500 Common Alarm A58 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A58		Write	
MPAC 1500 Common Alarm A58 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A58		Write	
MPAC 1500 Common Alarm A58 Common Alarm	MPAC 1500 Common Alarm A58		Read	
MPAC 1500 Common Alarm A59 Alarm Audible	MPAC 1500 Common Alarm A59		Write	
MPAC 1500 Common Alarm A59 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A59		Write	
MPAC 1500 Common Alarm A59 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A59		Write	
MPAC 1500 Common Alarm A59 Common Alarm	MPAC 1500 Common Alarm A59		Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC 1500 Common Alarm A6 Alarm Audible	MPAC 1500 Common Alarm A6	CA	Write	
MPAC 1500 Common Alarm A6 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A6		Write	
MPAC 1500 Common Alarm A6 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A6		Write	
MPAC 1500 Common Alarm A6 Common Alarm	MPAC 1500 Common Alarm A6		Read	
MPAC 1500 Common Alarm A60 Alarm Audible	MPAC 1500 Common Alarm A60		Write	
MPAC 1500 Common Alarm A60 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A60		Write	
MPAC 1500 Common Alarm A60 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A60		Write	
MPAC 1500 Common Alarm A60 Common Alarm	MPAC 1500 Common Alarm A60		Read	
MPAC 1500 Common Alarm A61 Alarm Audible	MPAC 1500 Common Alarm A61		Write	
MPAC 1500 Common Alarm A61 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A61		Write	
MPAC 1500 Common Alarm A61 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A61		Write	
MPAC 1500 Common Alarm A61 Common Alarm	MPAC 1500 Common Alarm A61		Read	
MPAC 1500 Common Alarm A62 Alarm Audible	MPAC 1500 Common Alarm A62		Write	
MPAC 1500 Common Alarm A62 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A62		Write	
MPAC 1500 Common Alarm A62 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A62		Write	
MPAC 1500 Common Alarm A62 Common Alarm	MPAC 1500 Common Alarm A62		Read	
MPAC 1500 Common Alarm A63 Alarm Audible	MPAC 1500 Common Alarm A63		Write	
MPAC 1500 Common Alarm A63 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A63		Write	
MPAC 1500 Common Alarm A63 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A63		Write	
MPAC 1500 Common Alarm A63 Common Alarm	MPAC 1500 Common Alarm A63		Read	
MPAC 1500 Common Alarm A64 Alarm Audible	MPAC 1500 Common Alarm A64		Write	
MPAC 1500 Common Alarm A64 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A64		Write	
MPAC 1500 Common Alarm A64 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A64		Write	
MPAC 1500 Common Alarm A64 Common Alarm	MPAC 1500 Common Alarm A64		Read	
MPAC 1500 Common Alarm A7 Alarm Audible	MPAC 1500 Common Alarm A7		Write	
MPAC 1500 Common Alarm A7 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A7		Write	
MPAC 1500 Common Alarm A7 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A7		Write	
MPAC 1500 Common Alarm A7 Common Alarm	MPAC 1500 Common Alarm A7		Read	
MPAC 1500 Common Alarm A8 Alarm Audible	MPAC 1500 Common Alarm A8		Write	
MPAC 1500 Common Alarm A8 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A8		Write	
MPAC 1500 Common Alarm A8 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A8		Write	
MPAC 1500 Common Alarm A8 Common Alarm	MPAC 1500 Common Alarm A8		Read	
MPAC 1500 Common Alarm A9 Alarm Audible	MPAC 1500 Common Alarm A9		Write	
MPAC 1500 Common Alarm A9 Assigned To Common Alarm 1	MPAC 1500 Common Alarm A9		Write	
MPAC 1500 Common Alarm A9 Assigned To Common Alarm 2	MPAC 1500 Common Alarm A9		Write	
MPAC 1500 Common Alarm A9 Common Alarm	MPAC 1500 Common Alarm A9		Read	
MPAC 1500 Digital Input A1 Event	MPAC 1500 Digital Input A1	PI	Write	
MPAC 1500 Digital Input A2 Event	MPAC 1500 Digital Input A2		Write	
MPAC 1500 Digital Input B1 Event	MPAC 1500 Digital Input B1		Write	
MPAC 1500 Digital Input B2 Event	MPAC 1500 Digital Input B2		Write	
MPAC 1500 Digital Input C1 Event	MPAC 1500 Digital Input C1		Write	
MPAC 1500 Digital Input C2 Event	MPAC 1500 Digital Input C2		Write	
MPAC 1500 Digital Input D1 Event	MPAC 1500 Digital Input D1		Write	
MPAC 1500 Digital Input D2 Event	MPAC 1500 Digital Input D2		Write	
MPAC 1500 Digital Input E1 Event	MPAC 1500 Digital Input E1		Write	
MPAC 1500 Digital Input E2 Event	MPAC 1500 Digital Input E2		Write	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC 1500 Digital Output A1 Event	MPAC 1500 Digital Output A1	PO	Write	
MPAC 1500 Digital Output A2 Event	MPAC 1500 Digital Output A2		Write	
MPAC 1500 Digital Output B1 Event	MPAC 1500 Digital Output B1		Write	
MPAC 1500 Digital Output B2 Event	MPAC 1500 Digital Output B2		Write	
MPAC 1500 Digital Output B3 Event	MPAC 1500 Digital Output B3		Write	
MPAC 1500 Digital Output B4 Event	MPAC 1500 Digital Output B4		Write	
MPAC 1500 Digital Output B5 Event	MPAC 1500 Digital Output B5		Write	
MPAC 1500 Digital Output B6 Event	MPAC 1500 Digital Output B6		Write	
MPAC 1500 Digital Output C1 Event	MPAC 1500 Digital Output C1		Write	
MPAC 1500 Digital Output C2 Event	MPAC 1500 Digital Output C2		Write	
MPAC 1500 Digital Output C3 Event	MPAC 1500 Digital Output C3		Write	
MPAC 1500 Digital Output C4 Event	MPAC 1500 Digital Output C4		Write	
MPAC 1500 Digital Output C5 Event	MPAC 1500 Digital Output C5		Write	
MPAC 1500 Digital Output C6 Event	MPAC 1500 Digital Output C6		Write	
MPAC 1500 Digital Output D1 Event	MPAC 1500 Digital Output D1		Write	
MPAC 1500 Digital Output D2 Event	MPAC 1500 Digital Output D2		Write	
MPAC 1500 Digital Output D3 Event	MPAC 1500 Digital Output D3		Write	
MPAC 1500 Digital Output D4 Event	MPAC 1500 Digital Output D4		Write	
MPAC 1500 Digital Output D5 Event	MPAC 1500 Digital Output D5		Write	
MPAC 1500 Digital Output D6 Event	MPAC 1500 Digital Output D6		Write	
MPAC 1500 Digital Output E1 Event	MPAC 1500 Digital Output E1		Write	
MPAC 1500 Digital Output E2 Event	MPAC 1500 Digital Output E2		Write	
MPAC 1500 Digital Output E3 Event	MPAC 1500 Digital Output E3		Write	
MPAC 1500 Digital Output E4 Event	MPAC 1500 Digital Output E4		Write	
MPAC 1500 Digital Output E5 Event	MPAC 1500 Digital Output E5		Write	
MPAC 1500 Digital Output E6 Event	MPAC 1500 Digital Output E6		Write	
MPAC ATS Contactor Position	ATS Metering Summary	P	Read	
MPAC ATS Date Of Last Maintenance	ATS Run Time	P	Write	
MPAC ATS Phase Rotation Setting	ATS Connection Configuration	P	Write	
MPAC Dm ATS Preferred Source	ATS Connection Configuration		Write	
MPAC Dm Exerciser Scheduler A1 Enabled	MPAC Dm Exerciser Scheduler A1	ES	Write	
MPAC Dm Exerciser Scheduler A1 Event Run Duration	MPAC Dm Exerciser Scheduler A1		Write	min
MPAC Dm Exerciser Scheduler A1 Interval	MPAC Dm Exerciser Scheduler A1		Write	
MPAC Dm Exerciser Scheduler A1 Loaded	MPAC Dm Exerciser Scheduler A1		Write	
MPAC Dm Exerciser Scheduler A1 Repeat Rate	MPAC Dm Exerciser Scheduler A1		Write	
MPAC Dm Exerciser Scheduler A1 Running	MPAC Dm Exerciser Scheduler A1		Read	
MPAC Dm Exerciser Scheduler A1 Source	MPAC Dm Exerciser Scheduler A1		Read	
MPAC Dm Exerciser Scheduler A1 Start Date	MPAC Dm Exerciser Scheduler A1		Write	
MPAC Dm Exerciser Scheduler A1 Start Time	MPAC Dm Exerciser Scheduler A1		Write	
MPAC Dm Exerciser Scheduler A10 Enabled	MPAC Dm Exerciser Scheduler A10		Write	
MPAC Dm Exerciser Scheduler A10 Event Run Duration	MPAC Dm Exerciser Scheduler A10		Write	min
MPAC Dm Exerciser Scheduler A10 Interval	MPAC Dm Exerciser Scheduler A10		Write	
MPAC Dm Exerciser Scheduler A10 Loaded	MPAC Dm Exerciser Scheduler A10		Write	
MPAC Dm Exerciser Scheduler A10 Repeat Rate	MPAC Dm Exerciser Scheduler A10		Write	
MPAC Dm Exerciser Scheduler A10 Running	MPAC Dm Exerciser Scheduler A10		Read	
MPAC Dm Exerciser Scheduler A10 Source	MPAC Dm Exerciser Scheduler A10		Read	
MPAC Dm Exerciser Scheduler A10 Start Date	MPAC Dm Exerciser Scheduler A10		Write	
MPAC Dm Exerciser Scheduler A10 Start Time	MPAC Dm Exerciser Scheduler A10		Write	

A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts

Parameter	Parameter Group	Tab	Access	Units
MPAC Dm Exerciser Scheduler A11 Enabled	MPAC Dm Exerciser Scheduler A11	ES	Write	
MPAC Dm Exerciser Scheduler A11 Event Run Duration	MPAC Dm Exerciser Scheduler A11		Write	min
MPAC Dm Exerciser Scheduler A11 Interval	MPAC Dm Exerciser Scheduler A11		Write	
MPAC Dm Exerciser Scheduler A11 Loaded	MPAC Dm Exerciser Scheduler A11		Write	
MPAC Dm Exerciser Scheduler A11 Repeat Rate	MPAC Dm Exerciser Scheduler A11		Write	
MPAC Dm Exerciser Scheduler A11 Running	MPAC Dm Exerciser Scheduler A11		Read	
MPAC Dm Exerciser Scheduler A11 Source	MPAC Dm Exerciser Scheduler A11		Read	
MPAC Dm Exerciser Scheduler A11 Start Date	MPAC Dm Exerciser Scheduler A11		Write	
MPAC Dm Exerciser Scheduler A11 Start Time	MPAC Dm Exerciser Scheduler A11		Write	
MPAC Dm Exerciser Scheduler A12 Enabled	MPAC Dm Exerciser Scheduler A12		Write	
MPAC Dm Exerciser Scheduler A12 Event Run Duration	MPAC Dm Exerciser Scheduler A12		Write	min
MPAC Dm Exerciser Scheduler A12 Interval	MPAC Dm Exerciser Scheduler A12		Write	
MPAC Dm Exerciser Scheduler A12 Loaded	MPAC Dm Exerciser Scheduler A12		Write	
MPAC Dm Exerciser Scheduler A12 Repeat Rate	MPAC Dm Exerciser Scheduler A12		Write	
MPAC Dm Exerciser Scheduler A12 Running	MPAC Dm Exerciser Scheduler A12		Read	
MPAC Dm Exerciser Scheduler A12 Source	MPAC Dm Exerciser Scheduler A12		Read	
MPAC Dm Exerciser Scheduler A12 Start Date	MPAC Dm Exerciser Scheduler A12		Write	
MPAC Dm Exerciser Scheduler A12 Start Time	MPAC Dm Exerciser Scheduler A12		Write	
MPAC Dm Exerciser Scheduler A13 Enabled	MPAC Dm Exerciser Scheduler A13		Write	
MPAC Dm Exerciser Scheduler A13 Event Run Duration	MPAC Dm Exerciser Scheduler A13		Write	min
MPAC Dm Exerciser Scheduler A13 Interval	MPAC Dm Exerciser Scheduler A13		Write	
MPAC Dm Exerciser Scheduler A13 Loaded	MPAC Dm Exerciser Scheduler A13		Write	
MPAC Dm Exerciser Scheduler A13 Repeat Rate	MPAC Dm Exerciser Scheduler A13		Write	
MPAC Dm Exerciser Scheduler A13 Running	MPAC Dm Exerciser Scheduler A13		Read	
MPAC Dm Exerciser Scheduler A13 Source	MPAC Dm Exerciser Scheduler A13		Read	
MPAC Dm Exerciser Scheduler A13 Start Date	MPAC Dm Exerciser Scheduler A13		Write	
MPAC Dm Exerciser Scheduler A13 Start Time	MPAC Dm Exerciser Scheduler A13		Write	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC Dm Exerciser Scheduler A14 Enabled	MPAC Dm Exerciser Scheduler A14	ES	Write	
MPAC Dm Exerciser Scheduler A14 Event Run Duration	MPAC Dm Exerciser Scheduler A14		Write	min
MPAC Dm Exerciser Scheduler A14 Interval	MPAC Dm Exerciser Scheduler A14		Write	
MPAC Dm Exerciser Scheduler A14 Loaded	MPAC Dm Exerciser Scheduler A14		Write	
MPAC Dm Exerciser Scheduler A14 Repeat Rate	MPAC Dm Exerciser Scheduler A14		Write	
MPAC Dm Exerciser Scheduler A14 Running	MPAC Dm Exerciser Scheduler A14		Read	
MPAC Dm Exerciser Scheduler A14 Source	MPAC Dm Exerciser Scheduler A14		Read	
MPAC Dm Exerciser Scheduler A14 Start Date	MPAC Dm Exerciser Scheduler A14		Write	
MPAC Dm Exerciser Scheduler A14 Start Time	MPAC Dm Exerciser Scheduler A14		Write	
MPAC Dm Exerciser Scheduler A15 Enabled	MPAC Dm Exerciser Scheduler A15		Write	
MPAC Dm Exerciser Scheduler A15 Event Run Duration	MPAC Dm Exerciser Scheduler A15		Write	min
MPAC Dm Exerciser Scheduler A15 Interval	MPAC Dm Exerciser Scheduler A15		Write	
MPAC Dm Exerciser Scheduler A15 Loaded	MPAC Dm Exerciser Scheduler A15		Write	
MPAC Dm Exerciser Scheduler A15 Repeat Rate	MPAC Dm Exerciser Scheduler A15		Write	
MPAC Dm Exerciser Scheduler A15 Running	MPAC Dm Exerciser Scheduler A15		Read	
MPAC Dm Exerciser Scheduler A15 Source	MPAC Dm Exerciser Scheduler A15		Read	
MPAC Dm Exerciser Scheduler A15 Start Date	MPAC Dm Exerciser Scheduler A15		Write	
MPAC Dm Exerciser Scheduler A15 Start Time	MPAC Dm Exerciser Scheduler A15		Write	
MPAC Dm Exerciser Scheduler A16 Enabled	MPAC Dm Exerciser Scheduler A16		Write	
MPAC Dm Exerciser Scheduler A16 Event Run Duration	MPAC Dm Exerciser Scheduler A16		Write	min
MPAC Dm Exerciser Scheduler A16 Interval	MPAC Dm Exerciser Scheduler A16		Write	
MPAC Dm Exerciser Scheduler A16 Loaded	MPAC Dm Exerciser Scheduler A16		Write	
MPAC Dm Exerciser Scheduler A16 Repeat Rate	MPAC Dm Exerciser Scheduler A16		Write	
MPAC Dm Exerciser Scheduler A16 Running	MPAC Dm Exerciser Scheduler A16		Read	
MPAC Dm Exerciser Scheduler A16 Source	MPAC Dm Exerciser Scheduler A16		Read	
MPAC Dm Exerciser Scheduler A16 Start Date	MPAC Dm Exerciser Scheduler A16		Write	
MPAC Dm Exerciser Scheduler A16 Start Time	MPAC Dm Exerciser Scheduler A16		Write	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC Dm Exerciser Scheduler A17 Enabled	MPAC Dm Exerciser Scheduler A17	ES	Write	
MPAC Dm Exerciser Scheduler A17 Event Run Duration	MPAC Dm Exerciser Scheduler A17		Write	min
MPAC Dm Exerciser Scheduler A17 Interval	MPAC Dm Exerciser Scheduler A17		Write	
MPAC Dm Exerciser Scheduler A17 Loaded	MPAC Dm Exerciser Scheduler A17		Write	
MPAC Dm Exerciser Scheduler A17 Repeat Rate	MPAC Dm Exerciser Scheduler A17		Write	
MPAC Dm Exerciser Scheduler A17 Running	MPAC Dm Exerciser Scheduler A17		Read	
MPAC Dm Exerciser Scheduler A17 Source	MPAC Dm Exerciser Scheduler A17		Read	
MPAC Dm Exerciser Scheduler A17 Start Date	MPAC Dm Exerciser Scheduler A17		Write	
MPAC Dm Exerciser Scheduler A17 Start Time	MPAC Dm Exerciser Scheduler A17		Write	
MPAC Dm Exerciser Scheduler A18 Enabled	MPAC Dm Exerciser Scheduler A18		Write	
MPAC Dm Exerciser Scheduler A18 Event Run Duration	MPAC Dm Exerciser Scheduler A18		Write	min
MPAC Dm Exerciser Scheduler A18 Interval	MPAC Dm Exerciser Scheduler A18		Write	
MPAC Dm Exerciser Scheduler A18 Loaded	MPAC Dm Exerciser Scheduler A18		Write	
MPAC Dm Exerciser Scheduler A18 Repeat Rate	MPAC Dm Exerciser Scheduler A18		Write	
MPAC Dm Exerciser Scheduler A18 Running	MPAC Dm Exerciser Scheduler A18		Read	
MPAC Dm Exerciser Scheduler A18 Source	MPAC Dm Exerciser Scheduler A18		Read	
MPAC Dm Exerciser Scheduler A18 Start Date	MPAC Dm Exerciser Scheduler A18		Write	
MPAC Dm Exerciser Scheduler A18 Start Time	MPAC Dm Exerciser Scheduler A18		Write	
MPAC Dm Exerciser Scheduler A19 Enabled	MPAC Dm Exerciser Scheduler A19		Write	
MPAC Dm Exerciser Scheduler A19 Event Run Duration	MPAC Dm Exerciser Scheduler A19		Write	min
MPAC Dm Exerciser Scheduler A19 Interval	MPAC Dm Exerciser Scheduler A19		Write	
MPAC Dm Exerciser Scheduler A19 Loaded	MPAC Dm Exerciser Scheduler A19		Write	
MPAC Dm Exerciser Scheduler A19 Repeat Rate	MPAC Dm Exerciser Scheduler A19		Write	
MPAC Dm Exerciser Scheduler A19 Running	MPAC Dm Exerciser Scheduler A19		Read	
MPAC Dm Exerciser Scheduler A19 Source	MPAC Dm Exerciser Scheduler A19		Read	
MPAC Dm Exerciser Scheduler A19 Start Date	MPAC Dm Exerciser Scheduler A19		Write	
MPAC Dm Exerciser Scheduler A19 Start Time	MPAC Dm Exerciser Scheduler A19		Write	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC Dm Exerciser Scheduler A2 Enabled	MPAC Dm Exerciser Scheduler A2	ES	Write	
MPAC Dm Exerciser Scheduler A2 Event Run Duration	MPAC Dm Exerciser Scheduler A2		Write	min
MPAC Dm Exerciser Scheduler A2 Interval	MPAC Dm Exerciser Scheduler A2		Write	
MPAC Dm Exerciser Scheduler A2 Loaded	MPAC Dm Exerciser Scheduler A2		Write	
MPAC Dm Exerciser Scheduler A2 Repeat Rate	MPAC Dm Exerciser Scheduler A2		Write	
MPAC Dm Exerciser Scheduler A2 Running	MPAC Dm Exerciser Scheduler A2		Read	
MPAC Dm Exerciser Scheduler A2 Source	MPAC Dm Exerciser Scheduler A2		Read	
MPAC Dm Exerciser Scheduler A2 Start Date	MPAC Dm Exerciser Scheduler A2		Write	
MPAC Dm Exerciser Scheduler A2 Start Time	MPAC Dm Exerciser Scheduler A2		Write	
MPAC Dm Exerciser Scheduler A20 Enabled	MPAC Dm Exerciser Scheduler A20		Write	
MPAC Dm Exerciser Scheduler A20 Event Run Duration	MPAC Dm Exerciser Scheduler A20		Write	min
MPAC Dm Exerciser Scheduler A20 Interval	MPAC Dm Exerciser Scheduler A20		Write	
MPAC Dm Exerciser Scheduler A20 Loaded	MPAC Dm Exerciser Scheduler A20		Write	
MPAC Dm Exerciser Scheduler A20 Repeat Rate	MPAC Dm Exerciser Scheduler A20		Write	
MPAC Dm Exerciser Scheduler A20 Running	MPAC Dm Exerciser Scheduler A20		Read	
MPAC Dm Exerciser Scheduler A20 Source	MPAC Dm Exerciser Scheduler A20		Read	
MPAC Dm Exerciser Scheduler A20 Start Date	MPAC Dm Exerciser Scheduler A20		Write	
MPAC Dm Exerciser Scheduler A20 Start Time	MPAC Dm Exerciser Scheduler A20		Write	
MPAC Dm Exerciser Scheduler A21 Enabled	MPAC Dm Exerciser Scheduler A21		Write	
MPAC Dm Exerciser Scheduler A21 Event Run Duration	MPAC Dm Exerciser Scheduler A21		Write	min
MPAC Dm Exerciser Scheduler A21 Interval	MPAC Dm Exerciser Scheduler A21		Write	
MPAC Dm Exerciser Scheduler A21 Loaded	MPAC Dm Exerciser Scheduler A21		Write	
MPAC Dm Exerciser Scheduler A21 Repeat Rate	MPAC Dm Exerciser Scheduler A21		Write	
MPAC Dm Exerciser Scheduler A21 Running	MPAC Dm Exerciser Scheduler A21		Read	
MPAC Dm Exerciser Scheduler A21 Source	MPAC Dm Exerciser Scheduler A21		Read	
MPAC Dm Exerciser Scheduler A21 Start Date	MPAC Dm Exerciser Scheduler A21		Write	
MPAC Dm Exerciser Scheduler A21 Start Time	MPAC Dm Exerciser Scheduler A21		Write	
MPAC Dm Exerciser Scheduler A3 Enabled	MPAC Dm Exerciser Scheduler A3		Write	
MPAC Dm Exerciser Scheduler A3 Event Run Duration	MPAC Dm Exerciser Scheduler A3		Write	min
MPAC Dm Exerciser Scheduler A3 Interval	MPAC Dm Exerciser Scheduler A3		Write	
MPAC Dm Exerciser Scheduler A3 Loaded	MPAC Dm Exerciser Scheduler A3		Write	
MPAC Dm Exerciser Scheduler A3 Repeat Rate	MPAC Dm Exerciser Scheduler A3		Write	
MPAC Dm Exerciser Scheduler A3 Running	MPAC Dm Exerciser Scheduler A3		Read	
MPAC Dm Exerciser Scheduler A3 Source	MPAC Dm Exerciser Scheduler A3		Read	
MPAC Dm Exerciser Scheduler A3 Start Date	MPAC Dm Exerciser Scheduler A3		Write	
MPAC Dm Exerciser Scheduler A3 Start Time	MPAC Dm Exerciser Scheduler A3		Write	
MPAC Dm Exerciser Scheduler A4 Enabled	MPAC Dm Exerciser Scheduler A4		Write	
MPAC Dm Exerciser Scheduler A4 Event Run Duration	MPAC Dm Exerciser Scheduler A4		Write	min
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC Dm Exerciser Scheduler A4 Interval	MPAC Dm Exerciser Scheduler A4	ES	Write	
MPAC Dm Exerciser Scheduler A4 Loaded	MPAC Dm Exerciser Scheduler A4		Write	
MPAC Dm Exerciser Scheduler A4 Repeat Rate	MPAC Dm Exerciser Scheduler A4		Write	
MPAC Dm Exerciser Scheduler A4 Running	MPAC Dm Exerciser Scheduler A4		Read	
MPAC Dm Exerciser Scheduler A4 Source	MPAC Dm Exerciser Scheduler A4		Read	
MPAC Dm Exerciser Scheduler A4 Start Date	MPAC Dm Exerciser Scheduler A4		Write	
MPAC Dm Exerciser Scheduler A4 Start Time	MPAC Dm Exerciser Scheduler A4		Write	
MPAC Dm Exerciser Scheduler A5 Enabled	MPAC Dm Exerciser Scheduler A5		Write	
MPAC Dm Exerciser Scheduler A5 Event Run Duration	MPAC Dm Exerciser Scheduler A5		Write	min
MPAC Dm Exerciser Scheduler A5 Interval	MPAC Dm Exerciser Scheduler A5		Write	
MPAC Dm Exerciser Scheduler A5 Loaded	MPAC Dm Exerciser Scheduler A5		Write	
MPAC Dm Exerciser Scheduler A5 Repeat Rate	MPAC Dm Exerciser Scheduler A5		Write	
MPAC Dm Exerciser Scheduler A5 Running	MPAC Dm Exerciser Scheduler A5		Read	
MPAC Dm Exerciser Scheduler A5 Source	MPAC Dm Exerciser Scheduler A5		Read	
MPAC Dm Exerciser Scheduler A5 Start Date	MPAC Dm Exerciser Scheduler A5		Write	
MPAC Dm Exerciser Scheduler A5 Start Time	MPAC Dm Exerciser Scheduler A5		Write	
MPAC Dm Exerciser Scheduler A6 Enabled	MPAC Dm Exerciser Scheduler A6		Write	
MPAC Dm Exerciser Scheduler A6 Event Run Duration	MPAC Dm Exerciser Scheduler A6		Write	min
MPAC Dm Exerciser Scheduler A6 Interval	MPAC Dm Exerciser Scheduler A6		Write	
MPAC Dm Exerciser Scheduler A6 Loaded	MPAC Dm Exerciser Scheduler A6		Write	
MPAC Dm Exerciser Scheduler A6 Repeat Rate	MPAC Dm Exerciser Scheduler A6		Write	
MPAC Dm Exerciser Scheduler A6 Running	MPAC Dm Exerciser Scheduler A6		Read	
MPAC Dm Exerciser Scheduler A6 Source	MPAC Dm Exerciser Scheduler A6		Read	
MPAC Dm Exerciser Scheduler A6 Start Date	MPAC Dm Exerciser Scheduler A6		Write	
MPAC Dm Exerciser Scheduler A6 Start Time	MPAC Dm Exerciser Scheduler A6		Write	
MPAC Dm Exerciser Scheduler A7 Enabled	MPAC Dm Exerciser Scheduler A7		Write	
MPAC Dm Exerciser Scheduler A7 Event Run Duration	MPAC Dm Exerciser Scheduler A7		Write	min
MPAC Dm Exerciser Scheduler A7 Interval	MPAC Dm Exerciser Scheduler A7		Write	
MPAC Dm Exerciser Scheduler A7 Loaded	MPAC Dm Exerciser Scheduler A7		Write	
MPAC Dm Exerciser Scheduler A7 Repeat Rate	MPAC Dm Exerciser Scheduler A7		Write	
MPAC Dm Exerciser Scheduler A7 Running	MPAC Dm Exerciser Scheduler A7		Read	
MPAC Dm Exerciser Scheduler A7 Source	MPAC Dm Exerciser Scheduler A7		Read	
MPAC Dm Exerciser Scheduler A7 Start Date	MPAC Dm Exerciser Scheduler A7		Write	
MPAC Dm Exerciser Scheduler A7 Start Time	MPAC Dm Exerciser Scheduler A7		Write	
MPAC Dm Exerciser Scheduler A8 Enabled	MPAC Dm Exerciser Scheduler A8		Write	
MPAC Dm Exerciser Scheduler A8 Event Run Duration	MPAC Dm Exerciser Scheduler A8		Write	min
MPAC Dm Exerciser Scheduler A8 Interval	MPAC Dm Exerciser Scheduler A8		Write	
MPAC Dm Exerciser Scheduler A8 Loaded	MPAC Dm Exerciser Scheduler A8		Write	
MPAC Dm Exerciser Scheduler A8 Repeat Rate	MPAC Dm Exerciser Scheduler A8		Write	
MPAC Dm Exerciser Scheduler A8 Running	MPAC Dm Exerciser Scheduler A8		Read	
MPAC Dm Exerciser Scheduler A8 Source	MPAC Dm Exerciser Scheduler A8		Read	
MPAC Dm Exerciser Scheduler A8 Start Date	MPAC Dm Exerciser Scheduler A8		Write	
MPAC Dm Exerciser Scheduler A8 Start Time	MPAC Dm Exerciser Scheduler A8		Write	
MPAC Dm Exerciser Scheduler A9 Enabled	MPAC Dm Exerciser Scheduler A9		Write	
MPAC Dm Exerciser Scheduler A9 Event Run Duration	MPAC Dm Exerciser Scheduler A9		Write	min
MPAC Dm Exerciser Scheduler A9 Interval	MPAC Dm Exerciser Scheduler A9		Write	
MPAC Dm Exerciser Scheduler A9 Loaded	MPAC Dm Exerciser Scheduler A9		Write	
MPAC Dm Exerciser Scheduler A9 Repeat Rate	MPAC Dm Exerciser Scheduler A9		Write	
MPAC Dm Exerciser Scheduler A9 Running	MPAC Dm Exerciser Scheduler A9		Read	
MPAC Dm Exerciser Scheduler A9 Source	MPAC Dm Exerciser Scheduler A9		Read	
MPAC Dm Exerciser Scheduler A9 Start Date	MPAC Dm Exerciser Scheduler A9		Write	
MPAC Dm Exerciser Scheduler A9 Start Time	MPAC Dm Exerciser Scheduler A9		Write	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
MPAC Modbus Baud Rate	Modbus	P	Write	b/s
MPAC Source 1 Calibration Factor Voltage L1-L2	MPAC Source 1 Calibration	P	Write	V
MPAC Source 1 Calibration Factor Voltage L1-N	MPAC Source 1 Calibration		Write	V
MPAC Source 1 Calibration Factor Voltage L2-L3	MPAC Source 1 Calibration		Write	V
MPAC Source 1 Calibration Factor Voltage L2-N	MPAC Source 1 Calibration		Write	V
MPAC Source 1 Calibration Factor Voltage L3-L1	MPAC Source 1 Calibration		Write	V
MPAC Source 1 Calibration Factor Voltage L3-N	MPAC Source 1 Calibration		Write	V
MPAC Source 1 Rotation Actual	Source 1 Metering	P	Read	
MPAC Source 2 Calibration Factor Voltage L1-L2	MPAC Source 2 Calibration	P	Write	V
MPAC Source 2 Calibration Factor Voltage L1-N	MPAC Source 2 Calibration		Write	V
MPAC Source 2 Calibration Factor Voltage L2-L3	MPAC Source 2 Calibration		Write	V
MPAC Source 2 Calibration Factor Voltage L2-N	MPAC Source 2 Calibration		Write	V
MPAC Source 2 Calibration Factor Voltage L3-L1	MPAC Source 2 Calibration		Write	V
MPAC Source 2 Calibration Factor Voltage L3-N	MPAC Source 2 Calibration		Write	V
MPAC Source 2 Rotation Actual	Source 2 Metering	P	Read	
Number Of Source 1 Timed Lcrs	ATS Timed Load Control	TBLC	Write	
Number Of Source 2 Timed Lcrs	ATS Timed Load Control		Write	
Peak Shave In Progress	ATS Metering Summary	P	Read	
Preferred Source	ATS Metering Summary		Read	
Preferred Source Available	ATS Metering Summary		Read	
Prime Power Start Stop	ATS Prime Power	P	Write	
Product	Identity	P	Read	
Remote Monitored Input 1 Description	Digital Input Output Descriptions	P	Write	
Remote Monitored Input 2 Description	Digital Input Output Descriptions		Write	
Remote Monitored Input 3 Description	Digital Input Output Descriptions		Write	
Remote Monitored Input 4 Description	Digital Input Output Descriptions		Write	
Remote Monitoring User Inputs	MPAC Dm Digital Input Output Status	P	Read	
Remote Monitoring User Inputs Assigned	MPAC Dm Digital Input Output Status		Read	
Repeat Rate	Exerciser Summary	ES	Read	
Running	Exerciser Summary		Read	
Save Configuration Parameters	ATS Connection Configuration	P	Write	
Service Entrance Configuration	ATS Connection Configuration		Write	
Software Controlled Output 1 Description	Digital Input Output Descriptions	P	Write	
Software Controlled Output 2 Description	Digital Input Output Descriptions		Write	
Software Controlled Output 3 Description	Digital Input Output Descriptions		Write	
Software Controlled Output 4 Description	Digital Input Output Descriptions		Write	
Software Controlled User Outputs	MPAC Dm Digital Input Output Status	P	Write	
Software Controlled User Outputs Assigned	MPAC Dm Digital Input Output Status		Read	
Source	Exerciser Summary	ES	Read	
Source 1 Add Load Amperage	ATS Current Based Load Control	CBLC	Write	A
Source 1 Current Based LCR 1 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 1 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 1 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 2 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 2 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 2 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 3 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 3 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 3 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 4 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 4 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 4 Remove Priority	ATS Current Based Load Control		Write	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
Source 1 Current Based LCR 5 Add Priority	ATS Current Based Load Control	CBLC	Write	
Source 1 Current Based LCR 5 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 5 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 6 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 6 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 6 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 7 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 7 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 7 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 8 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 8 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 8 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 9 Add Priority	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 9 Enabled	ATS Current Based Load Control		Write	
Source 1 Current Based LCR 9 Remove Priority	ATS Current Based Load Control		Write	
Source 1 Frequency	Source 1 Metering	P	Read	Hz
Source 1 Frequency Debounce Delay	Source 1 System Configuration	P	Write	s
Source 1 High Frequency Dropout	Source 1 System Configuration		Write	%
Source 1 High Frequency Pickup	Source 1 System Configuration		Write	%
Source 1 High Voltage Dropout	Source 1 System Configuration		Write	%
Source 1 High Voltage Pickup	Source 1 System Configuration		Write	%
Source 1 Load Control Mode	ATS Current Based Load Control	CBLC	Write	
Source 1 Low Frequency Dropout	Source 1 System Configuration	P	Write	%
Source 1 Low Frequency Pickup	Source 1 System Configuration		Write	%
Source 1 Low Voltage Dropout	Source 1 System Configuration		Write	%
Source 1 Low Voltage Pickup	Source 1 System Configuration		Write	%
Source 1 Number Of Phases	Source 1 System Configuration		Write	
Source 1 Prime Power Duration	ATS Prime Power	P	Write	h
Source 1 Prime Powerevent Countdown	ATS Prime Power		Read	min
Source 1 Remove Load Amperage	ATS Current Based Load Control	CBLC	Write	A
Source 1 System Frequency	Source 1 System Configuration	P	Write	Hz
Source 1 System Voltage	Source 1 System Configuration		Write	V
Source 1 To Close Time	ATS Run Time	P	Read	ms
Source 1 To Open Time	ATS Run Time		Read	ms
Source 1 Unbalance Enabled	Source 1 System Configuration	P	Write	
Source 1 Unbalance Voltage Dropout	Source 1 System Configuration		Write	%
Source 1 Unbalance Voltage Pickup	Source 1 System Configuration		Write	%
Source 1 Voltage Debounce Delay	Source 1 System Configuration		Write	s
Source 1 Voltage L1-L2	Source 1 Metering	P	Read	V
Source 1 Voltage L1-N	Source 1 Metering		Read	V
Source 1 Voltage L2-L3	Source 1 Metering		Read	V
Source 1 Voltage L2-N	Source 1 Metering		Read	V
Source 1 Voltage L3-L1	Source 1 Metering		Read	V
Source 1 Voltage L3-N	Source 1 Metering		Read	V
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
Source 2 Add Load Amperage	ATS Current Based Load Control	CBLC	Write	A
Source 2 Current Based LCR 1 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 1 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 1 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 2 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 2 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 2 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 3 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 3 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 3 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 4 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 4 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 4 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 5 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 5 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 5 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 6 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 6 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 6 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 7 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 7 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 7 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 8 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 8 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 8 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 9 Add Priority	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 9 Enabled	ATS Current Based Load Control		Write	
Source 2 Current Based LCR 9 Remove Priority	ATS Current Based Load Control		Write	
Source 2 Frequency	Source 2 Metering	P	Read	Hz
Source 2 Frequency Debounce Delay	Source 2 System Configuration	P	Write	s
Source 2 High Frequency Dropout	Source 2 System Configuration		Write	%
Source 2 High Frequency Pickup	Source 2 System Configuration		Write	%
Source 2 High Voltage Dropout	Source 2 System Configuration		Write	%
Source 2 High Voltage Pickup	Source 2 System Configuration		Write	%
Source 2 Load Control Mode	ATS Current Based Load Control	CBLC	Write	
Source 2 Low Frequency Dropout	Source 2 System Configuration	P	Write	%
Source 2 Low Frequency Pickup	Source 2 System Configuration		Write	%
Source 2 Low Voltage Dropout	Source 2 System Configuration		Write	%
Source 2 Low Voltage Pickup	Source 2 System Configuration		Write	%
Source 2 Number Of Phases	Source 2 System Configuration		Write	
Source 2 Prime Power Duration	ATS Prime Power	P	Write	h
Source 2 Prime Powerevent Countdown	ATS Prime Power		Read	min
Source 2 Remove Load Amperage	ATS Current Based Load Control	CBLC	Write	A
Source 2 System Frequency	Source 2 System Configuration	P	Write	Hz
Source 2 System Voltage	Source 2 System Configuration		Write	V
Source 2 To Close Time	ATS Run Time	P	Read	ms
Source 2 To Open Time	ATS Run Time		Read	ms
Source 2 Unbalance Enabled	Source 2 System Configuration	P	Write	
Source 2 Unbalance Voltage Dropout	Source 2 System Configuration		Write	%
Source 2 Unbalance Voltage Pickup	Source 2 System Configuration		Write	%
Source 2 Voltage Debounce Delay	Source 2 System Configuration		Write	s
Source 2 Voltage L1-L2	Source 2 Metering	P	Read	V
Source 2 Voltage L1-N	Source 2 Metering		Read	V
Source 2 Voltage L2-L3	Source 2 Metering		Read	V
Source 2 Voltage L2-N	Source 2 Metering		Read	V
Source 2 Voltage L3-L1	Source 2 Metering		Read	V
Source 2 Voltage L3-N	Source 2 Metering		Read	V
Standby Source Available	ATS Metering Summary	P	Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Parameter	Parameter Group	Tab	Access	Units
Start Date	Exerciser Summary	ES	Read	
Start Time	Exerciser Summary		Read	
Static Default Gateway	Network Configuration	P	Write	
Static IP Address	Network Configuration		Write	
Static Subnet Mask	Network Configuration		Write	
Sub MPAC Firmware Version	Identity	P	Read	
Synchronous Check Occurring	ATS Metering Summary	P	Read	
Synchronous Frequency Differential	ATS Connection Configuration	P	Write	Hz
Synchronous Voltage Differential	ATS Connection Configuration		Write	%
Synchronous Voltage Phase Angle	ATS Connection Configuration		Write	degrees
System Start Date	ATS Run Time	P	Write	
Timed Connect LCR 1 From Source 1	ATS Timed Load Control	TBLC	Write	s
Timed Connect LCR 1 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 2 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 2 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 3 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 3 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 4 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 4 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 5 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 5 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 6 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 6 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 7 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 7 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 8 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 8 From Source 2	ATS Timed Load Control		Write	s
Timed Connect LCR 9 From Source 1	ATS Timed Load Control		Write	s
Timed Connect LCR 9 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 1 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 1 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 2 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 2 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 3 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 3 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 4 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 4 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 5 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 5 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 6 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 6 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 7 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 7 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 8 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 8 From Source 2	ATS Timed Load Control		Write	s
Timed Disconnect LCR 9 From Source 1	ATS Timed Load Control		Write	s
Timed Disconnect LCR 9 From Source 2	ATS Timed Load Control		Write	s
Transfer Time Source 1 To Source 2	ATS Run Time	P	Read	ms
Transfer Time Source 2 To Source 1	ATS Run Time		Read	ms
Transition Mode	ATS Connection Configuration	P	Write	
Unloaded Test Occurring	ATS Metering Summary	P	Read	
User Forcing To Off	ATS Metering Summary		Read	
Vendor	Identity	P	Read	
A = amps, Amperes; h = hours; min = minutes; ms = milliseconds; s = seconds; V = volts				

Notes

10.1 Introduction

The Residential Digital Control (RDC controller) is used on Model 14/20RES generator sets. The Digital Control (DC controller) is used on Model 14/20RESL generator sets. SiteTech™ software allows viewing and adjustment of selected RDC and DC controller settings, including many parameters that are not accessible through the controller's user interface. SiteTech™ also provides metering groups that display status information for the source, the generator set, and the Model RRT transfer switch that is not available at the controller display.

SiteTech™ software version 2.0 or higher is required for use with the RDC/DC controller. SiteTech™ software version 2.2 or higher is required for the calibration function.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech™ software. If the controller is not powered by the generator set battery, it may drain the battery on the connected laptop PC.

This section provides information specific to the RDC/DC controller. For general software operating instructions, see Section 3, Software Operation. For controller operation instructions, refer to the controller operation manual provided with the generator set. See List of Related Literature on page 9 for the document part number.

10.2 Device Connection

⚠ WARNING

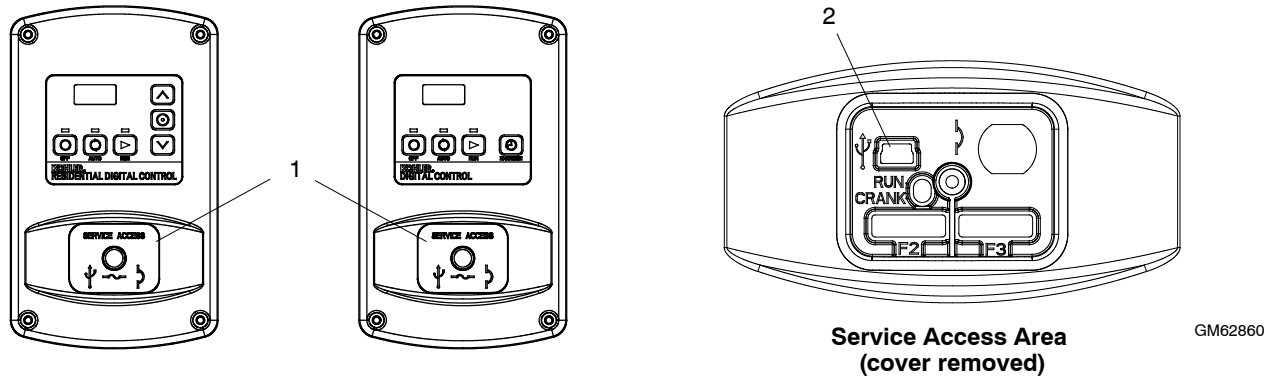
Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Remove the service access cover from the controller. See Figure 10-1. Use a USB cable with a mini-B connector to connect the controller to your personal computer (PC). See Section 1.3 for USB cable details.

Replace the service access cover after disconnecting the controller from the PC.



RDC Controller

DC Controller

Service Access Area (cover removed)

1. Service access (remove cover)

2. USB port. Use for computer connection.

Figure 10-1 RDC and DC Controller Connection

10.3 Screens

SiteTech™ screens for the RDC and DC controllers are shown in the following figures. See Section 10.5 for a summary of controller parameters.

10.3.1 Parameter Settings

SiteTech™ allows viewing and adjustment of many parameters for the generator set and Model RRT transfer switch. Refer to the group illustrations in Section 10.3.4 and parameter list in Section 10.5 to see the individual parameters.

Note: Do not use the settings shown in the sample groups in this section for actual controller setup.

Refer to the Controller Operation Manual for default settings and adjustment ranges. Cells with a gray background indicate parameters that cannot be changed. The table in Section 10.5 also indicates whether each parameter can be adjusted or viewed only.

10.3.2 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Figure 10-2 shows the Parameters screen for the RDC or DC controller. Some groups are shown closed in this illustration. See Section 10.3.4 for illustrations of the parameter groups.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

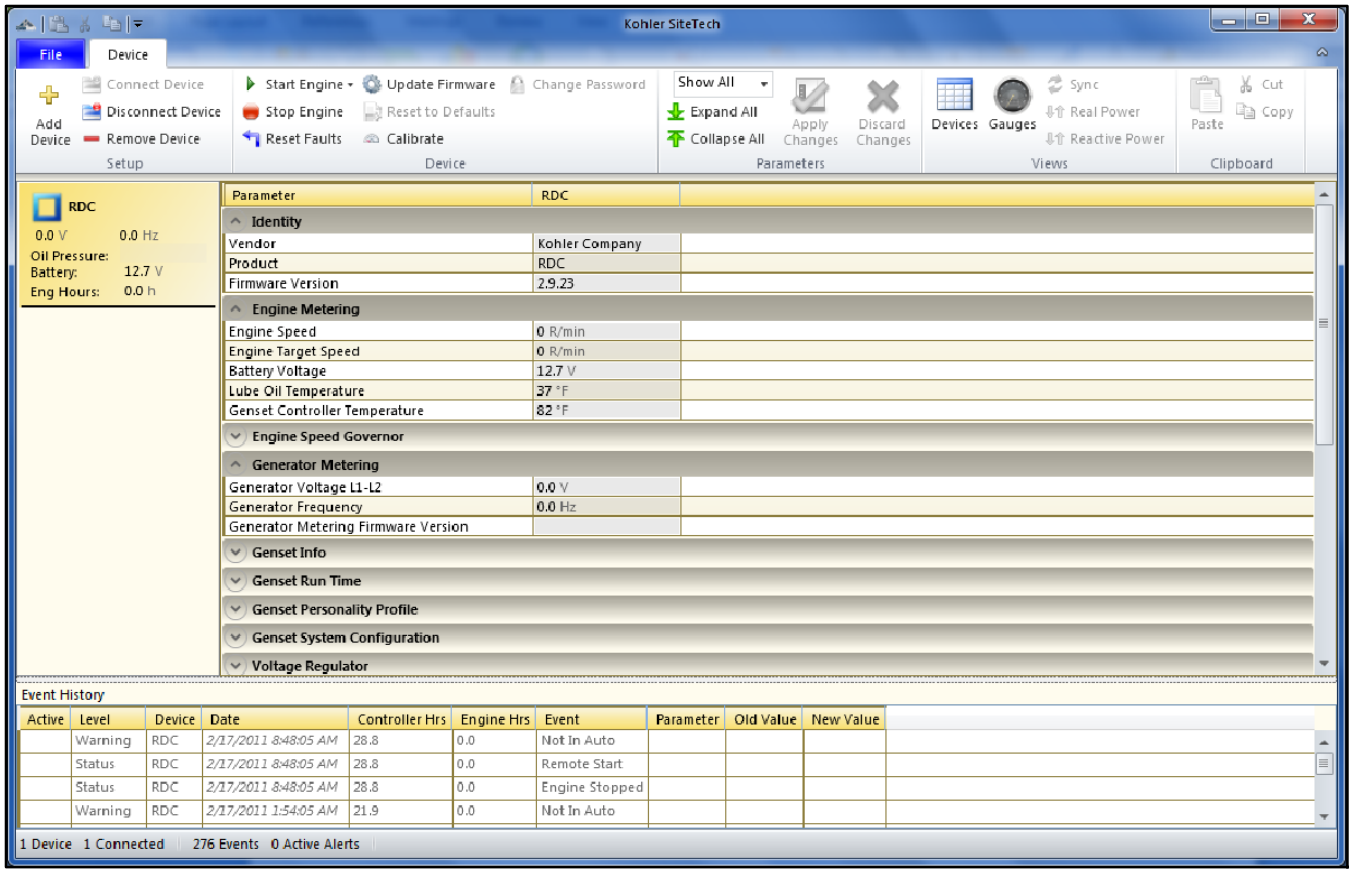


Figure 10-2 Parameters Screen, RDC/DC Controller

10.3.3 Metering Groups

SiteTech™ provides metering groups that display status information about the system. Much of this information is available only through the SiteTech™ software; it is not displayed on the RDC/DC controller. The metering groups are:

- Engine metering
- Generator metering
- ATS metering
- Source 1 metering (typically the utility source)

See Figure 10-3 and Figure 10-4 for illustrations that show the information contained in each metering group.

Engine Metering	
Engine Speed	0 R/min
Engine Target Speed	0 R/min
Battery Voltage	12.7 V
Lube Oil Temperature	37 °F
Genset Controller Temperature	82 °F
Engine Speed Governor	
Generator Metering	
Generator Voltage L1-L2	0.0 V
Generator Frequency	0.0 Hz
Generator Metering Firmware Version	

Figure 10-3 Engine and Generator Metering

ATS Metering Summary	
ATS Contactor Position	None
ATS Sources Available	None
Source 1 Metering	
Source 1 Voltage L1-L2	0.0 V
Source 1 Voltage Average Line To Line	0.0 V

Figure 10-4 ATS and Source 1 Metering

10.3.4 Parameter Groups

The parameter groups for the RDC/DC controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 10.5.

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Parameter	RDC
Identity	
Vendor	Kohler Company
Product	RDC
Firmware Version	2.9.23
Engine Metering	
Engine Speed	0 R/min
Engine Target Speed	0 R/min
Battery Voltage	12.6 V
Lube Oil Temperature	37 °F
Genset Controller Temperature	82 °F
Engine Speed Governor	
Engine Speed Adjustment	50
Engine Speed Gain Adjustment	50
Generator Metering	
Generator Voltage L1-L2	0.0 V
Generator Frequency	0.0 Hz
Generator Metering Firmware Version	
Genset Info	
Genset Model Number	
Genset Serial Number	
Alternator Part Number	
Engine Part Number	
Engine Model Number	CH-740
Engine Serial Number	
Genset State	Standby
Genset Run Time	
Genset Controller Total Operation Time	29.3 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Number Of Starts	0

Genset Run Time	
Genset Controller Total Operation Time	29.7 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Number Of Starts	0
Genset Personality Profile	
Engine Number Of Flywheel Teeth	97
Engine Cooled Down Temperature	219 °F
Engine Crank Disconnect Speed	750 R/min
Engine Run Speed	3600 R/min
Genset System Configuration	
Genset System Voltage	240.0 V
Genset System Frequency	60.0 Hz
Genset Voltage Phase Connection	Single Phase
Genset System Battery Voltage	12 V
Measurement System	English
Voltage Regulator	
Voltage Regulator Average Voltage Adjustment	240.0 V
Voltage Regulator Volts Per Hertz Slope	5 %
Voltage Regulator Volts Per Hertz Cut In Freque	57.5 Hz
Voltage Regulator Gain	128
Voltage Regulator Firmware Version	2.0.0
Engine Timing	
Engine Start Delay	0 s
Engine Cool Down Delay	300 s
Engine Crank On Delay	15 s
Engine Crank Pause Delay	15 s
Engine Number Of Crank Cycles	3
Genset Protection	

Genset Protection	
After Crank Disconnect Fault Inhibit Delay	30 s
Genset Low Battery Voltage Warning Delay	90 s
Genset High Battery Voltage Warning Delay	10 s
Genset Low Battery Voltage Warning Limit	100 %
Genset High Battery Voltage Warning Limit	125 %
Genset Battery Low Cranking Voltage Warning	6 s
Genset Battery Low Cranking Voltage Warning	60 %
Engine Protection	
Engine High Oil Temperature Shutdown Delay	5 s
Engine Low Oil Pressure Shutdown Delay	5 s
Engine Locked Rotor Shutdown Delay	3 s
Genset Low Engine Speed Shutdown Limit	85 %
Genset High Engine Speed Shutdown Limit	115 %
Generator Protection	
Loss Of AC Sensing Shutdown Delay	3 s
Genset Low Voltage Shutdown Delay	10 s
Genset High Voltage Shutdown Delay	2 s
Genset Low Voltage Shutdown Limit	80 %
Genset High Voltage Shutdown Limit	120 %
Genset Short Term Low Frequency Shutdown D	10 s
Genset Long Term Low Frequency Shutdown De	60 s
Genset High Frequency Shutdown Delay	10 s
Genset Low Frequency Shutdown Limit	90 %
Genset High Frequency Shutdown Limit	110 %
ATS Metering Summary	

ATS Metering Summary	
ATS Contactor Position	
ATS Sources Available	None
Source 1 Metering	
Source 1 Voltage L1-L2	
Source 1 Voltage Average Line To Line	
ATS Connection Configuration	
ATS Source	Remote
Source 1 System Configuration	
Source 1 System Voltage	240.0 V
Source 1 System Frequency	60.0 Hz
Source 1 Voltage Debounce Delay	0.5 s
Source 1 Low Voltage Pickup	90 %
Source 1 Low Voltage Dropout	90 %
Source 1 Calibration	
Source 1 Calibration Factor Voltage L1-L2	1.000000
Source 2 System Configuration	
Source 2 Voltage Debounce Delay	0.5 s
Source 2 Low Voltage Pickup	90 %
Source 2 Low Voltage Dropout	90 %
ATS Exercise	
Exercise Interval	Weekly
Exercise Run Duration	20 min
Exercise Mode	Unloaded Variable...
ATS Delays	
ATS Transfer From Preferred Delay	3 s
ATS Transfer From Standby Delay	120 s
ATS Source 2 Engine Start Delay	3 s
Network Configuration	

Network Configuration	
DHCP Enabled	True
Static IP Address	0.0.0.0
Static Subnet Mask	0.0.0.0
Static Default Gateway	0.0.0.0
Static DNS Server 1	0.0.0.0
Static DNS Server 2	0.0.0.0
Server Host Name	.homeip.net
Network Status	
IP Address	
Subnet Mask	
Default Gateway	
DNS Server 1	
DNS Server 2	
MAC Address	
Connected Server IP Address	

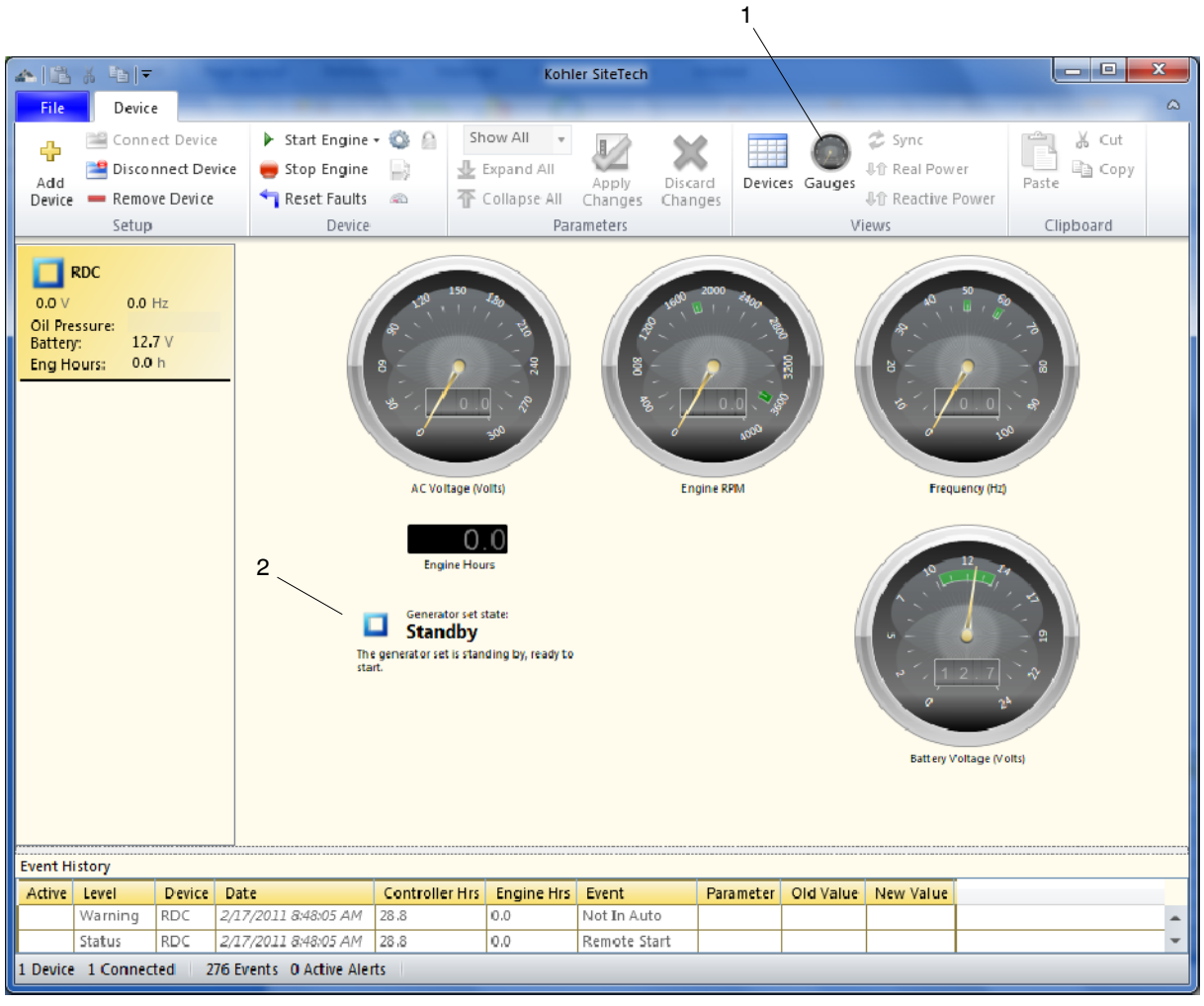
10.3.5 Gauges Screen

Click on Gauges in the Views panel to view the generator set engine data displayed on simulated gauges. See Figure 10-6. The gauges will expand and contract to fill the available space as the screen is resized.

- The needles on the gauge displays move as readings change, providing a graphic representation of the generator set operation.
- Green areas on the gauges show the acceptable range for engine speed (RPM), generator output frequency (Hz), and battery voltage. The data is also displayed numerically on each gauge.
- The generator set status is shown in the lower left corner of the gauge screen. The status indicator shows the generator set status as described in Figure 10-5. The status indicator matches the indicator in the navigation panel. If a fault condition in indicated, check the event history or the controller display to identify the fault.

Indicator		Status	Description
	Open blue square	Standby	Generator set is ready to start.
	Green triangle	Cranking or running	Engine is starting or running.
	Red X	Fault shutdown	The controller has detected a fault condition and the generator set has shut down.
	Red circle	Off	Controller is OFF.
	Solid orange square	Disconnected	No network connection.

Figure 10-5 Status Indicator Colors



1. Click on Gauges
2. Status indicator. See Figure 10-5.

Figure 10-6 Gauges Screen

10.4 Calibration

10.4.1 Calibrate Function

The RDC/DC controller can be calibrated using SiteTech™. SiteTech™ software version 2.2 or higher is required for the calibrate function. See Figure 10-7.

Note: Controller firmware version 2.04 or higher is required for calibration. The controller firmware version is displayed in the Identity group. See Section 10.3.4.

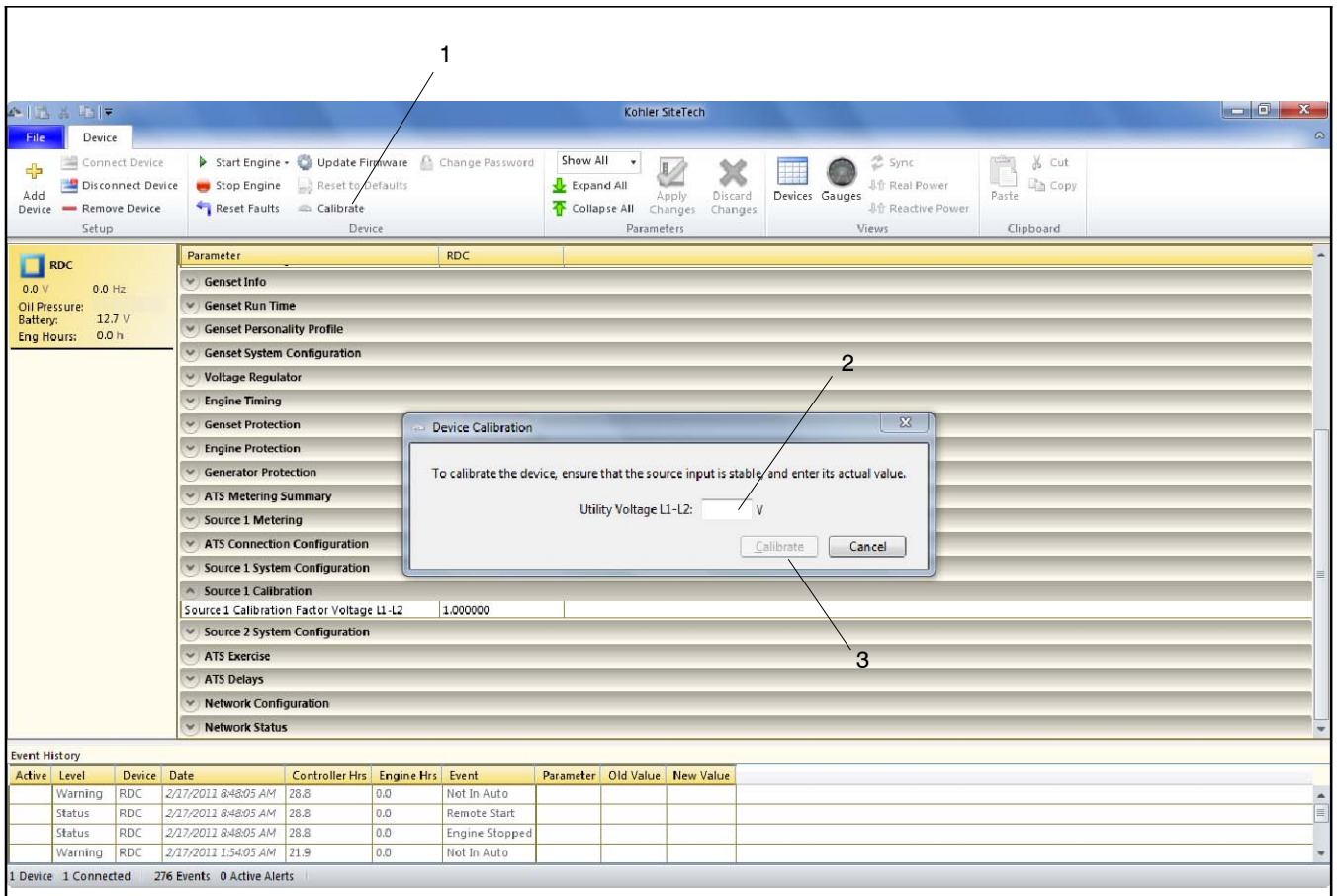
Calibration Procedure

1. Measure the actual utility voltage across L1 and L2. Use a digital voltage meter and observe the safety precautions in the generator set installation manual.
2. Click on Calibrate in the ribbon at the top of the SiteTech™ screen. See Figure 10-7.
3. The Device Calibration window appears. Type in the measured voltage into the space provided.
4. Click the Calibrate button in the Device Calibration window.

After the calibration procedure, view the utility voltage in the Source 1 metering group. Voltage L1–L2 and average line-to-line voltage are displayed.

10.4.2 Calibration Factor

The Source 1 Calibration Factor Voltage L1–L2 parameter shows the ratio of measured voltage to generator set system voltage.



1. Click on Calibrate in the ribbon at the top of the screen.
2. Enter the measured voltage.
3. Click Calibrate in the Device Calibration window.

Figure 10-7 Calibration

10.5 Parameter Summary

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The View/Adjust column in the table indicates whether each parameter can be changed or only viewed.

- View: View only, no adjustment
- Adjust: Parameter is adjustable
- Locked: Parameter is not adjustable using SiteTech™ software.

Locked parameters are set by selecting the Uu and Ec parameters at the controller. Refer to the generator set Installation Manual or controller replacement instruction sheet for instructions.

Refer to the Controller Operation Manual for default settings and adjustment ranges.

The table lists the individual parameters in alphabetical order and shows the group in which each parameter appears. Use this table to find the location of individual parameters, and also to see which parameters can be adjusted using the SiteTech™ program.

Parameter	Parameter Group	View/ Adjust	Units
After Crank Disconnect Fault Inhibit Delay	Genset Protection	View	s
Alternator Part Number	Genset Info	Locked	
ATS Contactor Position	ATS Metering Summary	View	
ATS Source	ATS Connection Configuration	View	
ATS Source 2 Engine Start Delay	ATS Delays	Adjust	s
ATS Sources Available	ATS Metering Summary	View	
ATS Transfer From Preferred Delay	ATS Delays	Adjust	s
ATS Transfer From Standby Delay	ATS Delays	Adjust	s
Battery Voltage	Engine Metering	View	V
Connected Server IP Address	Network Status	View	
Default Gateway	Network Status	View	
DHCP Enabled	Network Configuration	Adjust	
DNS Server 1	Network Status	View	
DNS Server 2	Network Status	View	
Engine Cool Down Delay	Engine Timing	Adjust	s
Engine Cooled Down Temperature	Genset Personality Profile	Locked	°C
Engine Crank Disconnect Speed	Genset Personality Profile	Locked	R/min
Engine Crank On Delay	Engine Timing	Adjust	s
Engine Crank Pause Delay	Engine Timing	Adjust	s
Engine High Oil Temperature Shutdown Delay	Engine Protection	View	s
Engine Locked Rotor Shutdown Delay	Engine Protection	Adjust	s
Engine Low Oil Pressure Shutdown Delay	Engine Protection	View	s
Engine Model Number	Genset Info	Locked	
Engine Number Of Crank Cycles	Engine Timing	Adjust	
Engine Number Of Flywheel Teeth	Genset Personality Profile	Locked	
Engine Part Number	Genset Info	Locked	
Engine Run Speed	Genset Personality Profile	Locked	R/min
Engine Serial Number	Genset Info	Locked	
Engine Speed	Engine Metering	View	R/min
Engine Speed Adjustment	Engine Speed Governor	Adjust	
Engine Speed Gain Adjustment	Engine Speed Governor	Adjust	

Parameter	Parameter Group	View/ Adjust	Units
Engine Start Delay	Engine Timing	Adjust	s
Engine Target Speed	Engine Metering	View	R/min
Engine Total Number Of Starts	Genset Run Time	View	
Engine Total Run Time	Genset Run Time	View	h
Engine Total Run Time Loaded	Genset Run Time	View	h
Exercise Interval	ATS Exercise	Adjust	
Exercise Mode	ATS Exercise	Adjust	
Exercise Run Duration	ATS Exercise	Adjust	min
File Version	Special Parameters		
Firmware Version	Identity	View	
Generator Frequency	Generator Metering	View	Hz
Generator Metering Firmware Version	Generator Metering	View	
Generator Voltage L1-L2	Generator Metering	View	V
Genset Battery Low Cranking Voltage Warning Delay	Genset Protection	View	s
Genset Battery Low Cranking Voltage Warning Limit	Genset Protection	View	%
Genset Controller Temperature	Engine Metering	View	°C
Genset Controller Total Operation Time	Genset Run Time	View	h
Genset High Battery Voltage Warning Delay	Genset Protection	View	s
Genset High Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset High Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset High Frequency Shutdown Delay	Generator Protection	View	s
Genset High Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset High Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset High Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Long Term Low Frequency Shutdown Delay	Generator Protection	View	s
Genset Low Battery Voltage Warning Delay	Genset Protection	View	s
Genset Low Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset Low Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset Low Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset Low Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset Low Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Model Number	Genset Info	Locked	
Genset Serial Number	Genset Info	Locked	
Genset Short Term Low Frequency Shutdown Delay	Generator Protection	View	s
Genset State	Genset Info	View	
Genset System Battery Voltage	Genset System Configuration	Locked	V
Genset System Frequency	Genset System Configuration	Adjust	Hz
Genset System Voltage	Genset System Configuration	Adjust	V
Genset Voltage Phase Connection	Genset System Configuration	Adjust	
IP Address	Network Status	View	
Loss Of AC Sensing Shutdown Delay	Generator Protection	View	s
Lube Oil Temperature	Engine Metering	View	°C
MAC Address	Network Status	View	
Measurement System	Genset System Configuration	Adjust	
Product	Identity	View	

Parameter	Parameter Group	View/ Adjust	Units
Profile	Special Parameters		
Saved Date	Special Parameters		
Server Host Name	Network Configuration	Adjust	
Source 1 Calibration Factor Voltage L1-L2	Source 1 Calibration	Adjust	
Source 1 Low Voltage Dropout	Source 1 System Configuration	Adjust	%
Source 1 Low Voltage Pickup	Source 1 System Configuration	Adjust	%
Source 1 System Frequency	Source 1 System Configuration	Adjust	Hz
Source 1 System Voltage	Source 1 System Configuration	Adjust	V
Source 1 Voltage Average Line To Line	Source 1 Metering	View	V
Source 1 Voltage Debounce Delay	Source 1 System Configuration	Adjust	s
Source 1 Voltage L1-L2	Source 1 Metering	View	V
Source 2 Low Voltage Dropout	Source 2 System Configuration	Adjust	%
Source 2 Low Voltage Pickup	Source 2 System Configuration	Adjust	%
Source 2 Voltage Debounce Delay	Source 2 System Configuration	Adjust	s
Static Default Gateway	Network Configuration	Adjust	
Static DNS Server 1	Network Configuration	Adjust	
Static DNS Server 2	Network Configuration	Adjust	
Static IP Address	Network Configuration	Adjust	
Static Subnet Mask	Network Configuration	Adjust	
Subnet Mask	Network Status	View	
Vendor	Identity	View	
Voltage Regulator Average Voltage Adjustment	Voltage Regulator	Adjust	V
Voltage Regulator Firmware Version	Voltage Regulator	View	
Voltage Regulator Gain	Voltage Regulator	Adjust	
Voltage Regulator Volts Per Hertz Cut In Frequency	Voltage Regulator	Adjust	Hz
Voltage Regulator Volts Per Hertz Slope	Voltage Regulator	Adjust	%

Notes

11.1 Introduction

RDC2 abd DC2 controllers are used on residential and light commercial model generator sets. See Figure 11-1 or Figure 11-2 for controller identification.

SiteTech™ software allows viewing and adjustment of selected RDC2 and DC2 controller settings, including many parameters that are not accessible through the controller's user interface. SiteTech™ also provides metering groups that display status information for the source, the generator set, and the Model RXT transfer switch that is not available at the controller display.

SiteTech™ software version 3.0 or higher is required for use with the RDC2 and DC2 controllers. SiteTech™ software version 3.2 or higher is required for the Model 38RCL generator set. Refer to Kohler® TechTools for the latest information about software versions.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech™ software. If the controller is not powered by the generator set battery, it may drain the battery on the connected laptop PC.

This section provides information specific to the RDC2/DC2 controller. For general software operating instructions, see Section 3, Software Operation. For controller operation instructions, refer to the controller operation manual provided with the generator set. See List of Related Literature on page 9 for the document part number.

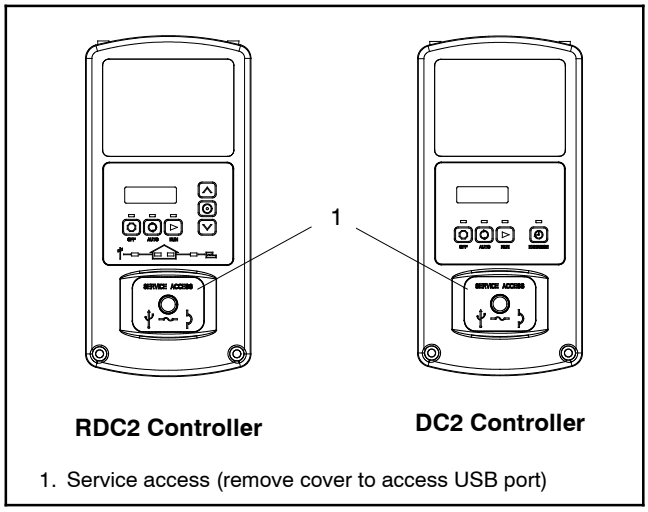


Figure 11-1 Original (green-board) RDC2 and DC2 Controllers

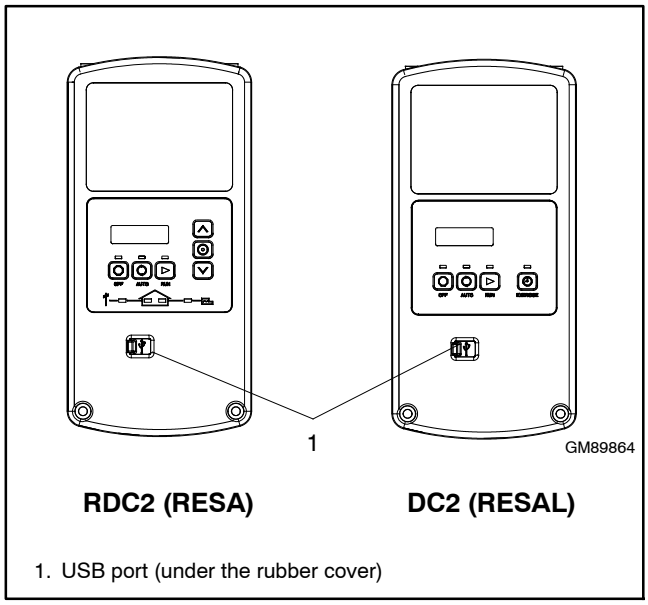


Figure 11-2 Revised (red board) RDC2 and DC2 Controllers

11.2 Device Connection

⚠ WARNING

Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Use a USB cable with a mini-B connector to connect the controller to your personal (laptop) computer.

Original RDC2/DC2 controllers have the USB port in the service area on the front of the controller. Remove the plastic cover with thumbscrew from the controller to access the USB port. See Figure 11-3. Revised (red board) controllers have the USB port under a small rubber cover on the front of the controller. See Figure 11-2. See Section 1.3 for USB cable details.

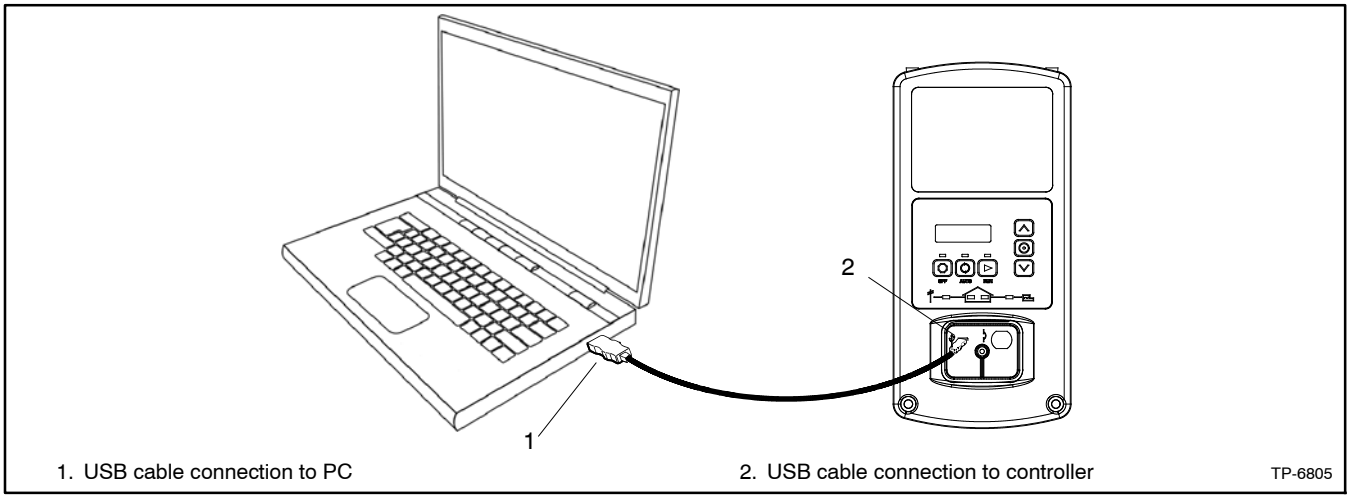


Figure 11-3 RDC2 and DC2 Controller Connection to Personal Computer (original RDC2 shown)

11.3 Screens

SiteTech™ screens for the RDC2 and DC2 controllers are shown in the following sections.

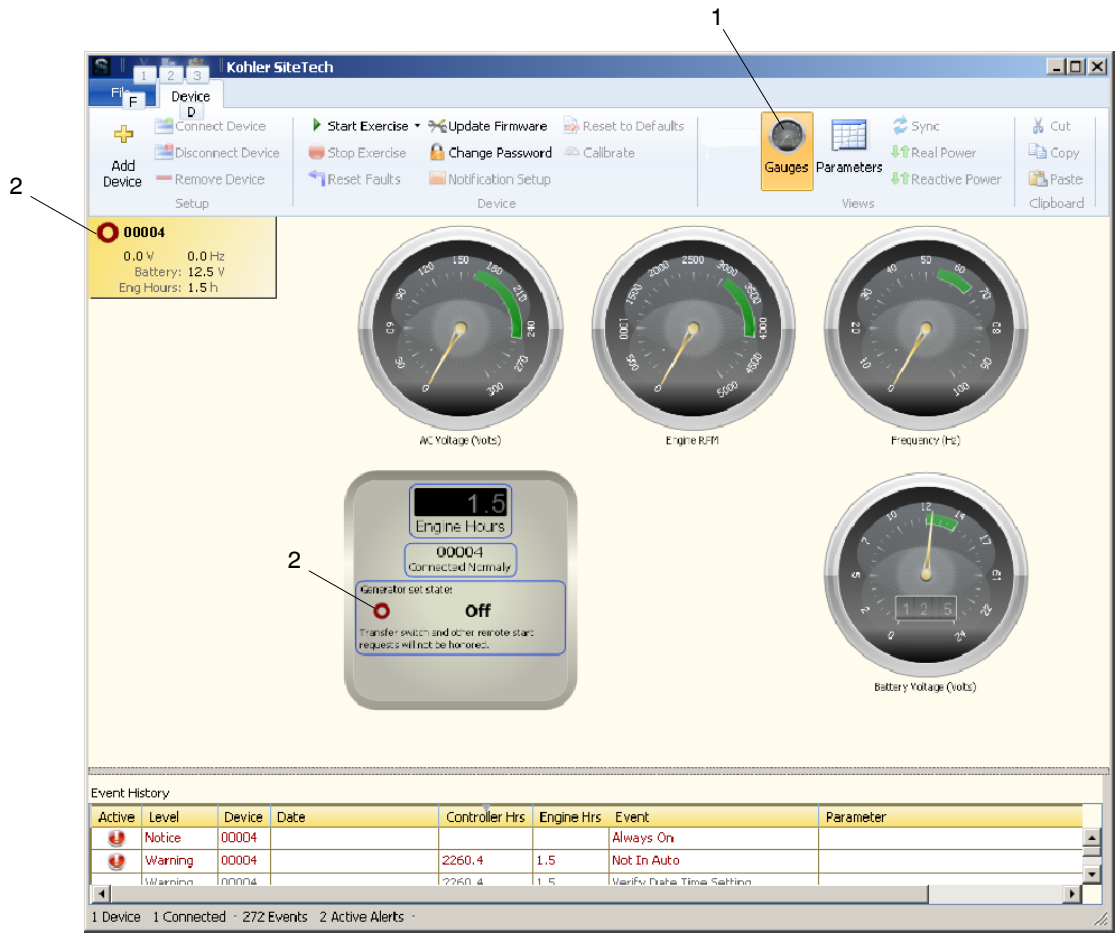
11.3.1 Gauges Screen

Click on Gauges in the Views panel to view the generator set engine data displayed on simulated gauges. See Figure 11-5. The gauges will expand and contract to fill the available space as the screen is resized.

- The needles on the gauge display move as readings change, providing a graphic representation of the generator set operation.
- Green areas on the gauges show the acceptable range for engine speed (RPM), generator output frequency (Hz), and battery voltage. The data is also displayed numerically on each gauge.
- The generator set status is shown in the lower left corner of the gauge screen. The status indicator shows the generator set status as described in Figure 11-4. The status indicator matches the indicator in the navigation panel. If a fault condition is indicated, check the event history or the controller display to identify the fault.

Indicator		Status	Description
	Open blue square	Standby	Generator set is ready to start.
	Green triangle	Cranking or running	Engine is starting or running.
	Red X	Fault shutdown	The controller has detected a fault condition and the generator set has shut down.
	Red circle	Off	Controller is OFF.
	Solid orange square	Disconnected	No network connection.

Figure 11-4 Status Indicator Symbols and Colors



1. Click on Gauges
2. Status indicator. See Figure 11-4.

Figure 11-5 Gauges Screen

11.3.2 Parameters Screen

Figure 11-6 shows the Parameters screen for the RDC2 or DC2 controller. Some groups are shown closed in this illustration. See Section 11.3.5 for illustrations of the parameter groups.

SiteTech™ allows viewing and adjustment of many parameters for the generator set and Model RXT transfer switch. Refer to the group illustrations in Section 11.3.5 and parameter list in Section 11.4 to see the individual parameters.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

Note: Do not use the settings shown in the sample groups in this section for actual controller setup.

Refer to the generator set Service Manual for default settings and adjustment instructions. The table in Section 11.4 also indicates whether each parameter can be adjusted or viewed only.

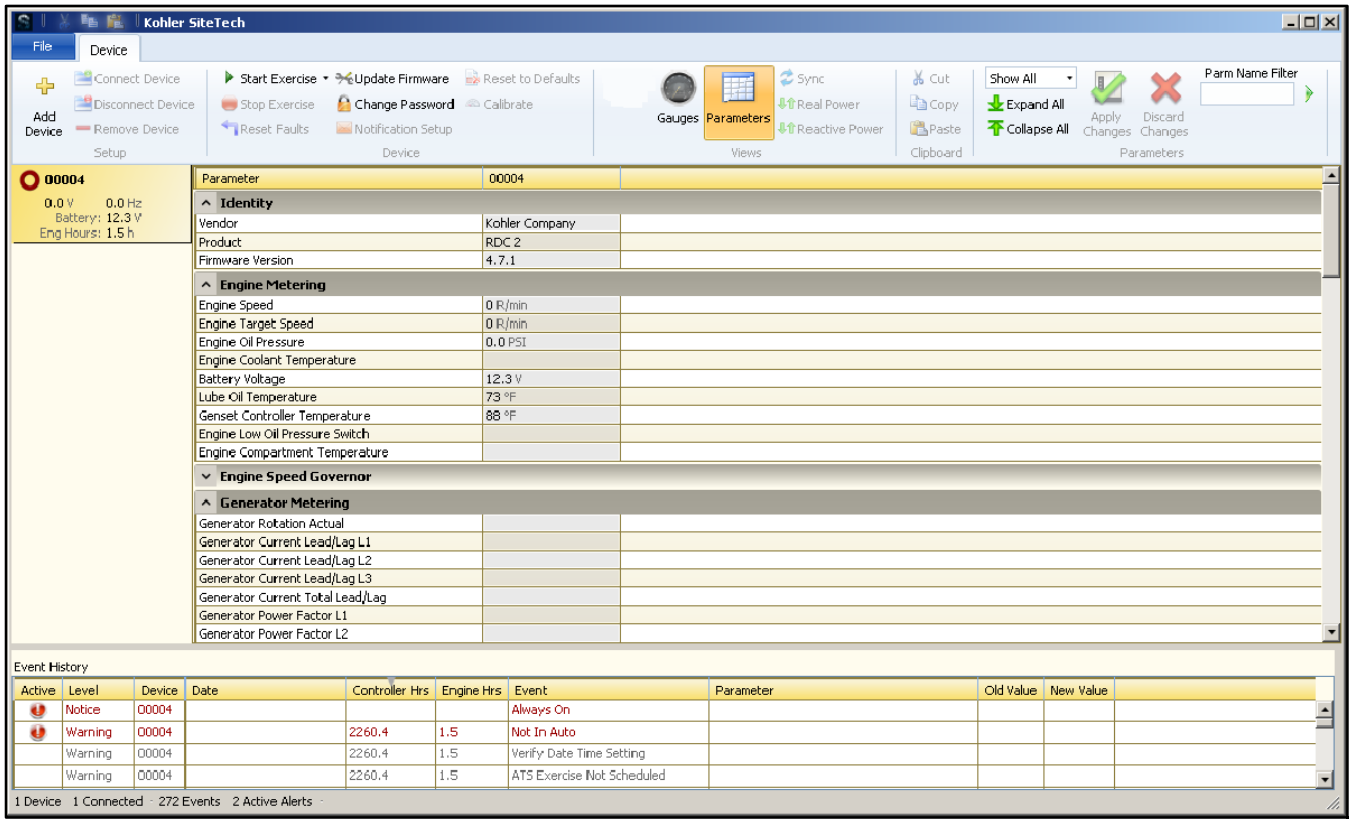


Figure 11-6 Parameters Screen, RDC2/DC2 Controller

11.3.3 Metering Groups

SiteTech™ provides metering groups that display status information about the system. Much of this information is available only through the SiteTech™ software; it is not displayed on the RDC2/DC2 controller. The metering groups are:

- Engine metering
- Generator metering
- ATS Metering
- Source 1 Metering (typically the utility source)
- Source 2 Metering (typically the generator set)

See Figure 11-7 through Figure 11-9 for illustrations that show the information contained in each metering group.

Engine Metering	
Engine Speed	0 R/min
Engine Target Speed	0 R/min
Engine Oil Pressure	0.0 PSI
Engine Coolant Temperature	
Battery Voltage	12.3 V
Lube Oil Temperature	73 °F
Genset Controller Temperature	88 °F
Engine Low Oil Pressure Switch	
Engine Compartment Temperature	

Figure 11-7 Engine Metering

ATS Metering Summary	
ATS Contactor Position	Source 2
ATS Sources Available	Source 2
Source 1 Metering	
Source 1 Rotation Actual	
Source 1 Voltage L1-L2	0.0 V
Source 1 Voltage L2-L3	
Source 1 Voltage L3-L1	
Source 1 Voltage Average Line To Line	0.0 V
Source 1 Frequency	0.0 Hz
Source 2 Metering	
Source 2 Rotation Actual	
Source 2 Voltage L1-L2	206.7 V
Source 2 Voltage L2-L3	
Source 2 Voltage L3-L1	
Source 2 Voltage Average Line To Line	206.7 V
Source 2 Frequency	60.0 Hz

Figure 11-8 ATS and Source Metering

Generator Metering	
Generator Rotation Actual	
Generator Current Lead/Lag L1	
Generator Current Lead/Lag L2	
Generator Current Lead/Lag L3	
Generator Current Total Lead/Lag	
Generator Power Factor L1	
Generator Power Factor L2	
Generator Power Factor L3	
Generator Total Power Factor	
Generator Apparent Power L1	
Generator Apparent Power L2	
Generator Apparent Power L3	
Generator Total Apparent Power	
Generator Reactive Power L1	
Generator Reactive Power L2	
Generator Reactive Power L3	
Generator Total Reactive Power	
Generator True Power L1	
Generator True Power L2	
Generator True Power L3	
Generator True Total Power	
Generator True Percent Of Rated Power	
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	0.0 V
Generator Voltage L3-L1	0.0 V
Generator Voltage Average Line To Line	0.0 V
Generator Current L1	
Generator Current L2	
Generator Current L3	
Generator Current Average	
Generator Frequency	0.0 Hz

Figure 11-9 Generator Metering

11.3.4 Run Time Display

The Genset Run Time window displays information about the generator set operation and maintenance schedule.

Genset Run Time	
Genset Controller Clock Time	12/4/2012 1:17:48 PM
Genset Controller Total Operation Time	2354.4 h
Engine Total Run Time	1.6 h
Engine Total Run Time Loaded	0.0 h
Engine Total Number Of Starts	15
Genset Date Time Of Last Maintenance	9/28/2012 1:32:31 PM
Engine Run Time Until Maintenance	149.5 h
Genset Controller Date Format	Month Date Year
Genset Controller Time Format	Hr 12
Genset Date Timeof Next Maintenance	11/8/0001 11:29:30...
Maintenance Period In Days	365 days
Maintenance Period Remaining	26954280 s
Genset Controller Clock Time Zone Offset	1/1/0001 12:00:00 AM

Figure 11-10
Genset Runtime

11.3.5 Parameter Groups

The parameter groups for the RDC2/DC2 controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 11.4.

Identity	
Vendor	Kohler Company
Product	RDC 2
Firmware Version	4.7.1
Engine Metering	
Engine Speed	3598 R/min
Engine Target Speed	3600 R/min
Engine Oil Pressure	0.0 PSI
Engine Coolant Temperature	
Battery Voltage	12.0 V
Lube Oil Temperature	75 °F
Genset Controller Temperature	104 °F
Engine Low Oil Pressure Switch	
Engine Compartment Temperature	
Engine Speed Governor	
Engine Speed Adjustment	50
Engine Speed Gain Adjustment	50

Genset Info	
Genset Model Number Select	20RESA
Genset Serial Number	00004
Alternator Part Number	
Genset Controller Serial Number	1275856413
Engine Part Number	
Engine Model Number	CH-1000
Engine Serial Number	
Genset State	Running
Genset Run Time	
Genset Controller Clock Time	12/4/2012 1:17:48 PM
Genset Controller Total Operation Time	2354.4 h
Engine Total Run Time	1.6 h
Engine Total Run Time Loaded	0.0 h
Engine Total Number Of Starts	15
Genset Date Time Of Last Maintenance	9/28/2012 1:32:31 PM
Engine Run Time Until Maintenance	149.5 h
Genset Controller Date Format	Month Date Year
Genset Controller Time Format	Hr 12
Genset Date Timeof Next Maintenance	11/8/0001 11:29:30...
Maintenance Period In Days	365 days
Maintenance Period Remaining	26954280 s
Genset Controller Clock Time Zone Offset	1/1/0001 12:00:00 AM

Genset Personality Profile	
ECM Model	No ECM
Maximum Alternator Current	920 A
Engine Number Of Flywheel Teeth	1
Engine Warmed Up Temperature	90 °F
Engine Cooled Down Temperature	174 °F
Engine Crank Disconnect Speed	750 R/min
Engine Idle Speed	2700 R/min
Engine Run Speed	3600 R/min
Engine Coolant Temperature Protectives Enabled	
Engine Coolant Temperature Sensor	
Engine High Coolant Temperature Inhibit Delay	
Engine Low Coolant Temperature Warning Delay	
Engine High Coolant Temperature Warning Delay	
Engine Low Coolant Temperature Shutdown Delay	
Engine High Coolant Temperature Shutdown Delay	
Engine Low Coolant Temperature Warning Limit	
Engine High Coolant Temperature Warning Limit	
Engine High Coolant Temperature Shutdown Limit	
Engine Coolant Temperature Deadband	
Personality Alternator Manufacturer	
Personality Alternator Toc Time Constant	
Personality Alternator Number Of Poles	
Personality Alternator Type	
Personality Fixed Voltage 50 Hz	
Personality Power Rating Single Phase 50 Hz 10 PF	
Personality Power Rating Single Phase 50 Hz 8 PF	
Personality Power Rating Fixed Volt 50 Hz	
Personality Power Rating 50 Hz 220 440	
Personality Power Rating 50 Hz 208 415	
Personality Power Rating 50 Hz 200 400	
Personality Power Rating 50 Hz 190 380	
Personality Power Rating 50 Hz 173 346	
Personality Power Rating 50 Hz Delta	
Personality Fixed Voltage 60 Hz	
Personality Power Rating Single Phase 60 Hz 10 PF	
Personality Power Rating Single Phase 60 Hz 8 PF	
Personality Power Rating Fixed Volt 60 Hz	
Personality Power Rating 60 Hz 240 480	
Personality Power Rating 60 Hz 230 460	
Personality Power Rating 60 Hz 220 440	
Personality Power Rating 60 Hz 208 416	
Personality Power Rating 60 Hz 190 380	
Personality Power Rating 60 Hz Delta	
Personality Installed Options	

Personality Power Rating Single Phase 50 Hz 10 PF	
Personality Power Rating Single Phase 50 Hz 8 PF	
Personality Power Rating Fixed Volt 50 Hz	
Personality Power Rating 50 Hz 220 440	
Personality Power Rating 50 Hz 208 415	
Personality Power Rating 50 Hz 200 400	
Personality Power Rating 50 Hz 190 380	
Personality Power Rating 50 Hz 173 346	
Personality Power Rating 50 Hz Delta	
Personality Fixed Voltage 60 Hz	
Personality Power Rating Single Phase 60 Hz 10 PF	
Personality Power Rating Single Phase 60 Hz 8 PF	
Personality Power Rating Fixed Volt 60 Hz	
Personality Power Rating 60 Hz 240 480	
Personality Power Rating 60 Hz 230 460	
Personality Power Rating 60 Hz 220 440	
Personality Power Rating 60 Hz 208 416	
Personality Power Rating 60 Hz 190 380	
Personality Power Rating 60 Hz Delta	
Personality Installed Options	

Genset System Configuration	
Genset System Voltage	208.0 V
Genset System Frequency	60.0 Hz
Genset Voltage Phase Connection	Single Phase
Genset Power Rating	18.0 kW
Genset Rated Current	86.5 A
Genset System Battery Voltage	12 V
Prime Power Application	Standby
Current Transformer Ratio	400
Local Start Mode	Off
Measurement System	English
ECM Power	False
Display Contrast	50
Genset System Language	English
Genset Maximum Percent Capacity	70.0 %
Generator Overloaded Percent	85.0 %
Genset Fuel Type	Natural Gas
Automatic Start Minimum Voltage	51.0 V
Automatic Stop Minimum Percent Load	20.0 %
Automatic Start Minimum Voltage Delay	180.0 s
Automatic Stop Minimum Load Delay	180.0 s
Genset Calibration	
Genset Calibration Factor Voltage L1-L2	1.015808
Genset Calibration Factor Voltage L2-L3	1.000000
Genset Calibration Factor Voltage L3-L1	1.000000
Genset Calibration Factor Voltage L1-N	1.000000
Genset Calibration Factor Current L1	1.000000
Genset Calibration Factor Current L2	1.000000
Genset Calibration Factor Current L3	1.000000
Current Transformer Calibration At No Load	3.5
Current Transformer Calibration At Full Load	121.5

Note: Do not adjust the Advanced Speed Control Settings unless advised by the Kohler Generator Field Service Department.

Advanced Speed Control	
Proportional Gain	1.0000
Transient Integral Gain	1.0000
Derivative Gain	1.0000
Slow Correction Integral Gain	1.0000
Diagnostic Derivative Gain	
Diagnostic Transient Integral Gain	

Voltage Regulator	
Voltage Regulator Average Voltage Adjustment	208.0 V
Voltage Regulator Volts Per Hertz Slope	5 %
Voltage Regulator Volts Per Hertz Cut In Frequency	59.0 Hz
Voltage Regulator Gain	16
Engine Timing	
Engine Start Delay	0 s
Engine Cool Down Delay	300 s
Engine Crank On Delay	15 s
Engine Crank Pause Delay	15 s
Engine Number Of Crank Cycles	3
Genset Protection	
Genset Low Battery Voltage Warning Delay	90 s
Genset High Battery Voltage Warning Delay	10 s
Genset Low Battery Voltage Warning Limit	100 %
Genset High Battery Voltage Warning Limit	125 %
Genset Battery Low Cranking Voltage Warning Dela	6 s
Genset Battery Low Cranking Voltage Warning Limit	60 %
Engine Protection	
Engine Locked Rotor Shutdown Delay	3 s
Genset Low Engine Speed Shutdown Limit	85 %
Genset High Engine Speed Shutdown Limit	115 %
Engine Low Oil Pressure Warning Limit	
Engine High Oil Pressure Shutdown Limit	
Generator Protection	
Loss Of AC Sensing Shutdown Delay	3 s
Genset Low Voltage Shutdown Delay	10 s
Genset High Voltage Shutdown Delay	2 s
Genset Low Voltage Shutdown Limit	80 %
Genset High Voltage Shutdown Limit	120 %
Genset Short Term Low Frequency Shutdown Delay	10 s
Genset Long Term Low Frequency Shutdown Delay	60 s
Genset High Frequency Shutdown Delay	10 s
Genset Low Frequency Shutdown Limit	90 %
Genset High Frequency Shutdown Limit	110 %

Note: Digital inputs and outputs labelled A1, A2, or B7 through B12 do not apply to the RDC2 controller or its accessories.

Digital Input B1	
Digital Input B1 Value	False
Digital Input B1 Enabled	False
Digital Input B1 Event	None
Digital Input B2	
Digital Input B2 Value	False
Digital Input B2 Enabled	False
Digital Input B2 Event	None
Digital Output A1	
Digital Output A2	
Digital Output B1	
Digital Output B1 Value	True
Digital Output B1 Event	Generator Running
Digital Output B2	
Digital Output B2 Value	False
Digital Output B2 Event	Common Fault
Digital Output B3	
Digital Output B3 Value	False
Digital Output B3 Event	Battery Voltage Low...
Digital Output B4	
Digital Output B4 Value	True
Digital Output B4 Event	Always On
Digital Output B5	
Digital Output B5 Value	True
Digital Output B5 Event	Always On
Digital Output B6	
Digital Output B6 Value	False
Digital Output B6 Event	Always Off

ATS Metering Summary	
ATS Contactor Position	Source 2
ATS Sources Available	Source 2
Source 1 Metering	
Source 1 Rotation Actual	
Source 1 Voltage L1-L2	0.0 V
Source 1 Voltage L2-L3	
Source 1 Voltage L3-L1	
Source 1 Voltage Average Line To Line	0.0 V
Source 1 Frequency	0.0 Hz
Source 2 Metering	
Source 2 Rotation Actual	
Source 2 Voltage L1-L2	206.7 V
Source 2 Voltage L2-L3	
Source 2 Voltage L3-L1	
Source 2 Voltage Average Line To Line	206.7 V
Source 2 Frequency	60.0 Hz
ATS Connection Configuration	
ATS Source	Local
Source 1 System Configuration	
Source 1 System Voltage	208.0 V
Source 1 System Frequency	60.0 Hz
Source 1 Voltage Debounce Delay	0.5 s
Source 1 Low Voltage Pickup	90 %
Source 1 Low Voltage Dropout	90 %
Source 1 Calibration	
Source 1 Calibration Factor Voltage L1-L2	1.000000
Source 1 Calibration Factor Voltage L2-L3	1.000000
Source 1 Calibration Factor Voltage L3-L1	1.000000
Source 2 System Configuration	
Source 2 System Voltage	208.0 V
Source 2 System Frequency	60.0 Hz
Source 2 Voltage Debounce Delay	0.5 s
Source 2 Low Voltage Pickup	90 %
Source 2 Low Voltage Dropout	90 %
Source 2 Calibration	
Source 2 Calibration Factor Voltage L1-L2	1.000000
Source 2 Calibration Factor Voltage L2-L3	1.000000
Source 2 Calibration Factor Voltage L3-L1	1.000000
ATS Exercise	
Exercise Interval	Weekly
Exercise Run Duration	20 min
Exercise Mode	Loaded Full Speed
Exercise Warning Enabled	True
ATS Delays	
ATS Transfer From Preferred Delay	3 s
ATS Transfer From Standby Delay	120 s
ATS Source 2 Engine Start Delay	3 s

Modbus	
Is Modbus Master	
Network Configuration	
DHCP Enabled	True
Static IP Address	0.0.0.0
Static Subnet Mask	0.0.0.0
Static Default Gateway	0.0.0.0
Static DNS Server 1	0.0.0.0
Static DNS Server 2	0.0.0.0
Server Host Name	oncue.kohler.com
Network Status	
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Default Gateway	0.0.0.0
DNS Server 1	0.0.0.0
DNS Server 2	0.0.0.0
MAC Address	00-14-6F-07-2C-60
Connected Server IP Address	0.0.0.0
Network Connection Established	False
Media Connected	False
Rbus Network	
Rbus Active	True
Rbus Connection Count	2
Rbus Net Cycle Time	200 ms
Rbus Timeouts	16
Rbus Errors	0
Rbus Devices B1	
Rbus Devices B1 Serial Number	4835
Rbus Devices B1 Type	Pim
Rbus Devices B1 Communication Errors	0
Rbus Devices B1 Communication Timeouts	0
Rbus Devices B1 Modbus Id	2
Rbus Devices B1 Last Connection Date	1/1/0001 12:00:00 AM
Rbus Devices B1 Firmware Version	1.2.0
Rbus Devices B1 Connected	True
Rbus Devices B2	
Rbus Devices B2 Serial Number	9060
Rbus Devices B2 Type	Single Phase ATS
Rbus Devices B2 Communication Errors	0
Rbus Devices B2 Communication Timeouts	0
Rbus Devices B2 Modbus Id	3
Rbus Devices B2 Last Connection Date	12/4/2012 1:14:56 PM
Rbus Devices B2 Firmware Version	1.2.0
Rbus Devices B2 Connected	True
Rbus Devices B3	
Rbus Devices B3 Serial Number	-1
Rbus Devices B3 Type	Invalid
Rbus Devices B3 Communication Errors	0
Rbus Devices B3 Communication Timeouts	0
Rbus Devices B3 Modbus Id	0
Rbus Devices B3 Last Connection Date	1/1/0001 12:00:00 AM
Rbus Devices B3 Firmware Version	0.0.0
Rbus Devices B3 Connected	False
Rbus Devices B4	
Rbus Devices B4 Serial Number	-1
Rbus Devices B4 Type	Invalid
Rbus Devices B4 Communication Errors	0
Rbus Devices B4 Communication Timeouts	0
Rbus Devices B4 Modbus Id	0
Rbus Devices B4 Last Connection Date	1/1/0001 12:00:00 AM
Rbus Devices B4 Firmware Version	0.0.0
Rbus Devices B4 Connected	False

11.4 Parameter Summary

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The View/Adjust column in the table indicates whether each parameter can be changed or only viewed.

- View: View only, no adjustment
- Adjust: Parameter is adjustable
- Locked: Parameter is not adjustable using SiteTech™ software.

Locked parameters are set by selecting the Uu and Ec parameters at the controller. Refer to the generator set Installation Manual or controller replacement instruction sheet for instructions.

Refer to the generator set Service Manual for default settings and adjustment instructions.

The following table lists the individual parameters in alphabetical order and shows the group in which each parameter appears. Use this table to find the location of individual parameters, and also to see which parameters can be adjusted using the SiteTech™ program.

Parameter	Parameter Group	View/ Adjust	Units
Address	Special Parameters		
Alternator Part Number	Genset Info	Locked	
ATS Contactor Position	ATS Metering Summary	View	
ATS Source	ATS Connection Configuration	View	
ATS Source 2 Engine Start Delay	ATS Delays	Adjust	s
ATS Sources Available	ATS Metering Summary	View	
ATS Transfer From Preferred Delay	ATS Delays	Adjust	s
ATS Transfer From Standby Delay	ATS Delays	Adjust	s
Automatic Start Minimum Voltage	Genset System Configuration	Adjust	V
Automatic Start Minimum Voltage Delay	Genset System Configuration	Adjust	s
Automatic Stop Minimum Load Delay	Genset System Configuration	Adjust	s
Automatic Stop Minimum Percent Load	Genset System Configuration	Adjust	%
Battery Voltage	Engine Metering	View	V
Connected Server IP Address	Network Status	View	
Current Transformer Calibration At Full Load	Genset Calibration	Adjust	
Current Transformer Calibration At No Load	Genset Calibration	Adjust	
Current Transformer Ratio	Genset System Configuration	Locked	
Default Gateway	Network Status	View	
Derivative Gain (do not adjust *)	Advanced Speed Control *	Adjust *	
DHCP Enabled	Network Configuration	Adjust	
Diagnostic Derivative Gain (do not adjust *)	Advanced Speed Control *	Adjust *	
Diagnostic Transient Integral Gain (do not adjust *)	Advanced Speed Control *	Adjust *	
Digital Input A1 Enabled	Digital Input A1	Adjust	
Digital Input A1 Event	Digital Input A1	Adjust	
Digital Input A1 Value	Digital Input A1	View	
Digital Input A2 Enabled	Digital Input A2	Adjust	
Digital Input A2 Event	Digital Input A2	Adjust	
Digital Input A2 Value	Digital Input A2	View	
Digital Input B1 Enabled	Digital Input B1	Adjust	
Digital Input B1 Event	Digital Input B1	Adjust	
Digital Input B1 Value	Digital Input B1	View	
Digital Input B2 Enabled	Digital Input B2	Adjust	
Digital Input B2 Event	Digital Input B2	Adjust	
Digital Input B2 Value	Digital Input B2	View	
Digital Output A1 Event	Digital Output A1	Adjust	
Digital Output A1 Value	Digital Output A1	View	
Digital Output A2 Event	Digital Output A2	Adjust	
Digital Output A2 Value	Digital Output A2	View	
Digital Output B1 Event	Digital Output B1	Adjust	
Digital Output B1 Value	Digital Output B1	View	
Digital Output B2 Event	Digital Output B2	Adjust	
Digital Output B2 Value	Digital Output B2	View	
Digital Output B3 Event	Digital Output B3	Adjust	
Digital Output B3 Value	Digital Output B3	View	
Digital Output B4 Event	Digital Output B4	Adjust	
Digital Output B4 Value	Digital Output B4	View	
Digital Output B5 Event	Digital Output B5	Adjust	

* Do not adjust the Advanced speed Control Settings unless advised by the Kohler Generator Field Service Department.

Parameter	Parameter Group	View/ Adjust	Units
Digital Output B5 Value	Digital Output B5	View	
Digital Output B6 Event	Digital Output B6	Adjust	
Digital Output B6 Value	Digital Output B6	View	
Digital Output B7 Event	Digital Output B7	Adjust	
Digital Output B7 Value	Digital Output B7	View	
Digital Output B8 Event	Digital Output B8	Adjust	
Digital Output B8 Value	Digital Output B8	View	
Digital Output B9 Event	Digital Output B9	Adjust	
Digital Output B9 Value	Digital Output B9	View	
Digital Output B10 Event	Digital Output B10	Adjust	
Digital Output B10 Value	Digital Output B10	View	
Digital Output B11 Event	Digital Output B11	Adjust	
Digital Output B11 Value	Digital Output B11	View	
Digital Output B12 Event	Digital Output B12	Adjust	
Digital Output B12 Value	Digital Output B12	View	
Display Contrast	Genset System Configuration	Adjust	
DNS Server 1	Network Status	View	
DNS Server 2	Network Status	View	
ECM Model	Genset Personality Profile	Locked	
ECM Power	Genset System Configuration	Adjust	
Engine Compartment Temperature	Engine Metering	View	°C
Engine Cool Down Delay	Engine Timing	Adjust	s
Engine Coolant Temperature	Engine Metering	View	°C
Engine Coolant Temperature Deadband	Genset Personality Profile	View	°C
Engine Coolant Temperature Protectives Enabled	Genset Personality Profile	Adjust	
Engine Coolant Temperature Sensor	Genset Personality Profile	Locked	
Engine Cooled Down Temperature	Genset Personality Profile	Locked	°C
Engine Crank Disconnect Speed	Genset Personality Profile	Locked	R/min (RPM)
Engine Crank On Delay	Engine Timing	Adjust	s
Engine Crank Pause Delay	Engine Timing	Adjust	s
Engine High Coolant Temperature Inhibit Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Shutdown Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Shutdown Limit	Genset Personality Profile	Locked	°C
Engine High Coolant Temperature Warning Delay	Genset Personality Profile	View	s
Engine High Coolant Temperature Warning Limit	Genset Personality Profile	Locked	°C
Engine High Oil Pressure Shutdown Limit	Engine Protection	Locked	kPa
Engine Idle Speed	Genset Personality Profile	Locked	R/min (RPM)
Engine Locked Rotor Shutdown Delay	Engine Protection	Adjust	s
Engine Low Coolant Temperature Shutdown Delay	Genset Personality Profile	View	s
Engine Low Coolant Temperature Warning Delay	Genset Personality Profile	View	s
Engine Low Coolant Temperature Warning Limit	Genset Personality Profile	Locked	°C
Engine Low Oil Pressure Switch	Engine Metering	View	

Parameter	Parameter Group	View/ Adjust	Units
Engine Low Oil Pressure Warning Limit	Engine Protection	Locked	kPa
Engine Model Number	Genset Info	Locked	
Engine Number Of Crank Cycles	Engine Timing	Adjust	
Engine Number Of Flywheel Teeth	Genset Personality Profile	Locked	
Engine Oil Pressure	Engine Metering	View	kPa
Engine Part Number	Genset Info	Locked	
Engine Run Speed	Genset Personality Profile	Adjust	R/min (RPM)
Engine Run Time Until Maintenance	Genset Run Time	View	h
Engine Serial Number	Genset Info	Locked	
Engine Speed	Engine Metering	View	R/min (RPM)
Engine Speed Adjustment	Engine Speed Governor	Adjust	
Engine Speed Gain Adjustment	Engine Speed Governor	Adjust	
Engine Start Delay	Engine Timing	Adjust	s
Engine Target Speed	Engine Metering	View	R/min (RPM)
Engine Total Number Of Starts	Genset Run Time	View	
Engine Total Run Time	Genset Run Time	View	h
Engine Total Run Time Loaded	Genset Run Time	View	h
Engine Warmed Up Temperature	Genset Personality Profile	Locked	°C
Exercise Interval	ATS Exercise	Adjust	
Exercise Mode	ATS Exercise	Adjust	
Exercise Run Duration	ATS Exercise	Adjust	min
Exercise Warning Enabled	ATS Exercise	Adjust	
File Version	Special Parameters		
Firmware Version	Identity	View	
Generator Apparent Power L1	Generator Metering	View	VA
Generator Apparent Power L2	Generator Metering	View	VA
Generator Apparent Power L3	Generator Metering	View	VA
Generator Current Average	Generator Metering	View	A
Generator Current L1	Generator Metering	View	A
Generator Current L2	Generator Metering	View	A
Generator Current L3	Generator Metering	View	A
Generator Current Lead/Lag L1	Generator Metering	View	
Generator Current Lead/Lag L2	Generator Metering	View	
Generator Current Lead/Lag L3	Generator Metering	View	
Generator Current Total Lead/Lag	Generator Metering	View	
Generator Frequency	Generator Metering	View	Hz
Generator Overloaded Percent	Genset System Configuration	Adjust	%
Generator Power Factor L1	Generator Metering	View	
Generator Power Factor L2	Generator Metering	View	
Generator Power Factor L3	Generator Metering	View	
Generator Reactive Power L1	Generator Metering	View	VAR
Generator Reactive Power L2	Generator Metering	View	VAR
Generator Reactive Power L3	Generator Metering	View	VAR
Generator Rotation Actual	Generator Metering	View	
Generator Total Apparent Power	Generator Metering	View	VA
Generator Total Power Factor	Generator Metering	View	
Generator Total Reactive Power	Generator Metering	View	VAR
Generator True Percent Of Rated Power	Generator Metering	View	%
Generator True Power L1	Generator Metering	View	W

Parameter	Parameter Group	View/ Adjust	Units
Generator True Power L2	Generator Metering	View	W
Generator True Power L3	Generator Metering	View	W
Generator True Total Power	Generator Metering	View	W
Generator Voltage Average Line To Line	Generator Metering	View	V
Generator Voltage L1-L2	Generator Metering	View	V
Generator Voltage L2-L3	Generator Metering	View	V
Generator Voltage L3-L1	Generator Metering	View	V
Genset Battery Low Cranking Voltage Warning Delay	Genset Protection	View	s
Genset Battery Low Cranking Voltage Warning Limit	Genset Protection	View	%
Genset Calibration Factor Current L1	Genset Calibration	Adjust	
Genset Calibration Factor Current L2	Genset Calibration	Adjust	
Genset Calibration Factor Current L3	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L1-L2	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L1-N	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L2-L3	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L3-L1	Genset Calibration	Adjust	
Genset Controller Clock Time	Genset Run Time	View	
Genset Controller Clock Time Zone Offset	Genset Run Time	View	
Genset Controller Date Format	Genset Run Time	Adjust	
Genset Controller Serial Number	Genset Info	View	
Genset Controller Temperature	Engine Metering	View	°C
Genset Controller Time Format	Genset Run Time	Adjust	
Genset Controller Total Operation Time	Genset Run Time	View	h
Genset Date Time Of Last Maintenance	Genset Run Time	View	
Genset Date Time Of Next Maintenance	Genset Run Time	View	
Genset Fuel Type	Genset System Configuration	Adjust	
Genset High Battery Voltage Warning Delay	Genset Protection	View	s
Genset High Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset High Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset High Frequency Shutdown Delay	Generator Protection	View	s
Genset High Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset High Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset High Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Long Term Low Frequency Shutdown Delay	Generator Protection	View	s
Genset Low Battery Voltage Warning Delay	Genset Protection	View	s
Genset Low Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset Low Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset Low Frequency Shutdown Limit	Generator Protection	Adjust	%
Genset Low Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset Low Voltage Shutdown Limit	Generator Protection	Adjust	%
Genset Maximum Percent Capacity	Genset System Configuration	Adjust	%
Genset Model Number Select	Genset Info	Locked	
Genset Power Rating	Genset System Configuration	Locked	kW
Genset Rated Current	Genset System Configuration	View	A
Genset Serial Number	Genset Info	Locked	
Genset Short Term Low Frequency Shutdown Delay	Generator Protection	View	s

Parameter	Parameter Group	View/ Adjust	Units
Genset State	Genset Info	View	
Genset System Battery Voltage	Genset System Configuration	Locked	V
Genset System Frequency	Genset System Configuration	Adjust	Hz
Genset System Language	Genset System Configuration	Adjust	
Genset System Voltage	Genset System Configuration	Adjust	V
Genset Voltage Phase Connection	Genset System Configuration	Adjust	
IP Address	Network Status	View	
Is Modbus Master	Modbus	Adjust	
Local Start Mode	Genset System Configuration	View	
Loss Of AC Sensing Shutdown Delay	Generator Protection	View	s
Lube Oil Temperature	Engine Metering	View	°C
MAC Address	Network Status	View	
Maintenance Period In Days	Genset Run Time	View	days
Maintenance Period Remaining	Genset Run Time	View	s
Maximum Alternator Current	Genset Personality Profile	View	A
Measurement System	Genset System Configuration	Adjust	
Media Connected	Network Status	View	
Network Connection Established	Network Status	View	
Password	Special Parameters		
Personality Alternator Manufacturer	Genset Personality Profile	Locked	
Personality Alternator Number Of Poles	Genset Personality Profile	Locked	
Personality Alternator Toc Time Constant	Genset Personality Profile	Locked	s
Personality Alternator Type	Genset Personality Profile	Locked	
Personality Fixed Voltage 50 Hz	Genset Personality Profile	Locked	V
Personality Fixed Voltage 60 Hz	Genset Personality Profile	Locked	V
Personality Installed Options	Genset Personality Profile	Locked	
Personality Power Rating 50 Hz 173 346	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 190 380	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 200 400	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 208 415	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz 220 440	Genset Personality Profile	Locked	kW
Personality Power Rating 50 Hz Delta	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 190 380	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 208 416	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 220 440	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 230 460	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz 240 480	Genset Personality Profile	Locked	kW
Personality Power Rating 60 Hz Delta	Genset Personality Profile	Locked	kW
Personality Power Rating Fixed Volt 50 Hz	Genset Personality Profile	Locked	kW
Personality Power Rating Fixed Volt 60 Hz	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 50 Hz 10 PF	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 50 Hz 8 PF	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 60 Hz 10 PF	Genset Personality Profile	Locked	kW
Personality Power Rating Single Phase 60 Hz 8 PF	Genset Personality Profile	Locked	kW
Prime Power Application	Genset System Configuration	Locked	
Product	Identity	View	

Parameter	Parameter Group	View/ Adjust	Units
Profile	Special Parameters		
Proportional Gain (do not adjust *)	Advanced Speed Control *	Adjust *	
Rbus Active	Rbus Network	View	
Rbus Connection Count	Rbus Network	View	
Rbus Devices B1 Communication Errors	Rbus Devices B1	View	
Rbus Devices B1 Communication Timeouts	Rbus Devices B1	View	
Rbus Devices B1 Connected	Rbus Devices B1	View	
Rbus Devices B1 Firmware Version	Rbus Devices B1	View	
Rbus Devices B1 Last Connection Date	Rbus Devices B1	View	
Rbus Devices B1 Modbus Id	Rbus Devices B1	View	
Rbus Devices B1 Serial Number	Rbus Devices B1	View	
Rbus Devices B1 Type	Rbus Devices B1	View	
Rbus Devices B2 Communication Errors	Rbus Devices B2	View	
Rbus Devices B2 Communication Timeouts	Rbus Devices B2	View	
Rbus Devices B2 Connected	Rbus Devices B2	View	
Rbus Devices B2 Firmware Version	Rbus Devices B2	View	
Rbus Devices B2 Last Connection Date	Rbus Devices B2	View	
Rbus Devices B2 Modbus Id	Rbus Devices B2	View	
Rbus Devices B2 Serial Number	Rbus Devices B2	View	
Rbus Devices B2 Type	Rbus Devices B2	View	
Rbus Devices B3 Communication Errors	Rbus Devices B3	View	
Rbus Devices B3 Communication Timeouts	Rbus Devices B3	View	
Rbus Devices B3 Connected	Rbus Devices B3	View	
Rbus Devices B3 Firmware Version	Rbus Devices B3	View	
Rbus Devices B3 Last Connection Date	Rbus Devices B3	View	
Rbus Devices B3 Modbus Id	Rbus Devices B3	View	
Rbus Devices B3 Serial Number	Rbus Devices B3	View	
Rbus Devices B3 Type	Rbus Devices B3	View	
Rbus Devices B4 Communication Errors	Rbus Devices B4	View	
Rbus Devices B4 Communication Timeouts	Rbus Devices B4	View	
Rbus Devices B4 Connected	Rbus Devices B4	View	
Rbus Devices B4 Firmware Version	Rbus Devices B4	View	
Rbus Devices B4 Last Connection Date	Rbus Devices B4	View	
Rbus Devices B4 Modbus Id	Rbus Devices B4	View	
Rbus Devices B4 Serial Number	Rbus Devices B4	View	
Rbus Devices B4 Type	Rbus Devices B4	View	
Rbus Errors	Rbus Network	View	
Rbus Net Cycle Time	Rbus Network	View	ms
Rbus Timeouts	Rbus Network	View	
Saved Date	Special Parameters		
Server Host Name	Network Configuration	Adjust	
Slow Correction Integral Gain (do not adjust*)	Advanced Speed Control *	Adjust *	
Source 1 Calibration Factor Voltage L1-L2	Source 1 Calibration	View	
Source 1 Calibration Factor Voltage L2-L3	Source 1 Calibration	View	
Source 1 Calibration Factor Voltage L3-L1	Source 1 Calibration	View	
Source 1 Frequency	Source 1 Metering	View	Hz
Source 1 Low Voltage Dropout	Source 1 System Configuration	Adjust	%
Source 1 Low Voltage Pickup	Source 1 System Configuration	Adjust	%
* Do not adjust the Advanced speed Control Settings unless advised by the Kohler Generator Field Service Department.			

Parameter	Parameter Group	View/ Adjust	Units
Source 1 Rotation Actual	Source 1 Metering	View	
Source 1 System Frequency	Source 1 System Configuration	Adjust	Hz
Source 1 System Voltage	Source 1 System Configuration	Adjust	V
Source 1 Voltage Average Line To Line	Source 1 Metering	View	V
Source 1 Voltage Debounce Delay	Source 1 System Configuration	Adjust	s
Source 1 Voltage L1-L2	Source 1 Metering	View	V
Source 1 Voltage L2-L3	Source 1 Metering	View	V
Source 1 Voltage L3-L1	Source 1 Metering	View	V
Source 2 Calibration Factor Voltage L1-L2	Source 2 Calibration	View	
Source 2 Calibration Factor Voltage L2-L3	Source 2 Calibration	View	
Source 2 Calibration Factor Voltage L3-L1	Source 2 Calibration	View	
Source 2 Frequency	Source 2 Metering	View	Hz
Source 2 Low Voltage Dropout	Source 2 System Configuration	Adjust	%
Source 2 Low Voltage Pickup	Source 2 System Configuration	Adjust	%
Source 2 Rotation Actual	Source 2 Metering	View	
Source 2 System Frequency	Source 2 System Configuration	Adjust	Hz
Source 2 System Voltage	Source 2 System Configuration	Adjust	V
Source 2 Voltage Average Line To Line	Source 2 Metering	View	V
Source 2 Voltage Debounce Delay	Source 2 System Configuration	Adjust	s
Source 2 Voltage L1-L2	Source 2 Metering	View	V
Source 2 Voltage L2-L3	Source 2 Metering	View	V
Source 2 Voltage L3-L1	Source 2 Metering	View	V
Static Default Gateway	Network Configuration	Adjust	
Static DNS Server 1	Network Configuration	Adjust	
Static DNS Server 2	Network Configuration	Adjust	
Static IP Address	Network Configuration	Adjust	
Static Subnet Mask	Network Configuration	Adjust	
Subnet Mask	Network Status	View	
Transient Integral Gain (do not adjust *)	Advanced Speed Control *	Adjust *	
Vendor	Identity	View	
Voltage Regulator Average Voltage Adjustment	Voltage Regulator	Adjust	V
Voltage Regulator Gain	Voltage Regulator	Adjust	
Voltage Regulator Volts Per Hertz Cut In Frequency	Voltage Regulator	Adjust	Hz
Voltage Regulator Volts Per Hertz Slope	Voltage Regulator	Adjust	%
* Do not adjust the Advanced speed Control Settings unless advised by the Kohler Generator Field Service Department.			

12.1 Introduction

This section provides information specific to the RSA II. For general SiteTech™ software operating instructions, see Section 3, Software Operation.

SiteTech™ software version 1.00 or higher is required for use with the RSA II remote serial annunciator.

Refer to the Installation Instruction sheet for the RSA II for default settings and adjustment ranges and for RSA II operation instructions. See List of Related Literature on page 9 for the document part number.

12.2 Device Connection

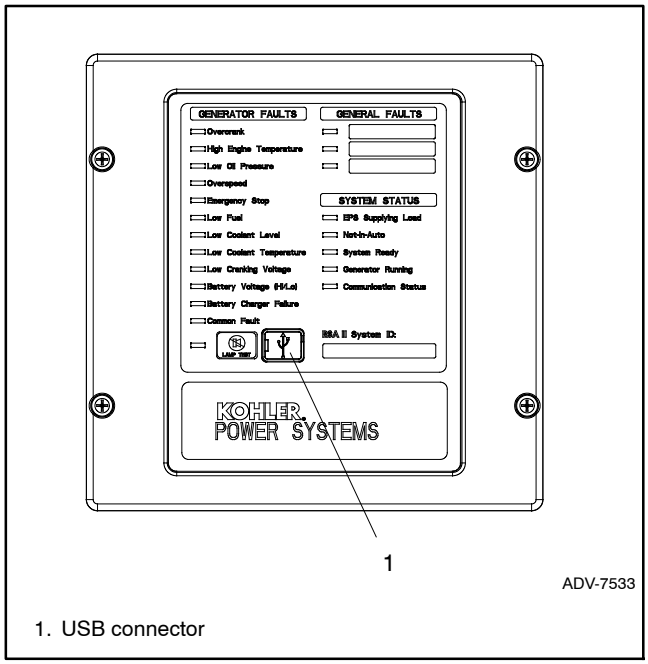
⚠ WARNING

Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Use a USB cable with a mini-B connector to connect the RSA II to your personal computer. See Figure 12-1 for the USB connector location on the RSA II. See Section 1.3 for USB cable details.



1. USB connector

Figure 12-1 Remote Serial Annunciator II (RSA II)

12.3 Parameters Screen

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Figure 12-2 shows the Parameters screen for the RSA II controller. See Section 12.4.1 for illustrations of the individual groups. See Section 12.4.2 for a summary of controller parameters.

Refer to the Installation Instruction sheet for the RSA II for default settings and adjustment ranges.

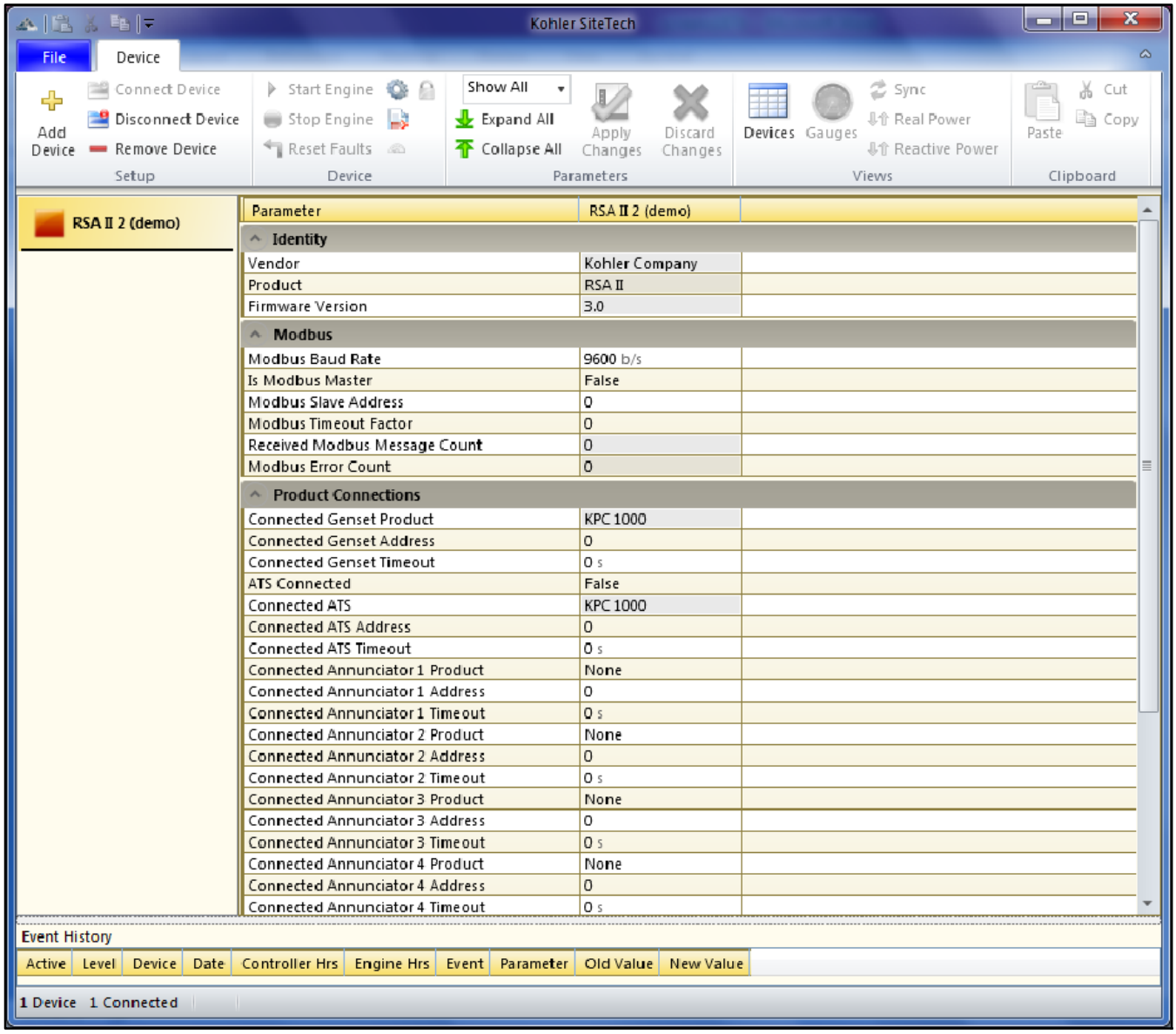


Figure 12-2 RSA II Parameters Screen

12.4 Parameter Summary

12.4.1 Parameter Groups

The parameter groups for RSA II are shown in order as they appear on the Devices screen.

Note: The Parameters screen was called Devices in previous versions of SiteTech.

Identity	
Vendor	Kohler Company
Product	RSA II
Firmware Version	0.0.0

Figure 12-3 RSA II Identity Parameters

Modbus	
Modbus Baud Rate	9600 b/s
Is Modbus Master	False
Modbus Slave Address	0
Modbus Timeout Factor	0
Received Modbus Message Count	0
Modbus Error Count	0

Figure 12-4 RSA II Modbus Parameters

Product Connections	
Connected Genset Product	KPC 1000
Connected Genset Address	0
Connected Genset Timeout	0 s
ATS Connected	False
Connected ATS	
Connected ATS Address	0
Connected ATS Timeout	0 s
Connected Annunciator 1 Product	None
Connected Annunciator 1 Address	0
Connected Annunciator 1 Timeout	0 s
Connected Annunciator 2 Product	None
Connected Annunciator 2 Address	0
Connected Annunciator 2 Timeout	0 s
Connected Annunciator 3 Product	None
Connected Annunciator 3 Address	0
Connected Annunciator 3 Timeout	0 s
Connected Annunciator 4 Product	None
Connected Annunciator 4 Address	0
Connected Annunciator 4 Timeout	0 s
Connected Annunciator 5 Product	None
Connected Annunciator 5 Address	0
Connected Annunciator 5 Timeout	0 s

Figure 12-5 RSA II Product Connections

Product Connection Inputs	
EPS Supplying Load Indicator	None
Digital Input 1 Source	None
Digital Input 1 Event Level	Warning
Digital Input 2 Source	None
Digital Input 2 Event Level	Warning
Digital Input 3 Source	None
Digital Input 3 Event Level	Warning

Figure 12-6 RSA II Product Connection Inputs

12.4.2 Parameter Summary Table

SiteTech™ software allows monitoring and adjustment of the parameters shown in the following table. Some settings are not adjustable, as indicated in the Setting Range column of the table.

Parameter	Setting Range
Identity	
Vendor	Kohler Company (not adjustable)
Product	RSA II (not adjustable)
Firmware Version	Not adjustable
Modbus	
Modbus Baud Rate (kbps)	9.6, 19.2, 38.4, or 57.6
Is Modbus Master?	True or False
Modbus Slave Address	1–247
Modbus Timeout Factor (1–fast, 10 slow)	1–10
Received Modbus Message Count	Not adjustable
Modbus Error Count	Not adjustable
Product Connections	
Connected GenSet Product	See Controller List *
Connected GenSet Address	1–247
Connected GenSet Timeout	1–120 seconds
Connected ATS Product	See ATS List †
Connected ATS Address	1–247
Connected ATS Timeout	1–120 seconds
Connected (Slave) Annunciator 1 Product	See Annunciator List ‡
Connected (Slave) Annunciator 1 Address	1–247
Connected (Slave) Annunciator 1 Timeout	1–120 seconds
Connected (Slave) Annunciator 2 Product	See Annunciator List ‡
Connected (Slave) Annunciator 2 Address	1–247
Connected (Slave) Annunciator 2 Timeout	1–120 seconds
Connected (Slave) Annunciator 3 Product	See Annunciator List ‡
Connected (Slave) Annunciator 3 Address	1–247
Connected (Slave) Annunciator 3 Timeout	1–120 seconds
Connected (Slave) Annunciator 4 Product	See Annunciator List ‡
Connected (Slave) Annunciator 4 Address	1–247
Connected (Slave) Annunciator 4 Timeout	1–120 seconds
Connected (Slave) Annunciator 5 Product	See Annunciator List ‡
Connected (Slave) Annunciator 5 Address	1–247
Connected (Slave) Annunciator 5 Timeout	1–120 seconds
Product Connection Inputs	
EPS Supplying Load Indicator	Local (hardwired), Generator, or ATS
Digital Input 1 Source	Local (hardwired), Generator, or ATS
Digital Input 1 Event Level	Warning or Fault
Digital Input 2 Source	Local (hardwired), Generator, or ATS
Digital Input 2 Event Level	Warning or Fault
Digital Input 3 Source	Local (hardwired), Generator, or ATS
Digital Input 3 Event Level	Warning or Fault

***** Controller List includes: Decision-Maker® 3+, Decision-Maker® 550, Decision-Maker® 3000, Decision-Maker® 6000, or KPC 1000. (Not user-adjustable)

† ATS List includes: None, MPAC 1000, or MPAC 1500. (Not user-adjustable)

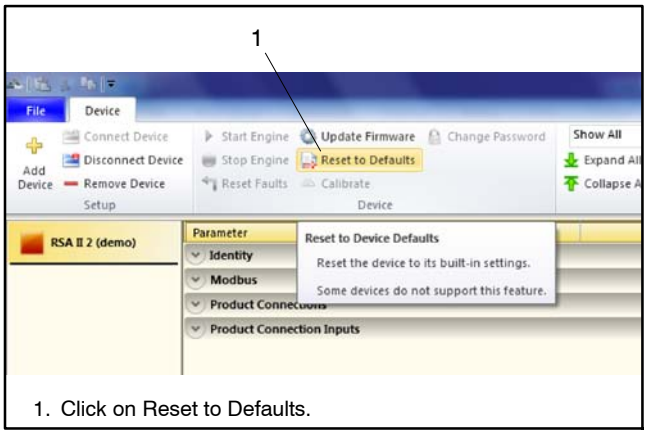
‡ Annunciator List includes: None, RSA 1000, or RSA II.

12.5 Reset to Defaults

The Reset to Defaults command on the top ribbon is available when an RSA II device is connected. The command will reset the device to its default parameters.

Reset To Device Defaults Procedure

1. Click on Reset to Defaults on the top ribbon. See Figure 12-7.



1. Click on Reset to Defaults.

Figure 12-7 Reset to Defaults Command

2. The Reset to Device Defaults dialogue box opens. Click on the OK button to reset the device. Click on the Cancel button to exit the dialogue box without resetting the device. See Figure 12-8.

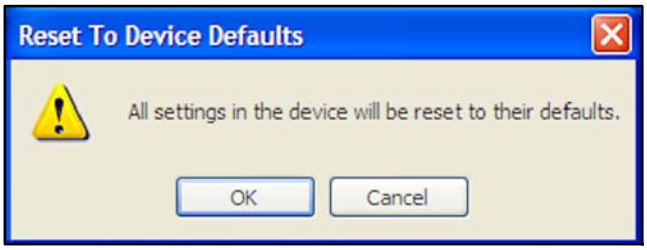


Figure 12-8 Reset To Device Defaults Dialogue Box

Notes

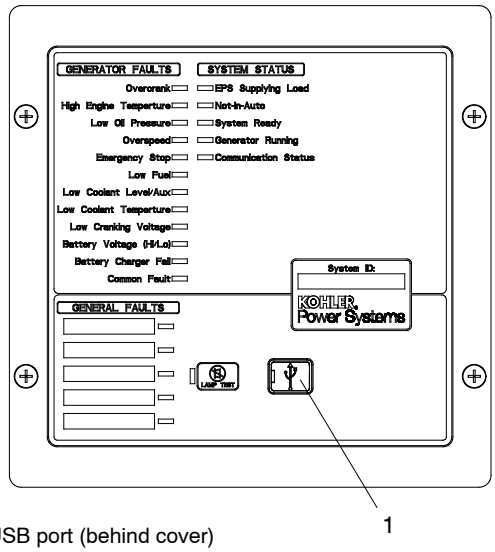
13.1 Introduction

After the RSA III master and RSA III slaves are installed, use SiteTech™ software to set up each RSA III.

Note: The RSA III requires a power source to P37. Use either the engine starting batteries or a 120 VAC to 12 VDC adapter when programming changes.

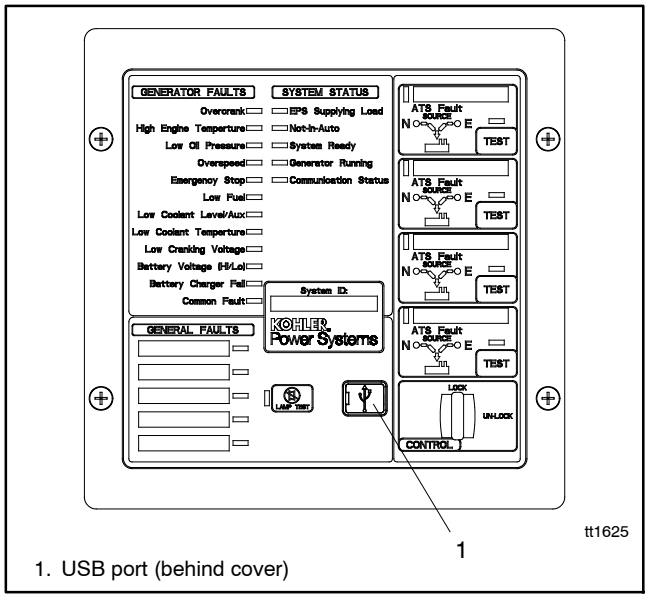
13.2 Device Connection

Use a USB cable with a mini-B connector to connect the RSA II to your personal (laptop) computer. See Figure 13-1 or Figure 13-2 for the USB connector location on the RSA II. See Section 1.3 for USB cable details.



1. USB port (behind cover)

Figure 13-1 Remote Serial Annunciator (RSA III)



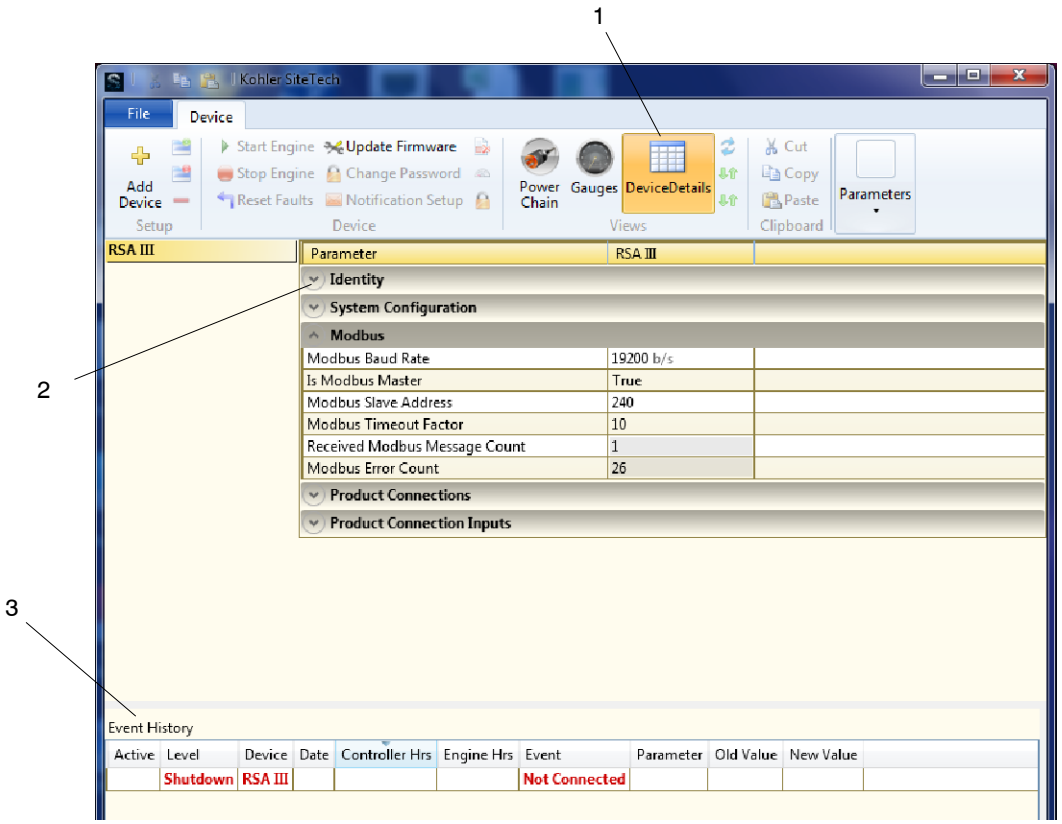
1. USB port (behind cover)

Figure 13-2 RSA III with Four ATS Controls

13.3 Device Details Screen

Figure 13-3 shows the Device Details screen for the RSA II controller. See Section 13.4.1 for illustrations of the individual groups. See Section 12.4.2 for a summary of controller parameters.

Refer to the Installation Instruction sheet for the RSA II for default settings and adjustment ranges.



1. Click on Device Details.
2. Click on the arrow to reveal or hide the parameters in each group.
3. Event history. Click and drag the top of this pane to make it larger or smaller.

Figure 13-3 RSA III Device Details Screen

13.4 Parameter Summary

13.4.1 Parameter Groups

The parameter group screens for the RSA III are shown below.

Parameter	RSA III
Identity	
Vendor	Kohler Company
Product	RSA III
Firmware Version	1.0.9

Parameter	RSA III
Identity	
System Configuration	
Light Indicator Brightness	100

Parameter	RSA III
Identity	
System Configuration	
Modbus	
Modbus Baud Rate	19200 b/s
Is Modbus Master	True
Modbus Slave Address	240
Modbus Timeout Factor	10
Received Modbus Message Count	1
Modbus Error Count	26

Parameter	RSA III
Modbus	
Product Connections	
Product Connection Inputs	
EPS Supplying Load Indicator	Genset
Digital Input 1 Source	None
Digital Input 1 Event Level	Warning
Digital Input 1 Source Input	None
Digital Input 2 Source	None
Digital Input 2 Event Level	Warning
Digital Input 2 Source Input	None
Digital Input 3 Source	None
Digital Input 3 Event Level	Warning
Digital Input 3 Source Input	None
Digital Input 4 Source	None
Digital Input 4 Event Level	Warning
Digital Input 4 Source Input	None
Digital Input 5 Source	None
Digital Input 5 Event Level	Warning
Digital Input 5 Source Input	None

Parameter	RSA III
Product Connections	
Genset Connected	False
Connected Genset Product	None
Connected Genset Address	1
Connected Genset Timeout	45 s
ATS 1 Connected	True
Connected ATS 1 Product	None
Connected ATS 1 Address	2
Connected ATS 1 Timeout	45 s
ATS 2 Connected	False
Connected ATS 2 Product	None
Connected ATS 2 Address	3
Connected ATS 2 Timeout	45 s
ATS 3 Connected	False
Connected ATS 3 Product	None
Connected ATS 3 Address	4
Connected ATS 3 Timeout	45 s
ATS 4 Connected	False
Connected ATS 4 Product	None
Connected ATS 4 Address	0
Connected ATS 4 Timeout	5 s
Connected Annunciator 1 Product	None
Connected Annunciator 1 Address	178
Connected Annunciator 1 Timeout	45 s
Connected Annunciator 2 Product	None
Connected Annunciator 2 Address	242
Connected Annunciator 2 Timeout	45 s
Connected Annunciator 3 Product	None
Connected Annunciator 3 Address	243
Connected Annunciator 3 Timeout	45 s
Connected Annunciator 4 Product	None
Connected Annunciator 4 Address	244
Connected Annunciator 4 Timeout	45 s
Connected Annunciator 5 Product	None
Connected Annunciator 5 Address	245
Connected Annunciator 5 Timeout	45 s

Note: Use the scroll bar on the right side of the window to access settings,if necessary.

13.4.2 Parameter Summary Table

SiteTech™ software allows monitoring and adjustment of the parameters shown in the following table. Some settings are not adjustable, as indicated in the Setting Range column of the table. See TT-1625, RSA III Installation Instructions, for more information.

Parameter	Setting Range
Identity	
Vendor	Kohler Company (not adjustable)
Product	RSA III (not adjustable)
Firmware Version	Not adjustable
Modbus	
Modbus Baud Rate (kbps)	9.6, 19.2, 38.4, or 57.6
Is Modbus Master?	True or False
Modbus Slave Address	1-247
Modbus Timeout Factor (1-fast, 10 slow)	1-10
Received Modbus Message Count	
Modbus Error Count	
Product Connections	
Connected GenSet Product	See Controller List *
Connected GenSet Address	1-247
Connected GenSet Timeout	1-120 seconds
Connected ATS Product	See ATS List †
Connected ATS Address	1-247
Connected ATS Timeout	1-120 seconds
Connected (Slave) Annunciator 1 Product	See Annunciator List ‡
Connected (Slave) Annunciator 1 Address	1-247
Connected (Slave) Annunciator 1 Timeout	1-120 seconds
Connected (Slave) Annunciator 2 Product	See Annunciator List ‡
Connected (Slave) Annunciator 2 Address	1-247
Connected (Slave) Annunciator 2 Timeout	1-120 seconds
Connected (Slave) Annunciator 3 Product	See Annunciator List ‡
Connected (Slave) Annunciator 3 Address	1-247
Connected (Slave) Annunciator 3 Timeout	1-120 seconds
Connected (Slave) Annunciator 4 Product	See Annunciator List ‡
Connected (Slave) Annunciator 4 Address	1-247
Connected (Slave) Annunciator 4 Timeout	1-120 seconds
Connected (Slave) Annunciator 5 Product	See Annunciator List ‡
Connected (Slave) Annunciator 5 Address	1-247
Connected (Slave) Annunciator 5 Timeout	1-120 seconds
Product Connection Inputs	
EPS Supplying Load Indicator	Local (hardwired), Generator, or ATS
Digital Input 1 Source	Local (hardwired), Generator, or ATS
Digital Input 1 Event Level	Warning or Fault
Digital Input 2 Source	Local (hardwired), Generator, or ATS
Digital Input 2 Event Level	Warning or Fault
Digital Input 3 Source	Local (hardwired), Generator, or ATS
Digital Input 3 Event Level	Warning or Fault
Digital Input 4 Source	Local (hardwired), Generator, or ATS
Digital Input 4 Event Level	Warning or Fault
Digital Input 5 Source	Local (hardwired), Generator, or ATS
Digital Input 5 Event Level	Warning or Fault

* Controller List includes: Decision-Maker® 3+, Decision-Maker® 550, Decision-Maker® 3000 or KPC 1000.

† ATS List includes: None, MPAC® 750, MPAC® 1000, MPAC® 1200, or MPAC® 1500.

‡ Annunciator List includes: None, RSA 1000, RSA II, or RSA III.

14.1 Introduction

The VSC controller is used on Model 6VSG DC generator sets. SiteTech™ software allows viewing and adjustment of selected VSC controller settings, including many parameters that are not accessible through the controller's user interface. SiteTech™ also provides metering groups that display status information that is not available at the controller display.

SiteTech™ software version 3.1 or higher is required for use with the VSC controller.

The controller must have power (typically through connection to the generator set battery) to allow communication with the PC that is connected to the controller and running SiteTech™ software. If the controller is not powered by the generator set battery, it may drain the battery on the connected laptop PC.

This section provides information specific to the VSC controller. For general software operating instructions, see Section 3, Software Operation. For controller operation instructions, refer to the controller operation manual provided with the generator set. See List of Related Literature on page 9 for the document part number.

14.2 Device Connection

⚠ WARNING

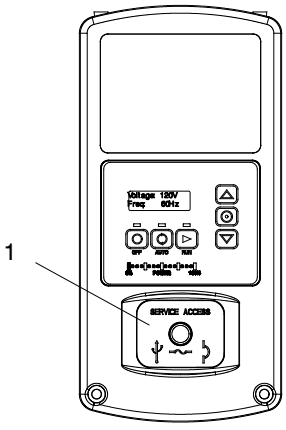
Hazardous voltage. Moving parts. Can cause severe injury or death.

Operate the generator set only when all guards and electrical enclosures are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

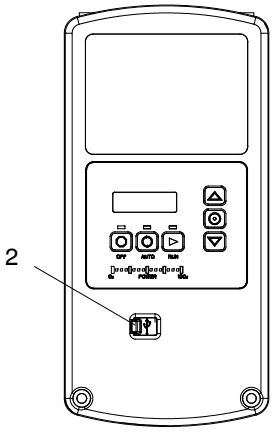
Use a USB cable with a mini-B connector to connect the controller to your personal computer (PC). See Section 1.3 for USB cable details.

Original RDC2/DC2 controllers have the USB port in the service area on the front of the controller. Remove the plastic cover with thumbscrew from the controller to access the USB port. Revised (red board) controllers have the USB port under a small rubber cover on the front of the controller. See Figure 14-1. See Section 1.3 for USB cable details.



Original (green-board) VSC Controller

1. Service access (remove cover to access USB port)



Revised (red-board) VSC Controller

2. USB port (under cover)

Figure 14-1 VSC Controller Connection

14.3 Screens

SiteTech™ screens for the VSC controllers are shown in the following sections.

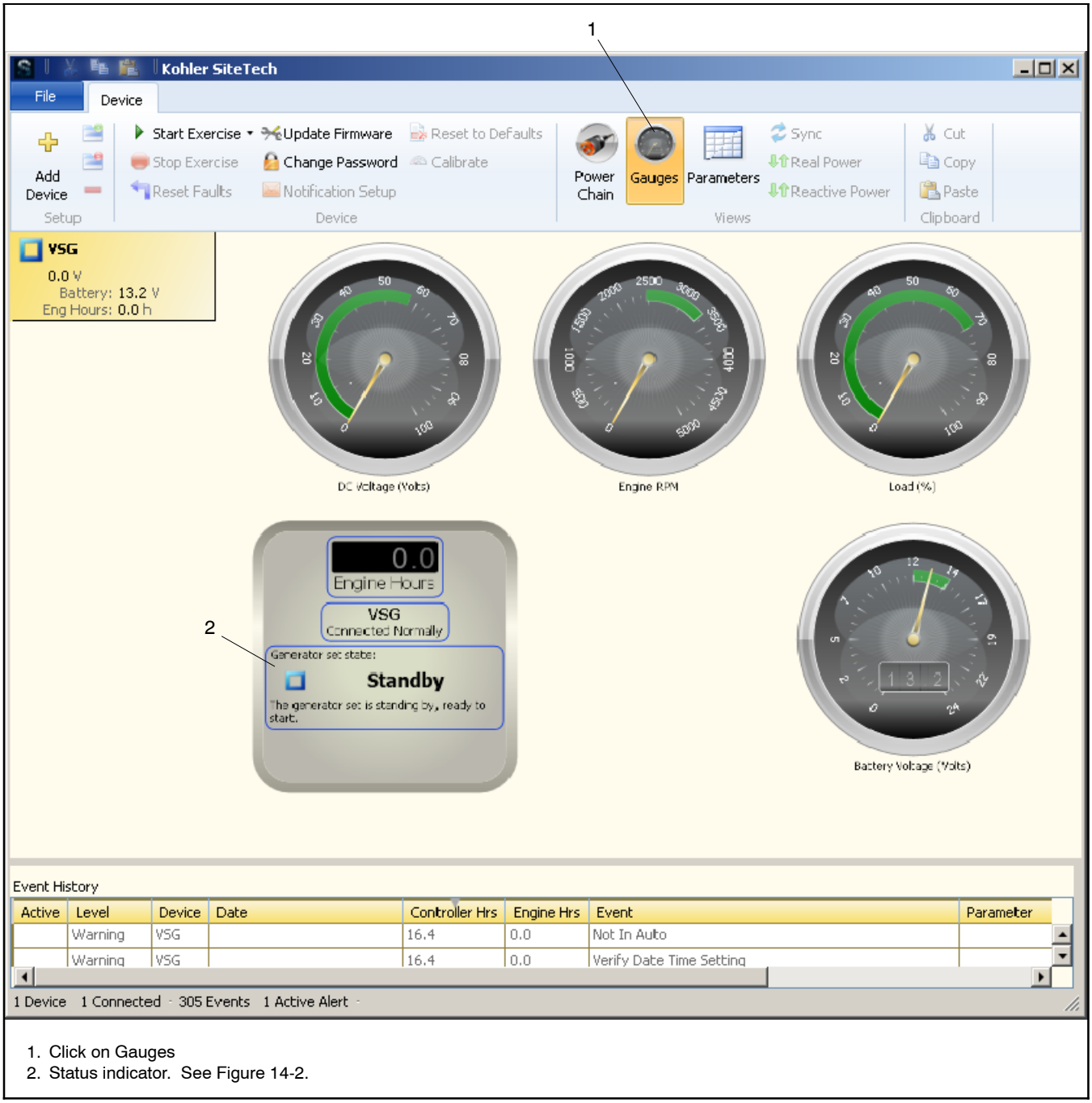
14.3.1 Gauges Screen

Click on Gauges in the Views panel to view the generator set engine data displayed on simulated gauges. See Figure 14-3. The gauges will expand and contract to fill the available space as the screen is resized.

- The needles on the gauge displays move as readings change, providing a graphic representation of the generator set operation.
- Green areas on the gauges show the acceptable range for engine speed (RPM), generator output frequency (Hz), and battery voltage. The data is also displayed numerically on each gauge.
- The generator set status is shown in the lower left corner of the gauge screen. The status indicator shows the generator set status as described in Figure 14-2. The status indicator matches the indicator in the navigation panel. If a fault condition is indicated, check the event history or the controller display to identify the fault.

Indicator		Status	Description
	Open blue square	Standby	Generator set is ready to start.
	Green triangle	Cranking or running	Engine is starting or running.
	Red X	Fault shutdown	The controller has detected a fault condition and the generator set has shut down.
	Red circle	Off	Controller is OFF.
	Solid orange square	Disconnected	No network connection.

Figure 14-2 Status Indicator Symbols and Colors



1. Click on Gauges
2. Status indicator. See Figure 14-2.

Figure 14-3 Gauges Screen

14.3.2 Parameters Screen

Figure 14-4 shows the Parameters screen for the VSC controller. Some groups are shown closed in this illustration. See Section 14.3.6 for illustrations of the parameter groups.

See Section 3 for general instructions for working with the commands at the top of the screen and working with the parameters in the parameter groups.

14.3.3 Parameter Settings

SiteTech™ allows viewing and adjustment of many generator set parameters. Refer to the group illustrations in Section 14.3.6 and parameter list in Section 14.4 to see the individual parameters. The table in Section 14.4 indicates whether each parameter can be adjusted or viewed only.

Note: Do not use the settings shown in the sample groups in this section for actual controller setup.

Some parameters that are not applicable to the VSC controller may also appear in SiteTech. Refer to the generator set Service Manual for applicable settings and adjustment instructions.

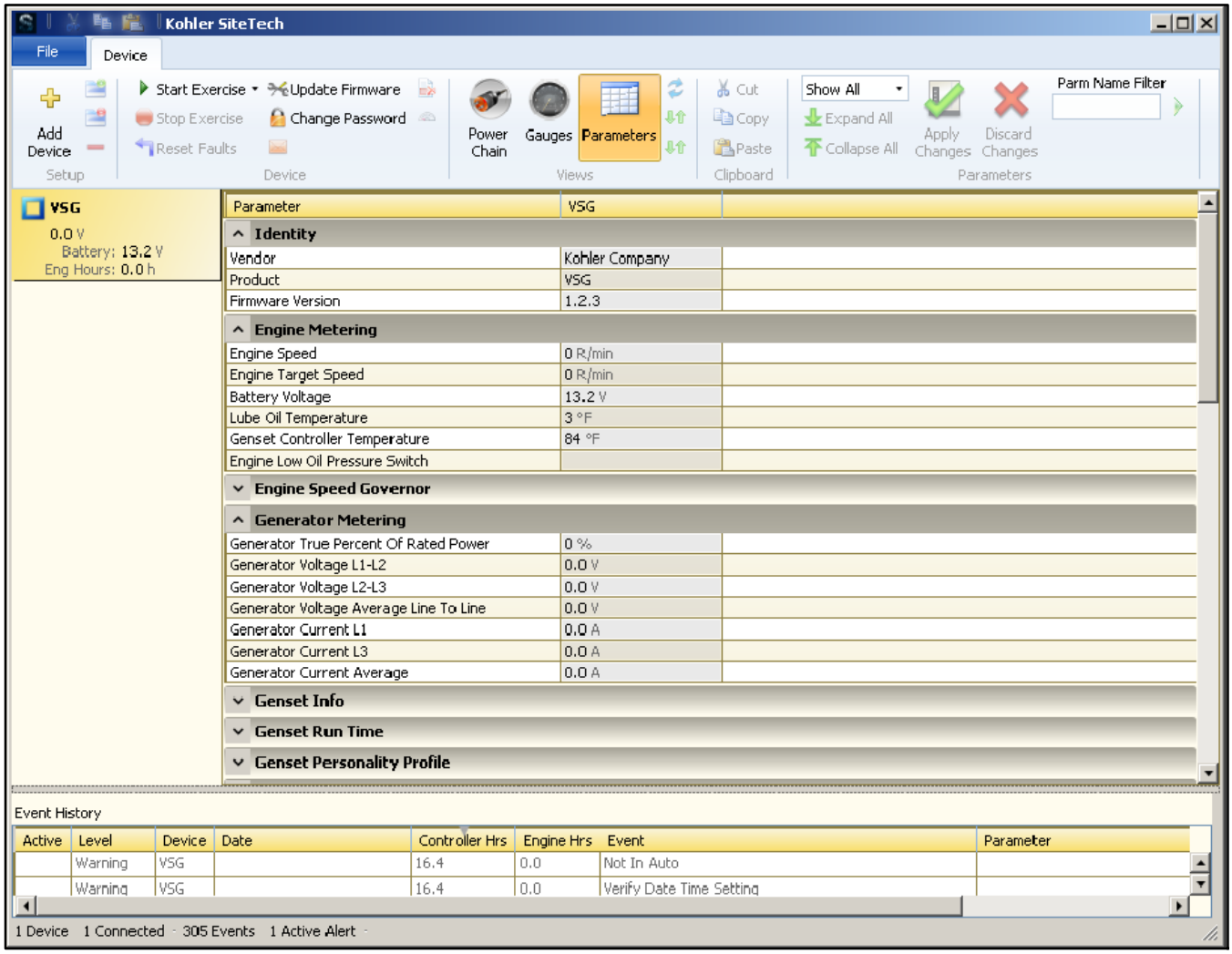


Figure 14-4 Parameters Screen, VSC Controller

14.3.4 Metering Groups

SiteTech™ provides metering groups that display status information about the system. Much of this information is available only through the SiteTech™ software; it is not displayed on the VSC controller. The metering groups are:

- Engine metering
- Generator metering

See Figure 14-5 and Figure 14-6 for illustrations that show the information contained in each metering group.

Engine Metering	
Engine Speed	0 R/min
Engine Target Speed	0 R/min
Battery Voltage	13.2 V
Lube Oil Temperature	7 °F
Genset Controller Temperature	84 °F
Engine Low Oil Pressure Switch	

Figure 14-5 Engine Metering

Generator Metering	
Generator True Percent Of Rated Power	0 %
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	0.0 V
Generator Voltage Average Line To Line	0.0 V
Generator Current L1	0.0 A
Generator Current L3	0.0 A
Generator Current Average	0.0 A

Figure 14-6 Generator Metering

14.3.5 Run Time Display

The Genset Run Time window displays information about the generator set operation and maintenance schedule.

Genset Run Time	
Genset Controller Clock Time	12/6/2012 12:58:10...
Genset Controller Total Operation Time	16.5 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Number Of Starts	0
Genset Date Time Of Last Maintenance	7/19/2012 10:01:42...
Engine Run Time Until Maintenance	100.0 h
Genset Controller Date Format	Month Date Year
Genset Controller Time Format	Hr 12
Genset Date Timeof Next Maintenance	12/31/0001 6:53:57...
Maintenance Period In Days	365 days
Maintenance Period Remaining	31516920 s
Genset Controller Clock Time Zone Offset	1/1/0001 12:00:00 AM

Figure 14-7 Generator Set Run Time

14.3.6 Parameter Groups

The parameter groups for the VSC controller are shown in order as they appear on the Parameters screen. For help in locating a specific parameter, see Section 14.4.

Some parameters that are not applicable to the VSC controller may also appear in SiteTech. Refer to the generator set Service Manual for applicable settings and adjustment instructions.

Identity	
Vendor	Kohler Company
Product	VSG
Firmware Version	1.2.3
Engine Metering	
Engine Speed	0 R/min
Engine Target Speed	0 R/min
Battery Voltage	13.2 V
Lube Oil Temperature	7 °F
Genset Controller Temperature	84 °F
Engine Low Oil Pressure Switch	
Engine Speed Governor	
Engine Speed Gain Adjustment	50
Generator Metering	
Generator True Percent Of Rated Power	0 %
Generator Voltage L1-L2	0.0 V
Generator Voltage L2-L3	0.0 V
Generator Voltage Average Line To Line	0.0 V
Generator Current L1	0.0 A
Generator Current L3	0.0 A
Generator Current Average	0.0 A
Genset Info	
Genset Model Number Select	Model 6 VS G 36 V
Genset Serial Number	
Alternator Part Number	
Genset Controller Serial Number	453773068
Engine Part Number	
Engine Model Number	CH-740
Engine Serial Number	
Genset State	Standby

Genset Run Time	
Genset Controller Clock Time	12/6/2012 12:58:10...
Genset Controller Total Operation Time	16.5 h
Engine Total Run Time	0.0 h
Engine Total Run Time Loaded	0.0 h
Engine Total Number Of Starts	0
Genset Date Time Of Last Maintenance	7/19/2012 10:01:42...
Engine Run Time Until Maintenance	100.0 h
Genset Controller Date Format	Month Date Year
Genset Controller Time Format	Hr 12
Genset Date Timeof Next Maintenance	12/31/0001 6:53:57...
Maintenance Period In Days	365 days
Maintenance Period Remaining	31516920 s
Genset Controller Clock Time Zone Offset	1/1/0001 12:00:00 AM
Genset Personality Profile	
ECM Model	No ECM
Engine Number Of Flywheel Teeth	12
Engine Warmed Up Temperature	90 °F
Engine Cooled Down Temperature	216 °F
Engine Crank Disconnect Speed	750 R/min
Engine Idle Speed	2200 R/min
Engine Run Speed	2900 R/min
Personality Installed Options	VSG Telecom

Genset System Configuration	
Genset System Voltage	48.0 V
Genset Power Rating	6.0 kW
Genset Rated Current	125.0 A
Genset System Battery Voltage	12 V
Current Transformer Ratio	400
Measurement System	English
Display Contrast	50
Genset System Language	English
Genset Maximum Percent Capacity	100.0 %
Genset Fuel Type	Liquid Propane
Automatic Start Minimum Voltage	37.5 V
Automatic Stop Minimum Percent Load	40.0 %
Automatic Start Minimum Voltage Delay	180.0 s
Automatic Stop Minimum Load Delay	180.0 s
Genset Calibration	
Genset Calibration Factor Voltage L1-L2	1.000000
Genset Calibration Factor Voltage L2-L3	1.000000
Genset Calibration Factor Voltage L1-N	0.979240
Genset Calibration Factor Current L1	1.000000
Genset Calibration Factor Current L3	1.000000
Current Transformer Calibration At No Load	0.0
Current Transformer Calibration At Full Load	170.3
Advanced Speed Control	
Proportional Gain	1.0000
Transient Integral Gain	1.0000
Derivative Gain	1.0000
Slow Correction Integral Gain	1.0000
Voltage Regulator	
Voltage Regulator Average Voltage Adjustment	48.0 V
Voltage Regulator Volts Per Hertz Slope	1 %
Voltage Regulator Gain	16

Engine Timing	
Engine Start Delay	0 s
Engine Cool Down Delay	300 s
Engine Crank On Delay	15 s
Engine Crank Pause Delay	15 s
Engine Number Of Crank Cycles	3
Genset Protection	
Genset Low Battery Voltage Warning Delay	90 s
Genset High Battery Voltage Warning Delay	10 s
Genset Low Battery Voltage Warning Limit	100 %
Genset High Battery Voltage Warning Limit	125 %
Genset Battery Low Cranking Voltage Warning Dela	6 s
Genset Battery Low Cranking Voltage Warning Limit	60 %
Engine Protection	
Engine Locked Rotor Shutdown Delay	3 s
Genset Low Engine Speed Shutdown Limit	85 %
Genset High Engine Speed Shutdown Limit	115 %
Generator Protection	
Genset High Voltage Shutdown Delay	2 s
Genset High Voltage Shutdown Limit	120 %

Digital Input B1	
Digital Input B1 Value	False
Digital Input B1 Enabled	True
Digital Input B1 Event	Fuel Pressure Low W...
Digital Input B2	
Digital Input B2 Value	False
Digital Input B2 Enabled	True
Digital Input B2 Event	Cabinet Intrusion Ala...

Digital Output B1	
Digital Output B1 Value	False
Digital Output B1 Event	Generator Running
Digital Output B2	
Digital Output B2 Value	False
Digital Output B2 Event	Common Fault
Digital Output B3	
Digital Output B3 Value	False
Digital Output B3 Event	Battery Voltage Low...
Digital Output B4	
Digital Output B4 Value	False
Digital Output B4 Event	Fuel Pressure Low W...
Digital Output B5	
Digital Output B5 Value	False
Digital Output B5 Event	Cabinet Intrusion Ala...
Digital Output B6	
Digital Output B6 Value	False
Digital Output B6 Event	Reserve Oil Empty W...

Network Configuration	
DHCP Enabled	True
Static IP Address	0.0.0.0
Static Subnet Mask	0.0.0.0
Static Default Gateway	0.0.0.0
Static DNS Server 1	0.0.0.0
Static DNS Server 2	0.0.0.0
Server Host Name	oncue.kohler.com
Network Status	
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Default Gateway	0.0.0.0
DNS Server 1	0.0.0.0
DNS Server 2	0.0.0.0
MAC Address	00-14-6F-07-00-1D
Connected Server IP Address	0.0.0.0
Network Connection Established	False
Media Connected	False

Rbus Network	
Rbus Active	False
Rbus Connection Count	0
Rbus Net Cycle Time	140 ms
Rbus Timeouts	0
Rbus Errors	0
Rbus Devices B1	
Rbus Devices B1 Serial Number	-1
Rbus Devices B1 Type	Invalid
Rbus Devices B1 Communication Errors	0
Rbus Devices B1 Communication Timeouts	0
Rbus Devices B1 Modbus Id	0
Rbus Devices B1 Last Connection Date	1/1/0001 12:00:00 AM
Rbus Devices B1 Firmware Version	0.0.0
Rbus Devices B1 Connected	False

14.4 Parameter Summary

SiteTech™ software allows monitoring and adjustment of the controller parameters shown in the following table. The View/Adjust column in the table indicates whether each parameter can be changed or only viewed.

- View: View only, no adjustment
- Adjust: Parameter is adjustable
- Locked: Parameter is not adjustable using SiteTech™ software.

Locked parameters are set by selecting the Uu and Ec parameters at the controller. Refer to the generator set Installation Manual or controller replacement instruction sheet for instructions.

The table lists the individual parameters in alphabetical order and shows the group in which each parameter appears. Use this table to find the location of individual parameters, and also to see which parameters can be adjusted using the SiteTech™ program.

Refer to the generator set Service Manual for default settings and adjustment ranges.

Parameter	Parameter Group	View/ Adjust	Units
After Crank Disconnect Fault Inhibit Delay	Genset Protection	View	s
Vendor	Identity	View	
Product	Identity	View	
Firmware Version	Identity	View	
Engine Speed	Engine Metering	View	R/min (RPM)
Engine Target Speed	Engine Metering	View	R/min (RPM)
Battery Voltage	Engine Metering	View	V
Lube Oil Temperature	Engine Metering	View	°C
Genset Controller Temperature	Engine Metering	View	°C
Engine Low Oil Pressure Switch	Engine Metering	View	
Engine Speed Gain Adjustment	Engine Speed Governor	Adjust	
Generator True Percent Of Rated Power	Generator Metering	View	%
Generator Voltage L1-L2	Generator Metering	View	V
Generator Voltage L2-L3	Generator Metering	View	V
Generator Voltage Average Line To Line	Generator Metering	View	V
Generator Current L1	Generator Metering	View	A
Generator Current L3	Generator Metering	View	A
Generator Current Average	Generator Metering	View	A
Genset Model Number Select	Genset Info	Locked	
Genset Serial Number	Genset Info	Locked	
Alternator Part Number	Genset Info	Locked	

Parameter	Parameter Group	View/ Adjust	Units
Genset Controller Serial Number	Genset Info	Locked	
Engine Part Number	Genset Info	Locked	
Engine Model Number	Genset Info	Locked	
Engine Serial Number	Genset Info	Locked	
Genset State	Genset Info	View	
Genset Controller Clock Time	Genset Run Time	View	
Genset Controller Total Operation Time	Genset Run Time	View	h
Engine Total Run Time	Genset Run Time	View	h
Engine Total Run Time Loaded	Genset Run Time	View	h
Engine Total Number Of Starts	Genset Run Time	View	
Genset Date Time Of Last Maintenance	Genset Run Time	View	
Engine Run Time Until Maintenance	Genset Run Time	View	h
Genset Controller Date Format	Genset Run Time	Adjust	
Genset Controller Time Format	Genset Run Time	Adjust	
Genset Date Time Of Next Maintenance	Genset Run Time	View	
Maintenance Period In Days	Genset Run Time	View	days
Maintenance Period Remaining	Genset Run Time	View	s
Genset Controller Clock Time Zone Offset	Genset Run Time	View	
ECM Model	Genset Personality Profile	Locked	
Engine Number Of Flywheel Teeth	Genset Personality Profile	Locked	
Engine Warmed Up Temperature	Genset Personality Profile	Locked	°C
Engine Cooled Down Temperature	Genset Personality Profile	Locked	°C
Engine Crank Disconnect Speed	Genset Personality Profile	Locked	R/min (RPM)
Engine Idle Speed	Genset Personality Profile	Locked	R/min (RPM)
Engine Run Speed	Genset Personality Profile	Adjust	R/min (RPM)
Personality Installed Options	Genset Personality Profile	Locked	
Genset System Voltage	Genset System Configuration	Adjust	V
Genset Power Rating	Genset System Configuration	Locked	kW
Genset Rated Current	Genset System Configuration	View	A
Genset System Battery Voltage	Genset System Configuration	Locked	V
Current Transformer Ratio	Genset System Configuration	Locked	
Measurement System	Genset System Configuration	Adjust	
Display Contrast	Genset System Configuration	Adjust	
Genset System Language	Genset System Configuration	Adjust	
Genset Maximum Percent Capacity	Genset System Configuration	Adjust	%
Genset Fuel Type	Genset System Configuration	Adjust	
Automatic Start Minimum Voltage	Genset System Configuration	Adjust	V
Automatic Stop Minimum Percent Load	Genset System Configuration	Adjust	%
Automatic Start Minimum Voltage Delay	Genset System Configuration	Adjust	s
Automatic Stop Minimum Load Delay	Genset System Configuration	Adjust	s
Genset Calibration Factor Voltage L1-L2	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L2-L3	Genset Calibration	Adjust	
Genset Calibration Factor Voltage L1-N	Genset Calibration	Adjust	
Genset Calibration Factor Current L1	Genset Calibration	Adjust	
Genset Calibration Factor Current L3	Genset Calibration	Adjust	
Current Transformer Calibration At No Load	Genset Calibration	Adjust	
Current Transformer Calibration At Full Load	Genset Calibration	Adjust	
Proportional Gain	Advanced Speed Control	Adjust	
Transient Integral Gain	Advanced Speed Control	Adjust	

Parameter	Parameter Group	View/ Adjust	Units
Derivative Gain	Advanced Speed Control	Adjust	
Slow Correction Integral Gain	Advanced Speed Control	Adjust	
Voltage Regulator Average Voltage Adjustment	Voltage Regulator	Adjust	V
Voltage Regulator Volts Per Hertz Slope	Voltage Regulator	Adjust	%
Voltage Regulator Gain	Voltage Regulator	Adjust	
Engine Start Delay	Engine Timing	Adjust	s
Engine Cool Down Delay	Engine Timing	Adjust	s
Engine Crank On Delay	Engine Timing	Adjust	s
Engine Crank Pause Delay	Engine Timing	Adjust	s
Engine Number Of Crank Cycles	Engine Timing	Adjust	
Genset Low Battery Voltage Warning Delay	Genset Protection	View	s
Genset High Battery Voltage Warning Delay	Genset Protection	View	s
Genset Low Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset High Battery Voltage Warning Limit	Genset Protection	Adjust	%
Genset Battery Low Cranking Voltage Warning Delay	Genset Protection	View	s
Genset Battery Low Cranking Voltage Warning Limit	Genset Protection	View	%
Engine Locked Rotor Shutdown Delay	Engine Protection	Adjust	s
Genset Low Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset High Engine Speed Shutdown Limit	Engine Protection	Adjust	%
Genset High Voltage Shutdown Delay	Generator Protection	Adjust	s
Genset High Voltage Shutdown Limit	Generator Protection	Adjust	%
Digital Input A1 Value	Digital Input A1	View	
Digital Input A1 Enabled	Digital Input A1	Adjust	
Digital Input A1 Event	Digital Input A1	Adjust	
Digital Input A2 Value	Digital Input A2	View	
Digital Input A2 Enabled	Digital Input A2	Adjust	
Digital Input A2 Event	Digital Input A2	Adjust	
Digital Input B1 Value	Digital Input B1	View	
Digital Input B1 Enabled	Digital Input B1	Adjust	
Digital Input B1 Event	Digital Input B1	Adjust	
Digital Input B2 Value	Digital Input B2	View	
Digital Input B2 Enabled	Digital Input B2	Adjust	
Digital Input B2 Event	Digital Input B2	Adjust	
Digital Output A1 Value	Digital Output A1	View	
Digital Output A1 Event	Digital Output A1	Adjust	
Digital Output A2 Value	Digital Output A2	View	
Digital Output A2 Event	Digital Output A2	Adjust	
Digital Output B1 Value	Digital Output B1	View	
Digital Output B1 Event	Digital Output B1	Adjust	
Digital Output B2 Value	Digital Output B2	View	
Digital Output B2 Event	Digital Output B2	Adjust	
Digital Output B3 Value	Digital Output B3	View	
Digital Output B3 Event	Digital Output B3	Adjust	
Digital Output B4 Value	Digital Output B4	View	
Digital Output B4 Event	Digital Output B4	Adjust	
Digital Output B5 Value	Digital Output B5	View	
Digital Output B5 Event	Digital Output B5	Adjust	

Parameter	Parameter Group	View/ Adjust	Units
Digital Output B6 Value	Digital Output B6	View	
Digital Output B6 Event	Digital Output B6	Adjust	
Digital Output B7 Value	Digital Output B7	View	
Digital Output B7 Event	Digital Output B7	Adjust	
Digital Output B8 Value	Digital Output B8	View	
Digital Output B8 Event	Digital Output B8	Adjust	
Digital Output B9 Value	Digital Output B9	View	
Digital Output B9 Event	Digital Output B9	Adjust	
Digital Output B10 Value	Digital Output B10	View	
Digital Output B10 Event	Digital Output B10	Adjust	
Digital Output B11 Value	Digital Output B11	View	
Digital Output B11 Event	Digital Output B11	Adjust	
Digital Output B12 Value	Digital Output B12	View	
Digital Output B12 Event	Digital Output B12	Adjust	
ATS Contactor Position	ATS Metering Summary	View	
ATS Sources Available	ATS Metering Summary	View	
Exercise Interval	ATS Exercise	Adjust	
Exercise Run Duration	ATS Exercise	Adjust	min
Exercise Mode	ATS Exercise	Adjust	
Exercise Warning Enabled	ATS Exercise	Adjust	
DHCP Enabled	Network Configuration	Adjust	
Static IP Address	Network Configuration	Adjust	
Static Subnet Mask	Network Configuration	Adjust	
Static Default Gateway	Network Configuration	Adjust	
Static DNS Server 1	Network Configuration	Adjust	
Static DNS Server 2	Network Configuration	Adjust	
Server Host Name	Network Configuration	Adjust	
IP Address	Network Status	View	
Subnet Mask	Network Status	View	
Default Gateway	Network Status	View	
DNS Server 1	Network Status	View	
DNS Server 2	Network Status	View	
MAC Address	Network Status	View	
Connected Server IP Address	Network Status	View	
Network Connection Established	Network Status	View	
Media Connected	Network Status	View	
Rbus Active	Rbus Network	View	
Rbus Connection Count	Rbus Network	View	
Rbus Net Cycle Time	Rbus Network	View	ms
Rbus Timeouts	Rbus Network	View	
Rbus Errors	Rbus Network	View	
Rbus Devices B1 Serial Number	Rbus Devices B1	View	
Rbus Devices B1 Type	Rbus Devices B1	View	
Rbus Devices B1 Communication Errors	Rbus Devices B1	View	
Rbus Devices B1 Communication Timeouts	Rbus Devices B1	View	
Rbus Devices B1 Modbus Id	Rbus Devices B1	View	
Rbus Devices B1 Last Connection Date	Rbus Devices B1	View	
Rbus Devices B1 Firmware Version	Rbus Devices B1	View	
Rbus Devices B1 Connected	Rbus Devices B1	View	

Parameter	Parameter Group	View/ Adjust	Units
Rbus Devices B2 Serial Number	Rbus Devices B2	View	
Rbus Devices B2 Type	Rbus Devices B2	View	
Rbus Devices B2 Communication Errors	Rbus Devices B2	View	
Rbus Devices B2 Communication Timeouts	Rbus Devices B2	View	
Rbus Devices B2 Modbus Id	Rbus Devices B2	View	
Rbus Devices B2 Last Connection Date	Rbus Devices B2	View	
Rbus Devices B2 Firmware Version	Rbus Devices B2	View	
Rbus Devices B2 Connected	Rbus Devices B2	View	
Rbus Devices B3 Serial Number	Rbus Devices B3	View	
Rbus Devices B3 Type	Rbus Devices B3	View	
Rbus Devices B3 Communication Errors	Rbus Devices B3	View	
Rbus Devices B3 Communication Timeouts	Rbus Devices B3	View	
Rbus Devices B3 Modbus Id	Rbus Devices B3	View	
Rbus Devices B3 Last Connection Date	Rbus Devices B3	View	
Rbus Devices B3 Firmware Version	Rbus Devices B3	View	
Rbus Devices B3 Connected	Rbus Devices B3	View	
Rbus Devices B4 Serial Number	Rbus Devices B4	View	
Rbus Devices B4 Type	Rbus Devices B4	View	
Rbus Devices B4 Communication Errors	Rbus Devices B4	View	
Rbus Devices B4 Communication Timeouts	Rbus Devices B4	View	
Rbus Devices B4 Modbus Id	Rbus Devices B4	View	
Rbus Devices B4 Last Connection Date	Rbus Devices B4	View	
Rbus Devices B4 Firmware Version	Rbus Devices B4	View	
Rbus Devices B4 Connected	Rbus Devices B4	View	
Profile	Special Parameters		
Saved Date	Special Parameters		
File Version	Special Parameters		
Address	Special Parameters		
Password	Special Parameters		

Notes

Appendix A Abbreviations

The following list contains abbreviations that may appear in this publication.

A, amp	ampere
ABDC	after bottom dead center
AC	alternating current
A/D	analog to digital
ADC	advanced digital control; analog to digital converter
adj.	adjust, adjustment
ADV	advertising dimensional drawing
Ah	amp-hour
AHWT	anticipatory high water temperature
AISI	American Iron and Steel Institute
ALOP	anticipatory low oil pressure
alt.	alternator
Al	aluminum
ANSI	American National Standards Institute (formerly American Standards Association, ASA)
AO	anticipatory only
APDC	Air Pollution Control District
API	American Petroleum Institute
approx.	approximate, approximately
APU	Auxiliary Power Unit
AQMD	Air Quality Management District
AR	as required, as requested
AS	as supplied, as stated, as suggested
ASE	American Society of Engineers
ASME	American Society of Mechanical Engineers
assy.	assembly
ASTM	American Society for Testing Materials
ATDC	after top dead center
ATS	automatic transfer switch
auto.	automatic
aux.	auxiliary
avg.	average
AVR	automatic voltage regulator
AWG	American Wire Gauge
AWM	appliance wiring material
bat.	battery
BBDC	before bottom dead center
BC	battery charger, battery charging
BCA	battery charging alternator
BCI	Battery Council International
BDC	before dead center
BHP	brake horsepower
blk.	black (paint color), block (engine)
blk. htr.	block heater
BMEP	brake mean effective pressure
bps	bits per second
br.	brass
BTDC	before top dead center
Btu	British thermal unit
Btu/min.	British thermal units per minute
C	Celsius, centigrade
cal.	calorie
CAN	controller area network
CARB	California Air Resources Board
CAT5	Category 5 (network cable)
CB	circuit breaker
CC	crank cycle
cc	cubic centimeter
CCA	cold cranking amps
ccw.	counterclockwise
CEC	Canadian Electrical Code
cert.	certificate, certification, certified
cfh	cubic feet per hour
cfm	cubic feet per minute
CG	center of gravity
CID	cubic inch displacement
CL	centerline
cm	centimeter
CMOS	complementary metal oxide substrate (semiconductor)
com	communications (port)
coml	commercial
Coml/Rec	Commercial/Recreational
conn.	connection
cont.	continued
CPVC	chlorinated polyvinyl chloride
crit.	critical
CSA	Canadian Standards Association
CT	current transformer
Cu	copper
cUL	Canadian Underwriter's Laboratories
CUL	Canadian Underwriter's Laboratories
cu. in.	cubic inch
cw.	clockwise
CWC	city water-cooled
cyl.	cylinder
D/A	digital to analog
DAC	digital to analog converter
dB	decibel
dB(A)	decibel (A weighted)
DC	direct current
DCR	direct current resistance
deg., °	degree
dept.	department
dia.	diameter
DI/EO	dual inlet/end outlet
DIN	Deutsches Institut fur Normung e. V. (also Deutsche Industrie Normenausschuss)
DIP	dual inline package
DPDT	double-pole, double-throw
DPST	double-pole, single-throw
DS	disconnect switch
DVR	digital voltage regulator
E^2PROM, EEPROM	electrically-erasable programmable read-only memory
E, emer.	emergency (power source)
ECM	electronic control module, engine control module
EDI	electronic data interchange
EFR	emergency frequency relay
e.g.	for example (*exempli gratia)*
EG	electronic governor
EGSA	Electrical Generating Systems Association
EIA	Electronic Industries Association
EI/EO	end inlet/end outlet
EMI	electromagnetic interference
emiss.	emission
eng.	engine
EPA	Environmental Protection Agency
EPS	emergency power system
ER	emergency relay
ES	engineering special, engineered special
ESD	electrostatic discharge
est.	estimated
E-Stop	emergency stop
etc.	et cetera (and so forth)
exh.	exhaust
ext.	external
F	Fahrenheit, female
FHM	flat head machine (screw)
fl. oz.	fluid ounce
flex.	flexible
freq.	frequency
FS	full scale
ft.	foot, feet
ft. lb.	foot pounds (torque)
ft./min.	feet per minute
ftp	file transfer protocol
g	gram
ga.	gauge (meters, wire size)
gal.	gallon
gen.	generator
genset	generator set
GFI	ground fault interrupter
GND, ⏚	ground
gov.	governor
gph	gallons per hour
gpm	gallons per minute
gr.	grade, gross
GRD	equipment ground
gr. wt.	gross weight
H x W x D	height by width by depth
HC	hex cap
HCHT	high cylinder head temperature
HD	heavy duty
HET	high exhaust temp., high engine temp.
hex	hexagon
Hg	mercury (element)
HH	hex head
HHC	hex head cap
HP	horsepower
hr.	hour
HS	heat shrink
hsg.	housing
HVAC	heating, ventilation, and air conditioning
HWT	high water temperature
Hz	hertz (cycles per second)
IBC	International Building Code
IC	integrated circuit
ID	inside diameter, identification
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IMS	improved motor starting
in.	inch
in. H_2O	inches of water
in. Hg	inches of mercury
in. lb.	inch pounds
Inc.	incorporated
ind.	industrial
int.	internal
int./ext.	internal/external
I/O	input/output
IP	internet protocol
ISO	International Organization for Standardization
J	joule
JIS	Japanese Industry Standard
k	kilo (1000)
K	kelvin
kA	kiloampere
KB	kilobyte (2^{10} bytes)
KBus	Kohler communication protocol
kg	kilogram

kg/cm^2	kilograms per square centimeter
kgm	kilogram-meter
kg/m^3	kilograms per cubic meter
kHz	kilohertz
kJ	kilojoule
km	kilometer
kOhm, kΩ	kilo-ohm
kPa	kilopascal
kph	kilometers per hour
kV	kilovolt
kVA	kilovolt ampere
kVAR	kilovolt ampere reactive
kW	kilowatt
kWh	kilowatt-hour
kWm	kilowatt mechanical
kWth	kilowatt-thermal
L	liter
LAN	local area network
L x W x H	length by width by height
lb.	pound, pounds
lbm/ft^3	pounds mass per cubic feet
LCB	line circuit breaker
LCD	liquid crystal display
LED	light emitting diode
Lph	liters per hour
Lpm	liters per minute
LOP	low oil pressure
LP	liquefied petroleum
LPG	liquefied petroleum gas
LS	left side
L_{wa}	sound power level, A weighted
LWL	low water level
LWT	low water temperature
m	meter, milli (1/1000)
M	mega (10^6 when used with SI units), male
m^3	cubic meter
$m^3/hr.$	cubic meters per hour
$m^3/min.$	cubic meters per minute
mA	milliampere
man.	manual
max.	maximum
MB	megabyte (2^{20} bytes)
MCCB	molded-case circuit breaker
MCM	one thousand circular mils
meggar	megohmmeter
MHz	megahertz
mi.	mile
mil	one one-thousandth of an inch
min.	minimum, minute
misc.	miscellaneous
MJ	megajoule
mJ	millijoule
mm	millimeter
mOhm, mΩ	milliohm
MOhm, MΩ	megohm
MOV	metal oxide varistor
MPa	megapascal
mpg	miles per gallon
mph	miles per hour
MS	military standard
ms	millisecond
m/sec.	meters per second
mtg.	mounting
MTU	Motoren-und Turbinen-Union
MW	megawatt
mW	milliwatt
μF	microfarad
N, norm.	normal (power source)
NA	not available, not applicable
nat. gas	natural gas
NBS	National Bureau of Standards
NC	normally closed
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
Nm	newton meter
NO	normally open
no., nos.	number, numbers
NPS	National Pipe, Straight
NPSC	National Pipe, Straight-coupling
NPT	National Standard taper pipe thread per general use
NPTF	National Pipe, Taper-Fine
NR	not required, normal relay
ns	nanosecond
OC	overcrank
OD	outside diameter
OEM	original equipment manufacturer
OF	overfrequency
opt.	option, optional
OS	oversize, overspeed
OSHA	Occupational Safety and Health Administration
OV	overvoltage
oz.	ounce
p., pp.	page, pages
PC	personal computer
PCB	printed circuit board
pF	picofarad
PF	power factor
ph., ∅	phase
PHC	Phillips® head Crimptite® (screw)
PHH	Phillips® hex head (screw)
PHM	pan head machine (screw)
PLC	programmable logic control
PMG	permanent magnet generator
pot	potentiometer, potential
ppm	parts per million
PROM	programmable read-only memory
psi	pounds per square inch
psig	pounds per square inch gauge
pt.	pint
PTC	positive temperature coefficient
PTO	power takeoff
PVC	polyvinyl chloride
qt.	quart, quarts
qty.	quantity
R	replacement (emergency) power source
rad.	radiator, radius
RAM	random access memory
RDO	relay driver output
ref.	reference
rem.	remote
Res/Coml	Residential/Commercial
RFI	radio frequency interference
RH	round head
RHM	round head machine (screw)
rly.	relay
rms	root mean square
rnd.	round
RO	read only
ROM	read only memory
rot.	rotate, rotating
rpm	revolutions per minute
RS	right side
RTDs	Resistance Temperature Detectors
RTU	remote terminal unit
RTV	room temperature vulcanization
RW	read/write
SAE	Society of Automotive Engineers
scfm	standard cubic feet per minute
SCR	silicon controlled rectifier
s, sec.	second
SI	*Systeme international d'unites,* International System of Units
SI/EO	side in/end out
sil.	silencer
SMTP	simple mail transfer protocol
SN	serial number
SNMP	simple network management protocol
SPDT	single-pole, double-throw
SPST	single-pole, single-throw
spec	specification
specs	specification(s)
sq.	square
sq. cm	square centimeter
sq. in.	square inch
SMS	short message service
SS	stainless steel
std.	standard
stl.	steel
tach.	tachometer
TB	terminal block
TCP	transmission control protocol
TD	time delay
TDC	top dead center
TDEC	time delay engine cooldown
TDEN	time delay emergency to normal
TDES	time delay engine start
TDNE	time delay normal to emergency
TDOE	time delay off to emergency
TDON	time delay off to normal
temp.	temperature
term.	terminal
THD	total harmonic distortion
TIF	telephone influence factor
tol.	tolerance
turbo.	turbocharger
typ.	typical (same in multiple locations)
UF	underfrequency
UHF	ultrahigh frequency
UIF	user interface
UL	Underwriter's Laboratories, Inc.
UNC	unified coarse thread (was NC)
UNF	unified fine thread (was NF)
univ.	universal
URL	uniform resource locator (web address)
US	undersize, underspeed
UV	ultraviolet, undervoltage
V	volt
VAC	volts alternating current
VAR	voltampere reactive
VDC	volts direct current
VFD	vacuum fluorescent display
VGA	video graphics adapter
VHF	very high frequency
W	watt
WCR	withstand and closing rating
w/	with
WO	write only
w/o	without
wt.	weight
xfmr	transformer

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