ASCO Power Technologies®

ASCO SourcePacT Source Isolation Switch Controller

User Guide

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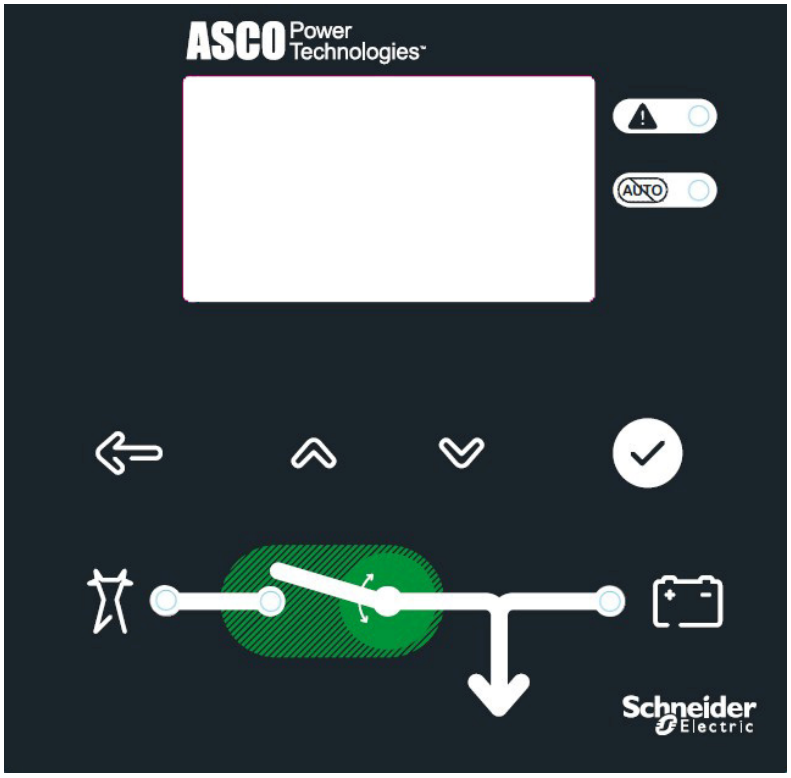

Schneider Electric

Legal Information

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Safety Information

Important information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that accompany this symbol to avoid possible injury or death.

⚠DANGER

DANGER indicates a hazardous situation which, if not avoided,
will result in death or serious injury

⚠WARNING

WARNING indicates a hazardous situation which, if not avoided,
could result in death or serious injury

⚠CAUTION

CAUTION indicates a hazardous situation which, if not avoided,
could result in minor or moderate injury

NOTICE

NOTICE is used to address practice not related to physical injury. The safety alert symbol shall not be used with the signal word

Please note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by ASCO POWER TECHNOLOGIES for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved. Electrical equipment should be transported, stored, installed and operated only in the environment for which it is designed.

Safety Precautions

⚠DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E or NOM-029-STPS-2011.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Practice lock-out/tag-out procedures according to OSHA requirements.
- Handle this equipment carefully and install, operate, and maintain it correctly in order for it to function properly. Neglecting fundamental installation and maintenance requirements may lead to personal injury, as well as damage to equipment or other property.
- Carefully inspect your work area and remove any tools and objects left inside the equipment.
- Replace all devices, doors, and covers before turning on power to this equipment.
- All instructions in this manual are written with the assumption that the customer has taken these measures before performing maintenance or testing.

Failure to follow these instructions will result in death or serious injury.

⚠CAUTION

POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY

- Change default passwords to help prevent unauthorized access to device settings and information.
- Disable unused ports/services and default accounts, where possible, to minimize pathways for malicious attacks.
- Place networked devices behind multiple layers of cyber defenses (such as firewalls, network segmentation, and network intrusion detection and protection).
- Use cyber security best practices (for example: least privilege, separation of duties) to help prevent unauthorized exposure, loss, modification of data and logs, interruption of services, or unintended operation.

Failure to follow these instructions can result in injury or equipment damage.

To avoid severe equipment damage, the external Battery Energy Storage System (BESS) deployed with this Source Isolation Switch (SIS) must have automatic shutdown capabilities, and the complete electrical installation must have appropriate upstream and/or downstream protective devices.

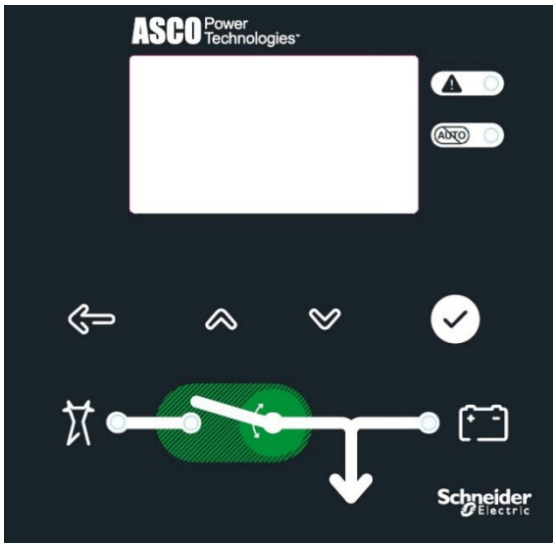
Refer to the outline and wiring drawings provided with the SIS for all installation and connection details and accessories.

Refer to the Installation Manual provided with the SIS for installation, functional testing, and device troubleshooting.

Controller Overview

The SourcePacT Source Isolation Switch (SIS) electronic controller handles the condition sensing, event timing, and system control functions for the product. This microprocessor-based controller includes a front-panel, external user interface (Figure 1). Voltage pickup and dropout settings, time delay settings, and various other system parameters can be made through the series of menus available on this user interface. System operation should be conducted with the external enclosure door closed for convenience and safety.

Figure 1. Source Isolation Switch External User Interface



The user interface includes a graphic display, control buttons, and status indicator lights. Five (5) buttons provide access to all the monitoring, control, settings and functions. The five lights indicate the status of the source acceptability, isolation switch position, and system Alarms. The messages presented on the user display are arranged in three levels. When parameter updates are desired, access to some of the menu screens require entering a passcode / PIN (indicated by a closed padlock symbol).

Up-down arrows buttons

The Up and Down arrow buttons are used to navigate through the menu settings. These buttons also allow the user to increase and decrease a parameter value while in the settings level screens.

Enter/Save settings button (see page 12 for *Are you sure?* screen)

The Enter/Save settings button moves from the status level to the Main Menu level and other levels. It is also used to select a parameter and to enter or save a new setting.

Back button (see page 12 for *Are you sure?* screen)

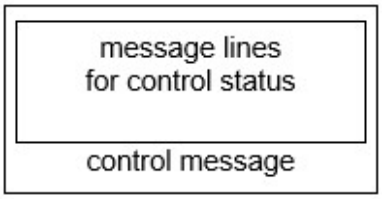
The back button ignores a change before it is confirmed. It also returns to the previous menu status level.

Isolation button (see page 12 for *Are you sure?* screen)

The central Isolation button has several functions. The default function is Isolation Test. The screen message will indicate the button function, including:

- Isolation test function causes the SIS to sequence through opening the isolation switch, enabling and disabling the Emergency power source, and closing the isolation switch.
- Bypass timer function cancels an active time delay.
- Abort function cancels a pending operation

Figure 2. Control Status / Home Screen



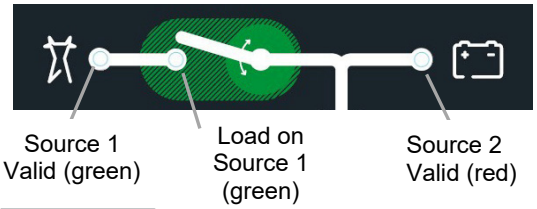
See page 18 for **Control Messages and their Meanings.**

Isolation switch status lights

There are three (3) status lights along the switch source icons on the user interface panel. Each indicator light is illuminated when:

- Source 1 Valid (left green light)
- Source 2 Valid (right red light)
- Isolation Status (Source 1 connected to load, green light)

Figure 3. Isolation switch status lights



Alert light (indicator light is illuminated when):

- Any Alert condition turns on this light.

Read the display for more information.

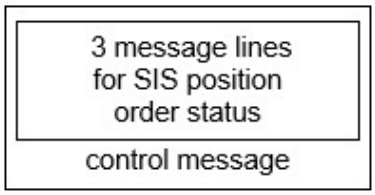
System Not in Automatic mode light
(the indicator light is illuminated).

Status Information

- If the SIS experiences an overcurrent event, due to some Load problem, and the isolation switch opens, the SIS Controller will not be able to control (close) the switch. A red plunger will pop out on the upper left corner of the isolation switch face and an error message will appear on the user interface display panel. The user must push in the red plunger and acknowledge the error message before the SIS Controller will be able to close the switch. It is highly recommended that the user addresses the issue that caused the overcurrent event before performing these recovery actions.

The system controller display panel provides the status of both power sources (Source 1 and Source 2) and the position of the Isolation switch. Press the Up or Down arrow buttons to navigate through screens. No password is required to navigate through these screens.

Figure 4. Status and position screen



SIS Status Screen

The SIS status is presented on the home screen. It shows the present status of the SIS including Isolation sequence status, running timers, status of a connected source, and the position of the SIS. A control message appears below the status messages. The control message instructs the user on what action is available. All other screens automatically return to the SIS Status screen (home screen) after five minutes of inactivity.

Metering Screen

One of several metering screens is provided. It shows the RMS voltage and frequency readings of the power sources.

Alarm Screen

On this menu, an active alarm message appears or *No active alarms*. A control message appears below the alarm message. If an active alarm must be acknowledged, the screen stays on until the user presses the Enter/Save button. Some alarms are self-clearing.

Controller Screen

Here, the controller information, name, location, present date, and time appear.

Source Acceptability

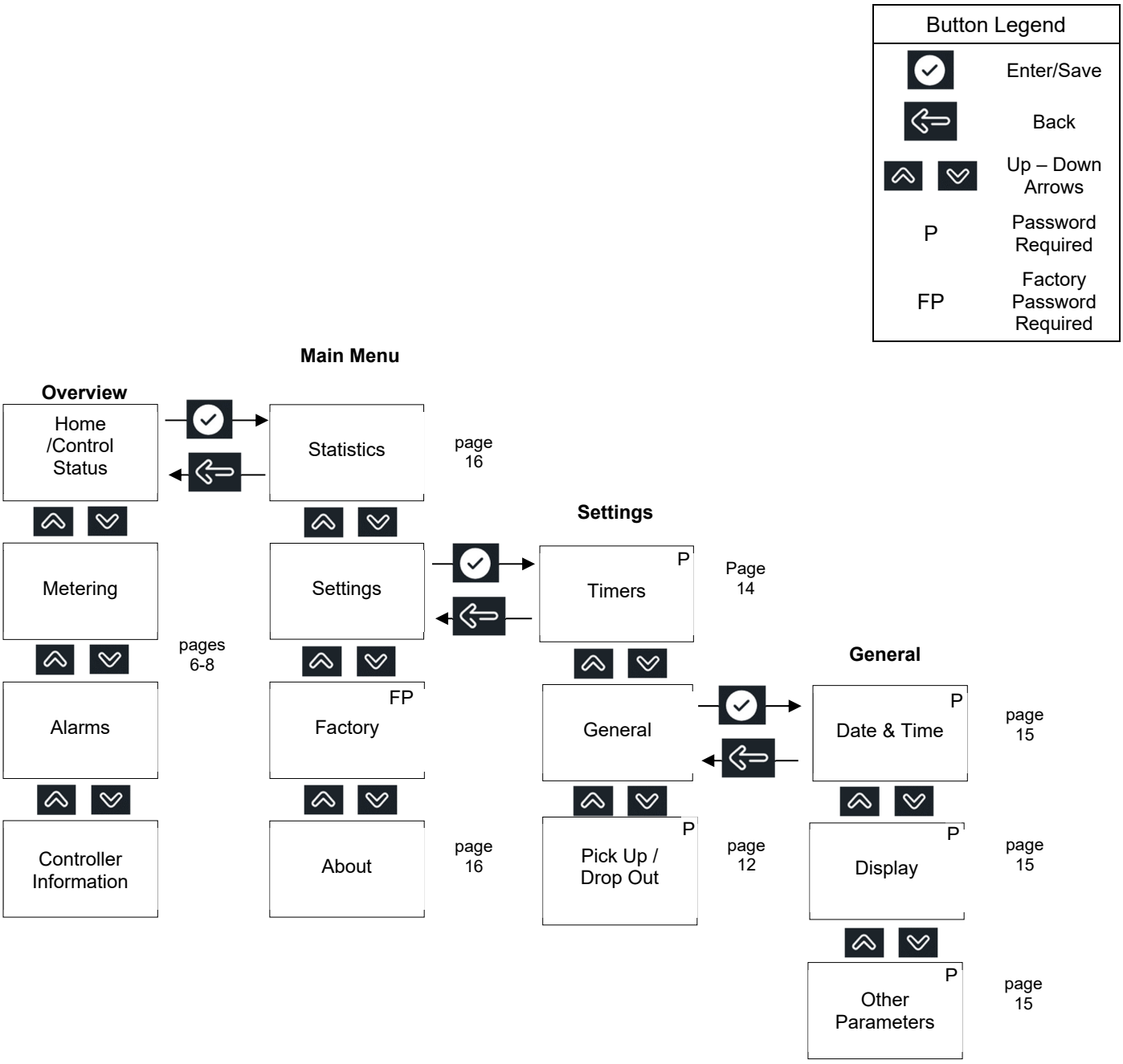
The System Controller considers a source not valid if any of these conditions are true:

- Any phase of the source voltage is less than the voltage dropout setting for more than the Isolate Delay setting.
- Any phase of the source voltage is greater than the over voltage (OV) setting for more than 3 seconds.
- Frequency of the source is less than the frequency dropout setting for more than Isolate Delay setting.
- Frequency of the source is greater than over-frequency (OF) setting for more than 3 seconds.

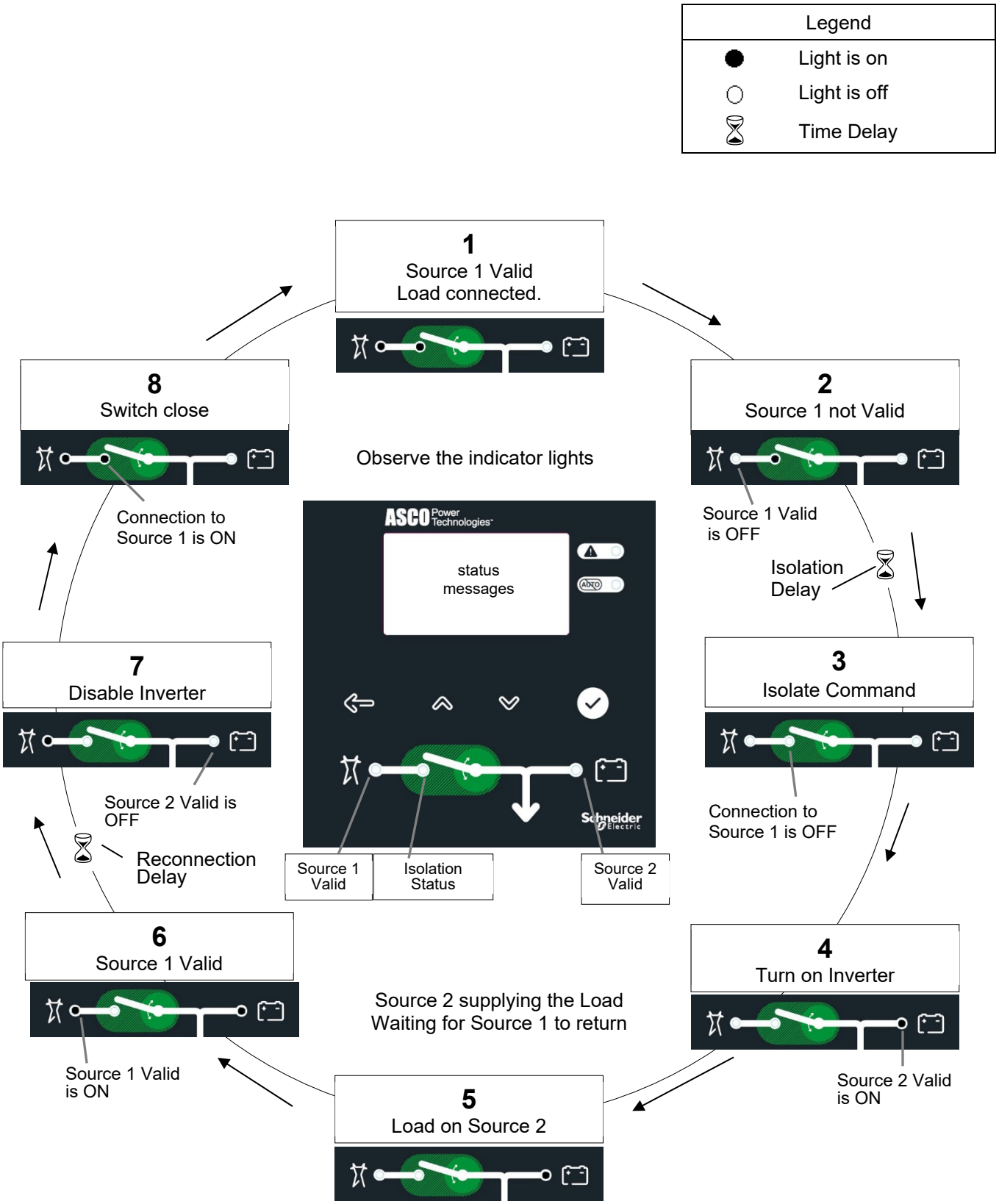
The System Controller considers a source valid again when all these conditions are true:

- Each phase voltage is greater than the Voltage Pickup setting.
- Each phase voltage is less than the over-voltage setting by 2% of nominal.
- The frequency of the source is greater than the frequency pickup setting.
- Frequency is less than the over-frequency setting by 2% of nominal.

Screen Navigation



Automatic Isolation Sequence of Operation – Source 1 Failure



Settings Overview (Main Menu ⇨ Settings)

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- Use precaution as changes in these settings may affect the normal operation of the Isolation switch.
- These changes could allow the load circuits to remain connected to an inadequate source.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Change a Setting

The SIS settings can be displayed and changed via the user interface. Some settings may require a password.

1. On the SIS Status Screen, press the Enter/Save button to display the Main Menu screen.
2. On the **Main Menu** screen, press the Up or Down arrow buttons to select **Settings**, then press the Enter/Save button.
3. On the **Settings** screen, press the Up or Down arrow buttons to select a parameter, then press the Enter/Save button.

To change a setting in the Controller:

1. Navigate to the settings menu screen that you want to change.
2. Press the Enter/Save settings button to start the first field blinking. If required, enter the password.
3. Press the Up or Down arrow buttons to change the flashing digit(s) or word and press the Enter/Save settings button to move to the next field.
4. Repeat step 3 until all the fields for that parameter have been entered.

NOTE: If a field is blinking, information must be entered. The Back button will end the editing session.

Password

The default password is 1111 (see page 15).

If **Enter Password** displays, you must enter the correct password first.

Use the Up and Down arrow buttons to change the flashing digit of the password. Press the Enter/Save settings button to move to the next digit (left to right). The password is accepted when all four digits have been entered correctly and the Enter/Save settings button is pressed.

If *Login Error Invalid Password* displays, press the Enter/Save settings button to reenter the password.

Once the correct password is entered, you can change the settings on the selected screen.

NOTE: Once the password is entered, it will stay unlocked for 5 minutes so that you do not have to keep entering it. To save time, plan to make all your settings at one time.

If no password is desired, set the password to 0000. This password unlocks the controller so that anyone can change the settings without entering a password. To isolate the load, however, the *Are you sure?* screen appears.

Are you sure?

Once the correct password is entered, the controller stays unlocked for 5 minutes. During that time if you press the isolation button, the ***Are You Sure?*** screen appears (instead of *Enter Password*).

You can:

- press the Enter/Save button to confirm (commit) load isolation, or
- press the Back button to cancel the load isolation operation.

Voltage and Frequency Settings (Main Menu ⇨ Settings ⇨ Pick Up / Drop Out)

Unless otherwise specified on the order, the voltage and frequency settings are set at the factory to the default values. See Table 1. If a setting must be changed, follow the procedure below. Some settings may require a password.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- Use precaution as changes in these settings may affect the normal operation of the Isolation switch.
- These changes could allow the load circuits to remain connected to an inadequate source.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Table 1. Voltage and Frequency Settings

Description	**Settings**	**Default Setting** % of nominal	**Adjustment Range** increments of 1%	**Display Screen** (see below)
Source 1 Voltage	Dropout	85%	70 to 98%	**S1 Volt DO**
	Pickup	90%	85 to 100%	**S1 Volt PU**
	Over Voltage	off	off, 102 to 116%	**S1 Volt OV**
Inverter Voltage	Dropout	75%	70 to 98%	**InvVolt DO**
	Pickup	90%	85 to 100	**InvVolt PU**
	Over Voltage	off	off, 102 to 116%	**InvVolt OV**
Source 1 Frequency	Dropout	85%	85 to 98%	**S1 Freq DO**
	Pickup	86%	86 to 100%	**S1 Freq PU**
	Over Frequency	off	off, 101 to 111%	**S1 Freq OF**
Inverter Frequency	Dropout	85%	85 to 98%	**InvFreq DO**
	Pickup	95%	86 to 100%	**InvFreq PU**
	Over Frequency	off	off, 101 to 111%	**InvFreq OF**

The voltage and frequency settings can be displayed and changed from the user interface. See Table 1. Some settings may require a password.

1. On the **Main Menu** press the Up or Down arrow buttons to select **Settings**, then press the Enter/Save button to move to the ***Settings*** level of menus.
2. Press the Up and Down arrow buttons to highlight **Pickup / Dropout**, then press the Enter/Save settings button to move to the *PU/DO* display.
3. Then you can press the Up and Down arrow buttons to highlight the voltage and frequency settings screens. An overview explanation of the settings is listed in Table 2.

Table 2. Source Parameter Settings Definitions

Description	**Explanation**
Source 1 Voltage	This screen shows dropout, pickup, and over-voltage settings for Source 1. They are in percentage of the nominal voltage and volts rms.
Inverter Voltage	This screen shows dropout, pickup, and over-voltage settings for Inverter. They are in percentage of the nominal voltage and volts rms.
Source 1 Frequency	This screen shows dropout, pickup, and over-frequency settings for Source 1. They are in percentage of the nominal frequency and Hz.
Inverter Frequency	This screen shows dropout, pickup, and over-frequency settings for Inverter They are in percentage of the nominal frequency and Hz.

Timer Settings (Main Menu ⇨ Settings ⇨ Timers)

Unless otherwise specified on the order, the timer (time delay) settings are set at the factory to the default values. See Table 3. If a setting must be changed, carefully follow the procedure below. Some settings may require a password.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- Use precaution as changes in these settings may affect the normal operation of the Isolation switch.
- These changes could allow the load circuits to remain connected to an inadequate source.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Table 3. Timer Definitions and Settings

Timer	Default Setting	Adjustment Range 1 sec. increment	Display Screen (see below)
Isolate Delay	3 seconds	0 to 6 sec	**Isolate Delay**
Inverter Fail	4 seconds	0 to 6 sec	**Inverter Fail**
Reconnect Delay (Fail)	30 minutes	0 to 60 min 59 sec	**Reconn Delay F**
Reconnect Delay (Test)	30 seconds	0 to 9 hours 59 min 59 sec	**Reconn Delay T**
Inverter-On Timeout	3 seconds	0 to 6 sec	**Inv-On Timeout**

The timer (time delay) settings can be displayed and changed from the user interface. See Table 2. Some settings may require a password.

1. On the **Main Menu** press the Up or Down arrow buttons to highlight **Settings**, then press the Enter/Save button to move to the ***Settings*** menus.
2. Press the Up or Down arrow buttons to highlight **Timers**, then press the Enter/Save settings button to move to the list of timers.

Then you can press the Up or Down arrow buttons to highlight the timer settings displays. An overview explanation of the settings is listed in Table 4.

Table 4. Timer and Delay Definitions

Display Screen	Explanation
Isolate Delay	Ignores momentary Source 1 failures
Inverter Fail	Ignores momentary Source 2 failures
Reconnect Delay (Fail)	Delay timer before starting transition from Source 2 to Source 1 if Source 1 becomes valid (When Source 1 is valid again)
Reconnect Delay (Test)	Delay timer before starting transition from Source 2 to Source 1 if Source 1 becomes valid (when isolation button is pressed).
Inverter-On Timeout	Failure to read valid voltage from Source 2, timer turns on alert light when the timer expires

General Settings (Main Menu ⇨ Settings ⇨ General)

Unless otherwise specified on the order, the general settings are set at the factory to the default values as shown in Table 5.

Table 5. General Settings

Parameter	Sub Level	Default Setting	Adjustment Range	Display Screen (see below)
Date & Time	Time	hh:mm:ss	hh:mm:ss	hh:mm:ss
	Date	day mm/dd/yy	day mm/dd/yy	day mm/dd/yy
	Format	mm/dd/yy	mm/dd/yy yy/mm/dd dd/mm/yy	mm/dd/yy yy/mm/dd dd/mm/yy
	Daylight Savings Time	Off	Off Apr/Oct Mar/Nov	Off Apr/Oct Mar/Nov
Display	Language	English	English	English
	Contrast	15	1 to 20	1 to 20
	Backlight	On	On, Off, 1 to 59 min	On, Off, 1 to 59 min
	Volt Label	Vab/bc/ca	Vab/bc/ca Uab/bc/ca Uuv/vw/wu	Vab/bc/ca Uab/bc/ca Uuv/vw/wu
Other Parameters	Password	1111	a-z, A-Z, 0-9 4 characters	1111

The general settings can be displayed and changed from the user interface. See Table 3. If a setting must be changed, follow the procedure below. Some settings may require a password.

1. From the **Main Menu** press the Up or Down arrow buttons to highlight **Settings**, then press the Enter/Save button to move to the ***Settings*** menus.
2. Press the Up or Down arrow buttons to highlight **General**, then press the Enter/Save settings button to move to the list of general settings.
3. Then you can press the Up or Down arrow buttons to highlight the general settings displays. An overview explanation of the settings is listed in Table 6.

Table 6. General Settings Description

Parameter	Explanation
Date & Time	This screen allows the user to change the time, date, date format, and daylight savings time.
Display	This screen selects the language for messages (English is the default language). Screen contrast can be set. Three voltage phase labels can be set.
Other Parameters	This screen allows the user to change the password (default password is 1111).

⚠DANGER

HAZARD OF ELECTRIC SHOCK

- Dangerous voltage can cause shocks, burns, and/or death.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

View Statistics (Main Menu ⇨ Statistics)

Statistics is used to view Source Isolation Switch history and statistics.

The statistics log can be viewed from the user interface.

1. From the **Main Menu** display press the Up or Down arrow buttons to highlight **Statistics**, then press the Enter/Save button to view the list.
2. Press the Up or Down arrow buttons to scroll through the **Statistics**.

Refer to **Appendix** (page 22) for a list of the statistics kept.

View About (Main Menu ⇨ About)

About is used to view controller information; use the Up or Down buttons to navigate the *About* list.

The *About* screen can be viewed from the user interface.

1. From the **Main Menu** screen press the Up or Down arrow buttons to highlight **About**, then press the Enter/Save button to view the ***About*** screen.
2 Press the Up or Down arrow buttons to scroll through the **About** screens.

About Menu

The user interface display shows the nominal voltage and frequency, the Isolation switch ampere size, the type of Isolation switch, the Isolation switch name, location, the software version, bootloader version, and the serial number.

Screen Messages and their Meanings

The messages in Table 7 (in alphabetical order) can appear on the user interface display:

Table 7. User Screen Messages

Screen Message	Meaning or Explanation	Refer to Pages
Are you sure?	This may appear when assurance is required for the new operation.	6, 12
Engaging Inverter	The controller is waiting for Source 2 to become valid that it can continue in the Isolation sequence.	19
Invalid Password	An incorrect password has been entered.	12
Inverter Off-Line	The Inverter has failed supplying a valid voltage to the load.	
Inverter Online	Source 2 is in grid forming mode	
Inverter-On Timeout	Controller is unable to accept Source 2 within the time specified.	14
Isolation ➔ S2 Inhibited	Load transition to Source 2 is inhibited.	
Isolation Delay	Source 1 failure time delay is running. The time remaining is shown.	10
Load Isolated	The load is isolated from Source 1.	19
No Active Alarms	There are no active alarms.	8
Reconnect Delay	The Source 2 to Source 1 reconnection time delay is running. The time remaining is shown.	14
Source Connected	The load is connected to Source 1.	11
S1 Failed / Under Voltage	Source 1 is not valid	18
S1 OK	Source 1 is valid	18
Sources Not Acceptable	The controller has powered up and has recognized an error condition (both sources are not valid).	See HELP in INDEX
Switch Position Unknown	The controller has powered up and has recognized an error condition (cannot determine switch position).	See HELP in INDEX

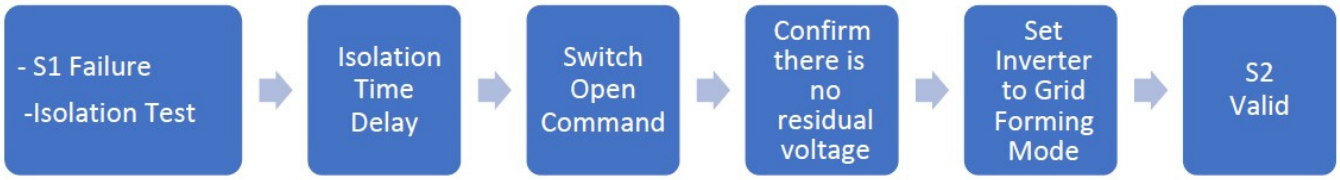
Control Messages and their Meanings

The control messages in Table 8 (in alphabetical order) can appear on the controller display:

Table 8. User Action Messages

Control Message	Meaning or Explanation	Refer to Pages
Enter Password	A password is required to proceed further in the change process. Enter the correct password to continue or press the Back button.	12
Press  Bypass Timer	Press the isolation button to cancel a running time delay when any of these screens appear: • S1 OK, S2 ➔S1 timer • S1 failed, S1 fail timer • S1 failed, S1 ➔ S2 timer • S1 failed, S2 ➔ S1 timer• • test mode, S1 ➔ S2 timer • test mode, S2 ➔S1 timer	
Press  Test Isolation	Press the isolation button to isolate the load when any of these screens appear: • S1 OK, load on S1, waiting for transiton signal	Isolation Switch Installation Manual
Press  to acknowledge alarms	If an active alarm needs to be acknowledged, the display will be unable to navigate through screens. Note the alarm, then press the Enter button to continue.	6
Press  to Test	Press the isolation button to confirm load transition.	6
Press  to Cancel	Press the Back button to return to a previous menu screen.	6, 9

Automatic Isolation Sequence of Operation



Source 1 Isolation

The sequence for load transition to the Source 2 begins automatically when the controller detects a Source 1 failure or a request to test Isolation.

S1 Failure. Source 1 is considered not valid when any one of four voltage or frequency conditions occur (see page 13).

Isolation Test. The test isolation signal is from the Isolation button.

Isolation Time Delay. This delay prevents nuisance isolation and enabling of Source 2 due to momentary failures of Source 1.

Switch Open Command. The controller begins the isolation sequence by opening the switch.

Confirm there is no residual voltage. Controller will wait for voltage readings on the Load to be safe before starting Source 2.

Set inverter to Grid Forming Mode. OP1 is Energized to tell the Inverter to change into Grid Forming Mode. The controller will wait for a valid voltage from the inverter.

Load Retransfer to Source 1

The sequence for load retransfer to Source 1 begins automatically when the controller detects a restored Source 1.

S1 Restoration. Source 1 is considered valid again when all four voltage and frequency conditions occur (see page 8).

Reconnect Time Delay. Delay on reconnection to Source 1 allows Source 1 to stabilize, If Source 1 fails while this time delay is running, the controller waits for Source 1 again to become valid and restarts the time delay. If the Source 2 fails while this time delay is running, the controller bypasses the time delay for immediate reconnection. The user can also bypass the Reconnect Time Delay by pressing the Isolation button (bypass timer).

There are two values for this timer:

- *Reconnection Delay Failure:* This delay value is set to reconnect the time delay when Source 1 becomes valid.
- *Reconnection Delay Test*: This delay value is set to Reconnect Time Delay when an Isolation Test is requested.

Set Inverter to Grid Tie Mode. Controller de-energizes OP1 to tell the inverter to set into Grid Tie Mode. The controller will wait for voltage readings on load to be safe before reconnecting to Source 1.

Switch Close Command. Controller will close the switch and wait for auxiliary switches to confirm that the switch is closed.

Appendix

⚠DANGER

HAZARD OF ELECTRIC SHOCK OR EXPLOSION

- Hazardous voltage capable of causing shock, burns, or death is used in this switch
- Deenergize both Source 1 and Load power sources before making any changes.

Failure to follow these instructions will result in death or serious injury.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- Do not make any setting changes to DIP switches and/or jumpers while the controller is energized.
- Any change in these settings may affect the normal operation of the Isolation switch.
- This change could allow the load circuits to remain connected to unacceptable voltage source.

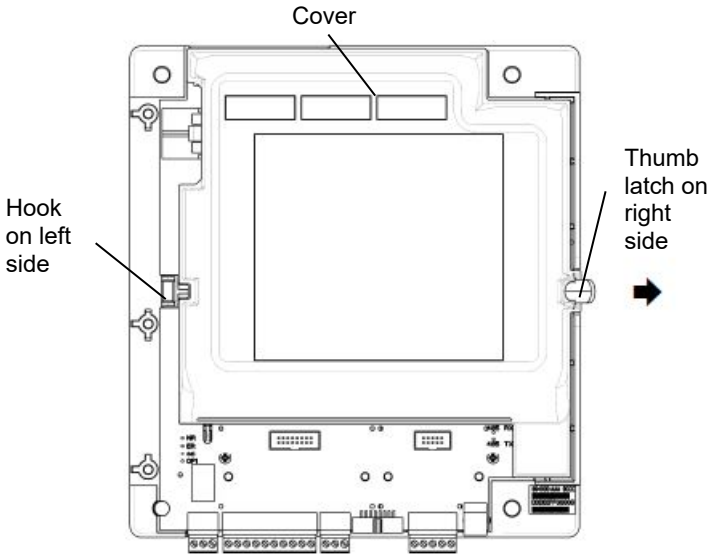
Failure to follow these instructions can result in death, serious injury, or equipment damage

This appendix shows the controller DIP switch settings and jumper block settings for input voltage, frequency, phases, and type of isolation switch used. These controls should only be used by trained technicians from ASCO Power Services, Inc. (1-800-800-2726).

Controller Cover Removal

1. Deenergize the controller.
2. Release the cover by pressing the latch outward on the right side with your thumb. Figure 5.
3. Pull the cover outward and unhook it from the left side.

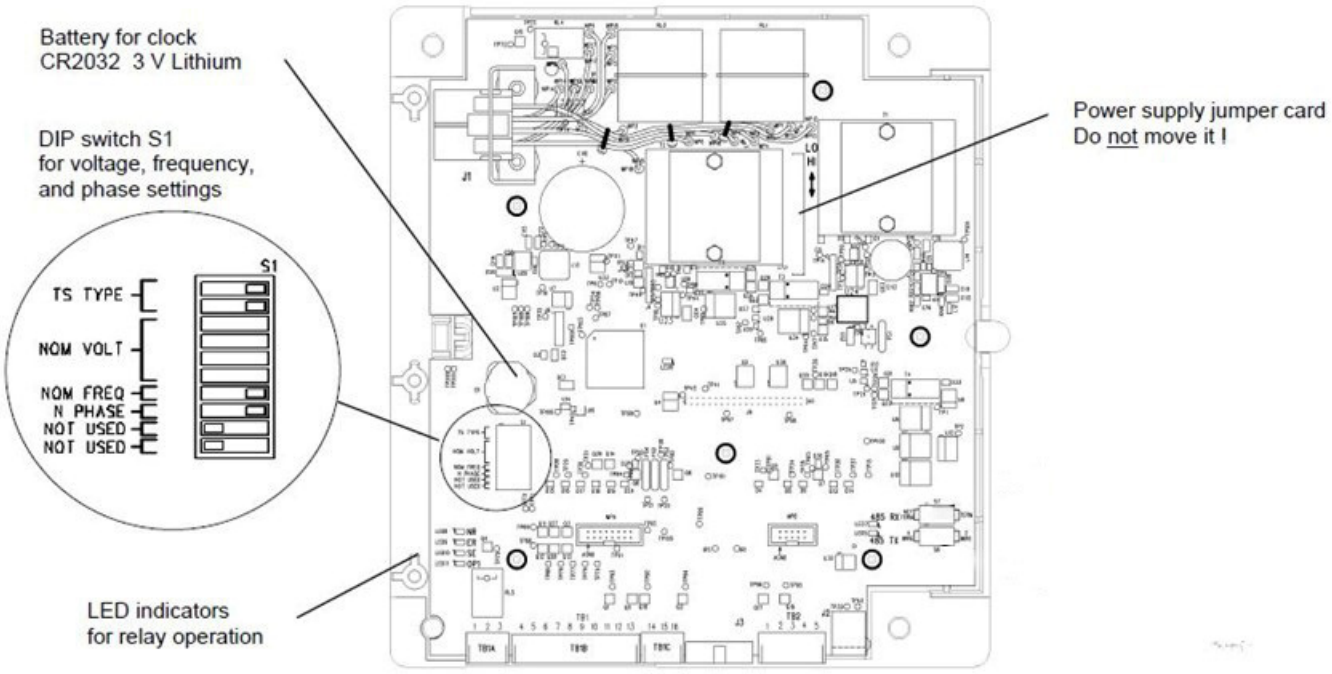
Figure 5. Cover removal.



Controller Cover Installation

1. Position the cover so that the hole on left side engages the hook on the base.
2. Press the cover inward until it latches on the right side. See Figure 5.
3. Reenergize the controller.

Figure 6. Location of DIP switches



Power Supply Jumper Card

Figure 7. Power Supply Jumper Card.

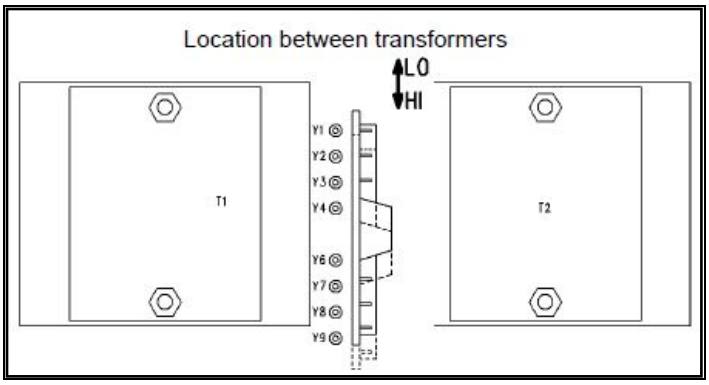


Table A-1 shows the appropriate position of the power supply jumper card for different controller part numbers and system voltages.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- To avoid permanent damage, be certain that the voltage setting matches the isolation switch system voltage.
- Do not apply HI voltage with the jumper card in the LO position.

Failure to follow these instructions can result in death, serious injury, or equipment damage

Table A-1. Position of Jumper Card

Controller Part No.	Position of Jumper Card for system voltage	
	Up ↑ (LO) toward the top	Down ↓ (HI) toward the bottom
894000002	208V, 220V 230V, 240V	380V, 400V, 415V 440V, 460V, 480V

Isolation Switch Type Setting

DIP switch Source 1, actuators 1 and 2 select the mode of the SIS used with the controller (Automatic or Commanded). See Table A-2.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- To avoid permanent damage, be certain that the voltage setting matches the isolation switch system voltage.

Failure to follow these instructions can result in death, serious injury, or equipment damage

Table A-2. Isolation switch type DIP switch Source 1

Source 1 DIP	Automatic	Commanded
1	⇨ on	⇨ on
2	⇨ on	⇦ off

Frequency Setting

DIP switch Source 1 actuator 7 selects either 50 or 60 Hz source frequency sensing. See Table A-3.

Table A-3. Source Frequency DIP switch Source 1, actuator 7

Source 1 DIP	50 Hz	60 Hz
7	⇦ off	⇨ on

Phase Configuration Setting

DIP switch Source 1 actuator 8 selects either 1 phase or 3 phase for the Source 1 source. DIP switch Source 1, actuator 9 selects either 1 phase or 3 phase for Source 2.

Table A-4. Phase Configuration position DIP switch Source 1, actuator 8 and 9

Source 1 DIP	1 Phase	3 Phase
8	⇦ off	⇨ on
9	⇦ off	⇨ on

Voltage Setting

DIP switch Source 1, actuators 3, 4, 5, and 6 select the voltage setting. See Table A-5.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- To avoid permanent damage, be certain that the voltage setting matches the isolation switch system voltage.

Failure to follow these instructions can result in death, serious injury, or equipment damage

Table A-5. Voltage setting, DIP switch Source 1, actuators 3, 4, 5, and 6.

Source 1 DIP switch actuators	480
3	⇦
4	⇦
5	⇨
6	⇨

Statistics Kept

The following list of the statistics that are displayed. (see Table A-6). The meaning is shown at the right. See page 16 for how to view the statistics kept

Table A-6. Statistics

Displayed Statistics	Meaning
SIS Total Isolations	Number of times the SIS has isolated the load from Source 1

California Proposition 65 Warning—Lead and Lead Compounds

Advertencia de la Proposición 65 de California—Plomo y compuestos de plomo

Avertissement concernant la Proposition 65 de Californie—Plomb et composés de plomb

WARNING: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov

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