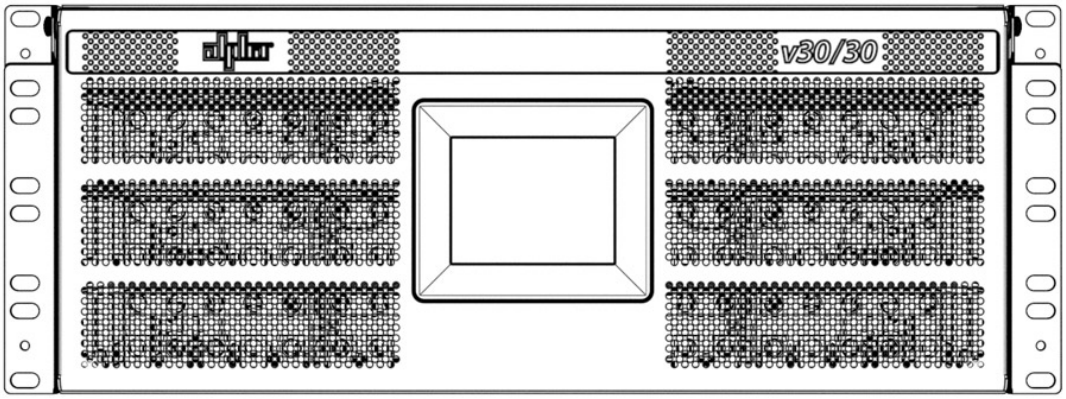
an EnerSys® company

v30/30™ Distribution Panel

For Telecom Broadband

Technical Manual

Effective: January 2020



Safety Notes

Alpha Technologies Services, Inc. considers customer safety and satisfaction its most important priority. To reduce the risk of injury or death and to ensure continual safe operation of this product, certain information is presented differently in this manual. Alpha® tries to adhere to ANSI Z535 and encourages special attention and care to information presented in the following manner:

WARNING! GENERAL HAZARD

GENERAL HAZARD WARNING provides safety information to PREVENT INJURY OR DEATH to the technician or user.

WARNING! ELECTRICAL HAZARD

ELECTRICAL HAZARD WARNING provides electrical safety information to PREVENT INJURY OR DEATH to the technician or user.

WARNING! FUMES HAZARD

FUMES HAZARD WARNING provides fumes safety information to PREVENT INJURY OR DEATH to the technician or user.

WARNING! FIRE HAZARD

FIRE HAZARD WARNING provides flammability safety information to PREVENT INJURY OR DEATH to the technician or user.

There may be multiple warnings associated with the call out. Example:

WARNING! ELECTRICAL & FIRE HAZARD

This WARNING provides safety information for both Electrical AND Fire Hazards

CAUTION!

CAUTION provides safety information intended to PREVENT DAMAGE to material or equipment.

***NOTICE**:*

NOTICE provides additional information to help complete a specific task or procedure.

ATTENTION:

ATTENTION provides specific regulatory/code requirements that may affect the placement of equipment and /or installation procedures.

The following sections contain important safety information that must be followed during the installation of the equipment. Read all of the instructions before installing or operating the equipment, and save this manual for future reference.

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C048-781-30 R01, Rev. B

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Disclaimer

Images contained in this manual are for illustrative purposes only. These images may not match your installation. Operator is cautioned to review the drawings and illustrations contained in this manual before proceeding. If there are questions regarding the safe operation of this powering system, please contact Alpha Technologies Services, Inc. or your nearest Alpha representative.

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Contact Information

Sales information and customer service in USA (7AM to 5PM, Pacific Time):	1 800 322 5742
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Table of Contents

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1.0 Purpose and Applicability

The purpose of this document is to detail the installation and operation instructions for the v30/30 distribution panel.

1.1 Product Model

This document applies to the following configurations of the v30/30 distribution panel:

Table 1. v30/30 Model Configuration

PART NUMBER	DESCRIPTION
C016-2040-10	V30/30 Distribution Panel Chassis (w/o Circuit Breaker Modules)

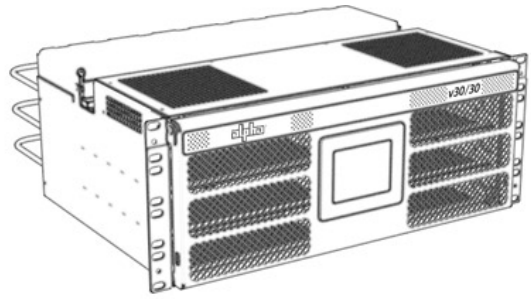


Figure 1. v30/30 Distribution Panel

2.0 Theory of Operation

2.1 Introduction

The v30/30 product model consists of a dual-input 30A/30B breaker position, 4RU distribution panel with 40A connectorized outputs and an advanced touch screen display. Breakers are available for this panel in ratings from 2A up to 30A.

2.2 Features

- Modular design
- 4RU; 19" or 23" rack compatible*
- Two A-side and two B-side inputs; 300A each
- Up to 60 Slimline circuit breaker positions (30A/30B)
- Up to 6 distribution modules with 10 breaker positions each; modules are dual input with 5 breaker positions per side (5/5); 150A maximum current per module input; 35A maximum current per breaker position
- Connectorized outputs; polarized, positive-latching
- LCD touchscreen controller with Ethernet (HTTP, SNMP)
- Per-circuit current monitoring and RedundancyTracker™
- Unmatched safety and reliability

*23 in. rack ear kit required.

3.0 Unpacking and Inspection

The v30/30 breaker panel was carefully packaged at the factory to withstand the normal rigors of shipping. However, you should carefully inspect the box and contents to confirm that no damage has occurred in transit. Most shipping carriers require notification of shipping damage within twenty-four hours of delivery, and it is the responsibility of the recipient to inspect the shipment immediately upon receipt.

3.1 Package Contents

Included with your product are the following items:

- v30/30 distribution panel
- Breaker module assemblies (up to 6 per panel)
- Mounting hardware kit with necessary screws and washers

4.0 Installation

4.1 Installation Preparation

When selecting an installation location, ensure that all of the following conditions are met before proceeding.

4.1.1 Elevated Operating Ambient Temperature

If you install the panel in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, take care to install the equipment in an environment compatible with the maximum ambient temperature (TMA).

4.1.2 Reduced Air Flow

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

4.1.3 Mechanical Loading

Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

4.1.4 Circuit Overloading

Give consideration to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Use appropriate consideration for equipment nameplate ratings when addressing this concern.

4.1.5 Reliable Earthing

Maintain reliable earthing of rack-mounted equipment. Pay particular attention to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

4.1.6 Disconnect Device

A readily accessible disconnect device must be incorporated in the building installation wiring.

4.2 Mounting

***NOTICE**:*

THIS PRODUCT MUST BE INSTALLED WITHIN A RESTRICTED ACCESS LOCATION WHERE ACCESS IS THROUGH THE USE OF A TOOL, LOCK AND KEY, OR OTHER MEANS OF SECURITY, AND IS CONTROLLED BY THE AUTHORITY RESPONSIBLE FOR THE LOCATION. THIS PRODUCT MUST BE INSTALLED AND MAINTAINED ONLY BY QUALIFIED TECHNICIANS.

Step 1. Attach the three cable lacing bars to the threaded inserts found on the rear of the chassis using the included 12-24 hardware (see Figure 2).

Step 2. Secure panel to equipment rack by tightening the included 12-24 hardware into the mounting ears (see Figure 3).

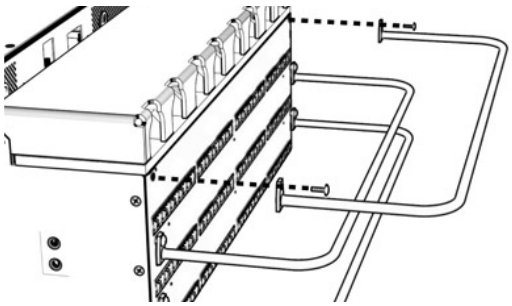


Figure 2. Cable Lacing Bars

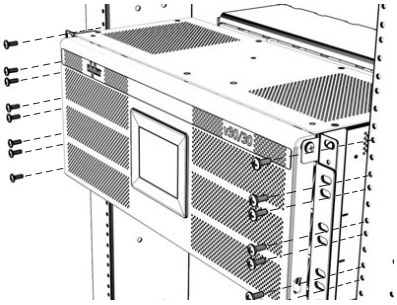


Figure 3. Rack Install

4.3 Chassis Ground

CAUTION!

DO NOT ENERGIZE THE PANEL BEFORE CHASSIS GROUND IS CONNECTED.

The chassis ground is located in the side of the panel. A two hole lug landing position is provided. See table below for termination information. A minimum of #6 AWG chassis ground cable is required.

IMPORTANT: Grounding hardware not included. A properly-sized grounding conductor must be installed per NEC (250.122).

Table 2. Chassis Ground Termination Specifications

TERMINATION TYPE	HOLE/ STUD SIZE	CENTER TO CENTER	RECOMMENDED TORQUE VALUE
Threaded Insert	1/4 in.	5/8 in.	5.83 ft·lbs

Step 1. Secure the ground cable to the chassis by tightening 1/4 in. hardware (see Figure 4).

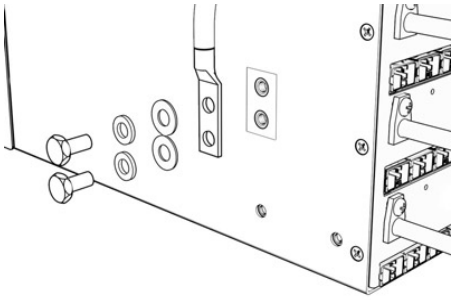


Figure 4. Chassis Ground

4.4 Input Connections

WARNING! ELECTRICAL HAZARD

INPUTS MUST BE PROTECTED BY A LISTED CIRCUIT BREAKER OR BRANCH RATED FUSE. THE CIRCUIT BREAKER OR FUSE MUST BE RATED 375A MAX. MULTIPLE POWER SOURCES ARE PRESENT, ENSURE ALL INPUT POWER FEEDS ARE NOT ENERGIZED BEFORE INSTALLING THEM. ELECTRICAL INSTALLATION SHOULD ONLY BE PERFORMED BY QUALIFIED PERSONNEL WITH PROPER TOOLS AND PROTECTIVE SAFETY EQUIPMENT. FAILURE TO REINSTALL THE BUS SAFETY COVER WILL CREATE AN ELECTRICAL HAZARD.

***NOTICE**:*

MAKE SURE THAT ALL FEEDER CABLES HAVE HEAT SHRINK APPLIED PRIOR TO TERMINATION, AND THAT NO-OXIDE COMPOUND IS APPLIED TO ALL COPPER-TO-COPPER CONNECTIONS.

Table 3. Input Termination Specifications

TERMINATION TYPE	HOLE/ STUD SIZE	CENTER TO CENTER	RECOMMENDED TORQUE VALUE
Threaded Stud	3/8 in.	1 in.	18.75 ft·lbs

Step 1. Flip up the plastic input safety cover to gain access to the HOT (-) and RTN (+) input bus termination locations.

Step 2. Install the RTN (+) cables/lugs to the threaded RTN (+) input studs as shown in Figure 5. Tighten hardware to 250 in-lbs.

Step 3. Install the HOT (-) cables/lugs to the threaded HOT (-) input studs as shown in Figure 6. Tighten hardware to 250 in-lbs.

Step 4. Reinstall the plastic input safety cover from Step 1.

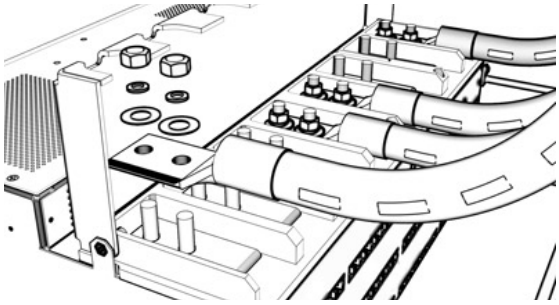


Figure 5. RTN Input Connections

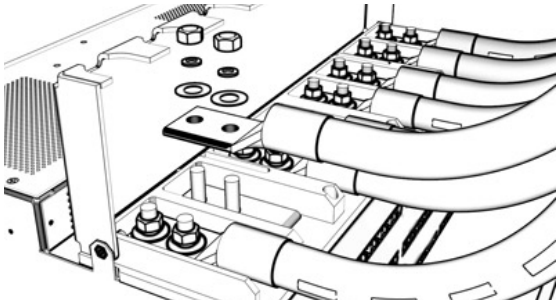


Figure 6. HOT Input Connections

4.5 Alarm Installation

The v30/30 distribution panel includes a Form-C dry alarm contact for remote alarm monitoring. If alarm monitoring is required, a 8p8c (RJ-45) modular jack is provided for alarm connection.

The 8p8c modular jacks are located behind the hinged input bus plastic cover. Refer to mechanical drawings found in Appendix A for more details.

Step 1. Plug in a UTP cable with a TIA/EIA T568B termination into the alarm jack (see Figure 7). Refer to Table 4 below for termination pinout information.

Step 2. Connect the cable to the site alarm monitoring system.

Table 4. Alarm Contact Pinout

PIN 1	PIN 2	PIN 3	PINS 4-8
Major COM	Major N.C	Major N.O	Reserved

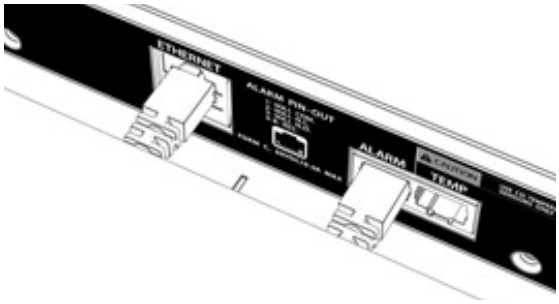


Figure 7. Alarm/Ethernet

4.6 Installing the Network Cable

If remote monitoring over the network is required, complete the following steps to connect the Ethernet module with embedded web server.

NOTE: For initial configuration, it is recommended to use a crossover Cat 5/5e/6 UTP cable to connect a laptop directly to the Ethernet port of the v30/30 panel. If the laptop is configured for Auto MDI-X, a straight-through cable may be used.

Step 1. Connect a Cat 5/5e/6 UTP Ethernet cable from the local network to the Ethernet port on the rear of the panel. Use a TIA/EIA T-568B pinout for the network connection.

4.7 Output Connections

CAUTION!

DO NOT PERFORM THIS STEP ON CIRCUITS WITH BREAKERS INSTALLED. ENSURE NO POWER IS PRESENT ON THE CIRCUIT BEING WIRED BEFORE PROCEEDING.

***NOTICE**:*

SEE TABLE 21 ON PAGE 23 FOR CONNECTORIZED CABLE WHIP ORDERING INFORMATION.

Step 1. Plug in the output cables to the output connection receptacles on the rear of the v30/30 as shown in Figure 8.

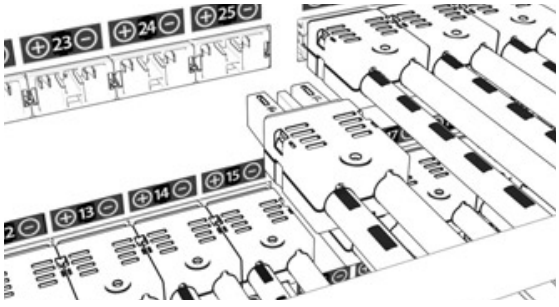


Figure 8. Output Connections

4.8 Circuit Breaker Installation

CAUTION!

ENSURE BREAKERS ARE IN THE OFF POSITION BEFORE INSERTING THEM.

The v30/30 distribution panel offers six removable breaker modules that each can fit up to ten slimline breakers.

Step 1. Lift up the front lid of the v30/30 to access the breaker module compartment. Loosen the captive screws on the circuit breaker module retaining brackets and then lift out of the way (see Figure 9).

Step 2. Insert slimline circuit breakers into the circuit breaker modules, ensuring they are fully seated (see Figure 10).

Step 3. Return the circuit breaker module retaining bracket into the locking position, then tighten the captive screws.

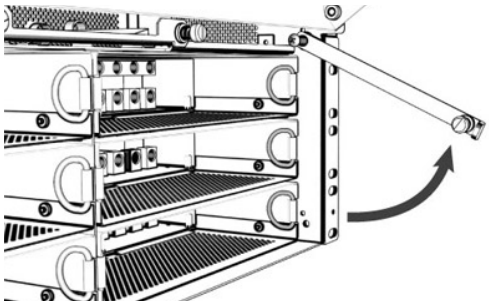


Figure 9. Module Retaining Bracket

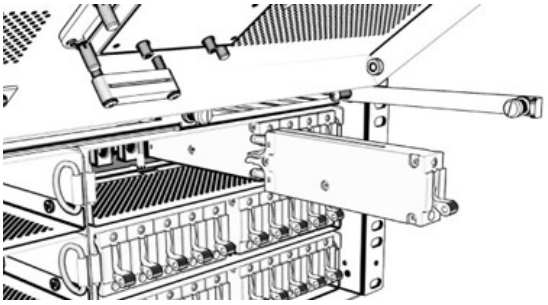


Figure 10. Circuit Breaker Installation

4.9 Polarity Check

The v30/30 includes a set of LED indicators inside of the panel to ensure correct polarity of the input terminations (see Figure 11). A green light indicates correct polarity, while a red light indicates incorrect polarity. To view these LED indicators, lift up the front panel door and look inside the top section of the panel.

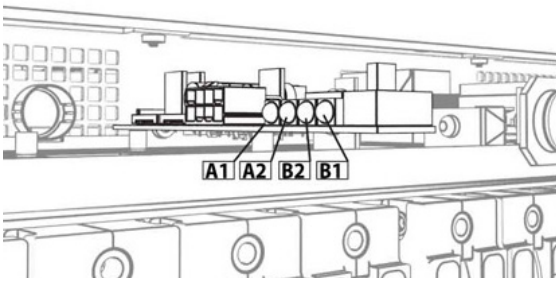


Figure 11. Polarity Check

4.10 Display Power

The v30/30 ships with the display power in the OFF position by default. When the panel is ready to be turned on, lift up the front panel door and carefully reach into the top section of the panel and flip the switch to the right (ON position). See Figure 12.
Note: this switch is located next to LED indicators described above in Section 4.9.

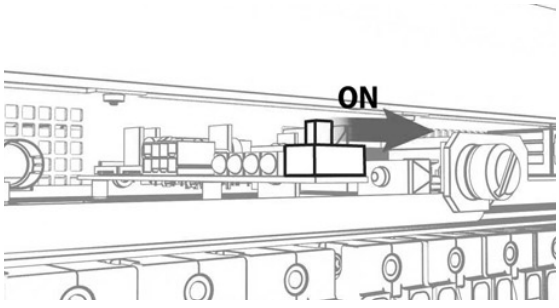


Figure 12. Display Power

5.0 Operation

5.1 Overview

The v30/30 offers an advanced touch-screen display that allows real-time monitoring of breakers and modules.

5.1.1 Firmware Features

Table 5. Bus Features

BUS FEATURES	
DISPLAY	- Displays voltage per bus - Displays total load per bus
CALIBRATION	- Voltage per bus - Load per bus - Adjustable feeder fuse size (100-300A)
ALARMS	- Adjustable overload alarm threshold per bus (40%-100%) - Bus overload - Bus overload Warning (-10% of alarm threshold) - Over voltage (greater than 56.0 V) - Under voltage (less than 47.0 V) - Bus redundancy - Bus redundancy warning

Table 6. Breaker Features

BREAKER FEATURES	
DISPLAY	- Display ampacity per breaker - Display load per breaker
SETTINGS	- Manual offset load per breaker - Set breaker ampacity (0-35A) - Set breaker alarm threshold (40%-100%)
ALARMS	- Adjustable overload alarm threshold per breaker (40%-100%) - Breaker overload - Breaker overload warning (-10% of alarm threshold) - Breaker not inventoried - Breaker redundancy - Breaker redundancy warning

5.1.1 Firmware Features (Continued)

Table 7. Other Features

OTHER FEATURES	
Bus and Module Auto Inventory	- System automatically takes bus and module inventory
Display Brightness Adjustment	- Allows user to change screen brightness
Clear Memory Options	- Clear voltage calibration - Clear load calibration (bus and breaker) - Breaker alarm threshold
Test Modes	- Test major alarm - Breaker isolation test
Raw Data	- Voltage per bus - Load per breaker - Temperature status per breaker
Alarms	- Silence buzzer
Configuration	- Powered bus or installed module cannot be removed from configuration
Module Overload and Warning Alarms	- In alarms list, bus and module will be displayed for module in overload

5.1.2 Firmware Icons

5.1.2.1 Alarm Icons

Alarm icons appear when at least one system alarm is present. If this should occur, press the Alarm icon to display alarm information (refer to Table 8).

- Major alarm icon appears when there is at least one major alarm.
- Minor alarm icon appears when there is at least one minor alarm and no major alarms.

Table 8. Alarm Icon Key

ICON	COLOR	STATUS
	Red	**MAJOR ALARM** - Breaker trip - Bus overload - Breaker overload - Bus over voltage - Bus under voltage - Bus redundancy - Breaker redundancy - Module overload - Module communication lost
	Orange	**MINOR ALARM** - Bus overload warning - Breaker overload warning - Bus redundancy warning - Breaker redundancy warning - Breaker not inventoried - Module overload warning

5.1.2.2 Menu Icons

Table 9. Menu Icon Key

ICON	FUNCTION
	BREAKER INVENTORY - Prompts user to take breaker inventory when icon is pressed
	SETTINGS - Bus Calibration ├ Bus Load └ Bus Voltage - System ├ Display ├ Touch Calibration ├ Settings └ Information - Advanced ├ Raw Data ├ Configuration ├ Test Modes └ Restore Defaults
	RETURN - Returns to previous screen when icon is pressed
	HOME - Returns to home screen when icon is pressed

5.2 Home Screen

5.2.1 Bus Load and Voltage Displayed Per Bus

Table 10. Bus Status Monitored

BUS STATUS COLOR	STATUS
Green	Normal operation
Orange	Bus in minor alarm (bus overload warning)
Red	Bus in major alarm (bus overload and/or high or low voltage)

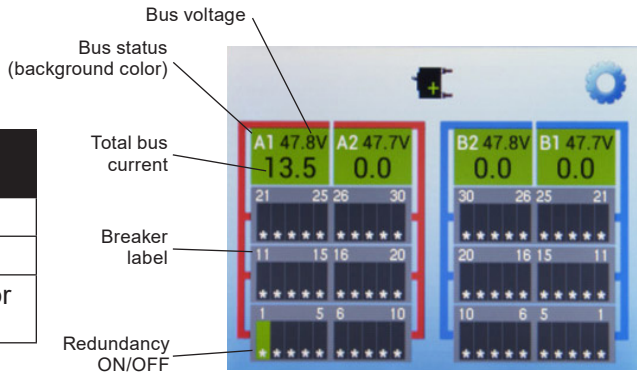


Figure 13. Bus Status

5.2.2 Display Per Breaker Status

Asterisks indicate that each channel has redundancy enabled (default).

Table 11. Display Per Breaker Status

BREAKER STATUS COLOR	STATUS
Gray	Breaker not installed and if installed, breaker is OFF and not inventoried
Green	Normal operation and breaker is in inventory
Light Orange	Breaker not inventoried but turned ON (no alarms monitored)
Orange	Breaker in minor alarm and only monitored for inventoried breakers (breaker overload warning)
Red	Breaker in major alarm and only monitored for inventoried breakers (breaker overload or breaker trip)

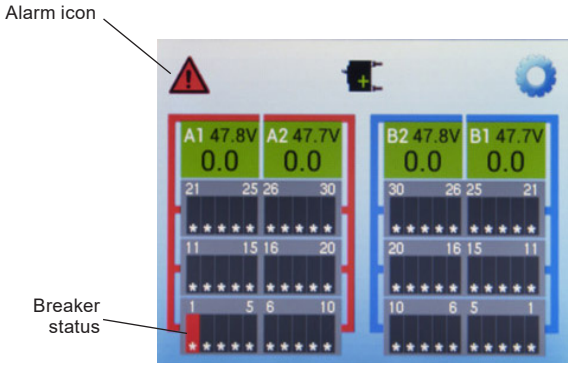


Figure 14. Breaker Status

5.2.3 Alarm Indication

If an alarm occurs, press the alarm icon at the top left of the screen to access the System Alarms screen.

Table 12. Alarm Indication

ALARM ICON	COLOR	STATUS
	Red	At least 1 major alarm has been detected
	Orange	At least 1 minor alarm and no major alarms

5.2.3.1 System Alarms

This screen displays the bus/module/breaker location of the alarm(s) and alarm type(s) as well as the total number of alarms detected. Press the alarm silencer icon at the top left of the screen to temporarily disable the audible alarm.

Table 13. Alarm Status

BACKGROUND COLOR	STATUS
Red/White Gradient	At least one major alarm has been detected
Orange/White Gradient	At least one minor alarm has been detected, and no major alarm

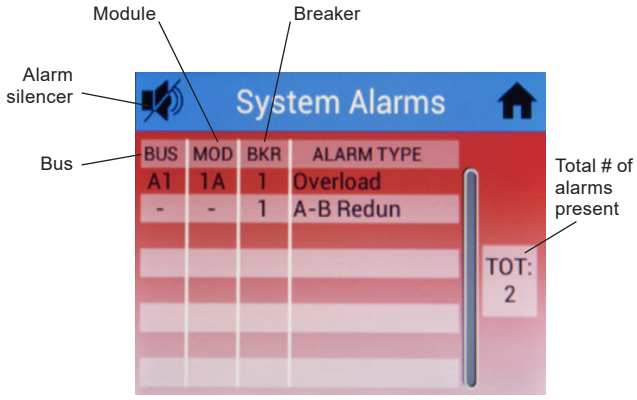


Figure 15. System Alarms

5.3 Module Detail

To access this screen, press any breaker status icon.

5.3.1 Individual Breaker Load and Ampacity

Table 14. Breaker Status

BREAKER COLOR	STATUS
Gray	Breaker not installed and if installed, breaker is OFF and not inventoried
Green	Normal operation and breaker is in inventory
Light Orange	Breaker not inventoried but turned ON (no alarms monitored)
Orange	Breaker in minor alarm and only monitored for inventoried breakers (breaker overload warning)
Red	Breaker in major alarm and only monitored for inventoried breakers (breaker overload or breaker trip)

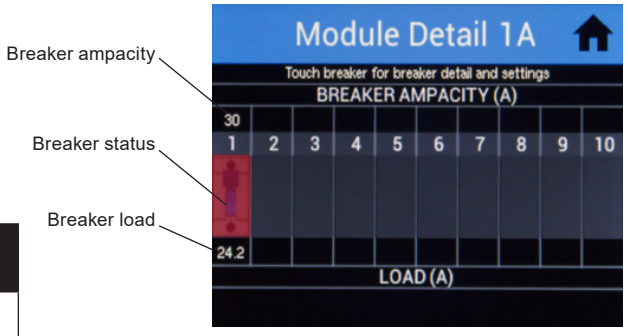


Figure 16. Module Detail

5.3.2 Breaker Detail

Within the module detail menu, the breaker detail menu is accessed by pressing any breaker icon. Another breaker can be selected in this menu by pressing the left and right arrow buttons located at the bottom of the screen.

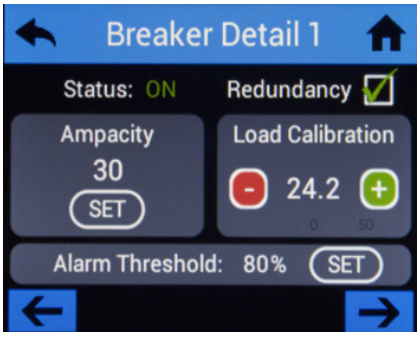


Figure 17. Breaker Detail

5.3.2.1 Breaker Ampacity:

Breaker ampacity is displayed with a SET button to set breaker ampacity. Press this to enter the breaker ampacity keypad screen. To enter a new ampacity for the selected breaker:

1. Use keypad to enter an ampacity between 1A and 35A.
2. Press SAVE button to save ampacity, or CANCEL to revert back to old ampacity.

5.3.2.2 Breaker Load:

Breaker load calibration can be adjusted by pressing the plus and minus buttons.

5.3.2.3 Alarm Threshold:

Individual breaker alarm threshold is displayed with a SET button to set breaker alarm threshold. Press this to enter the alarm threshold screen. To enter a new alarm threshold for the selected breaker:

1. Use keypad to enter an alarm threshold. Alarm threshold range is between 40% and 100%.
2. Press SAVE button to save threshold, or CANCEL to revert back to old ampacity.

- Redundancy can be turned ON/OFF by pressing the check box next to Redundancy. This option is for breaker channel redundancy. If enabled, the breaker will automatically pair with it's mirror image position on the adjacent module to the left or the right.

5.4 Bus Calibration

To access bus calibration settings from the home screen, press the Settings icon, then press Bus Calibration.

5.4.1 Bus Load

Bus Load can be adjusted up to +/- 15 increments (+/- 15A). Voltage adjustment offset is shows on the right side of the display.

5.4.2 Bus Voltage

Voltage can be adjusted up to +/- 30 increments (+/- 3.0V). Voltage adjustment offset is shown on the right side of the display.

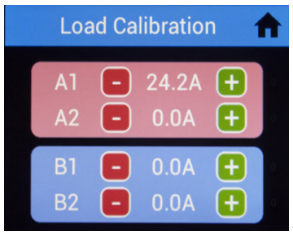


Figure 18. Bus Load Calibration

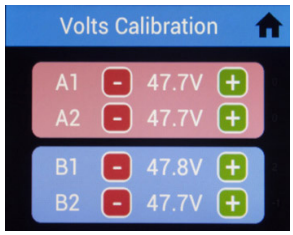


Figure 19. Bus Voltage Calibration

5.5 System

To access system settings from the home screen, press the Settings icon, then press System.

5.5.1 Display

5.5.1.1 Brightness/Buzzer Volume

The display brightness and buzzer volume can be adjusted by moving the sliders.

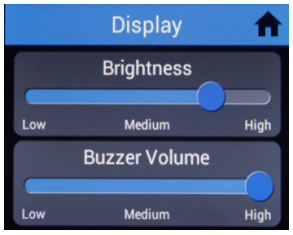


Figure 20. Display

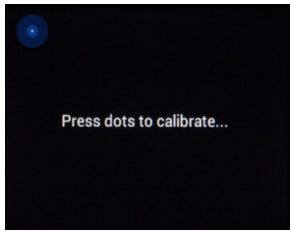


Figure 21. Touch Calibration

5.5.2 Touch Calibration

This setting prompts user for permission to proceed with touch calibration. Follow instructions on screen to continue.

5.5.3 Settings

5.5.3.1 Input Feeder Size

Press the SET button to adjust feeder fuse size for A1, A2, B2, and B1 busses.

1. Use keypad to enter a feeder fuse size between 100A and 300A.
2. Press SAVE button to save feeder fuse size, or CANCEL to revert back to old feeder fuse size.

5.5.3.2 Input Feeder Threshold

Press the SET button to adjust feeder fuse threshold for A1, A2, B2, and B1 busses.

1. Use keypad to enter a feeder fuse threshold between 40% and 100%.
2. Press SAVE button to save feeder fuse threshold, or CANCEL to revert back to old feeder fuse threshold.

5.5.3.3 Bus Redundancy

Turn bus redundancy ON/OFF by pressing the check box next to Bus Redundancy.

Figure 22. Settings

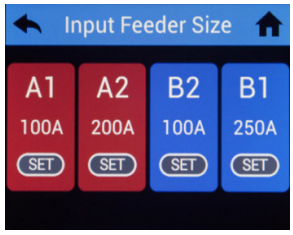


Figure 23. Input Feeder Size

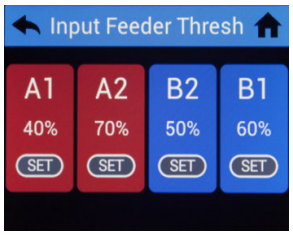


Figure 24. Input Feeder Threshold

5.5.4 Information

This screen displays system information about controller and temperature sensors.

Cont = Controller internal temperature sensor. 1-4 are reserved for optional external temperature sensors.

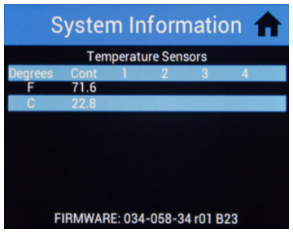


Figure 25. System Information

5.6 Advanced

To access advanced settings from the home screen, press the Settings icon, then press Advanced.

5.6.1 Raw Data

This screen displays raw data for load status, breaker status, and temperature.

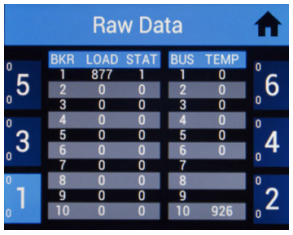


Figure 26. Raw Data

5.6.2 Configuration

This screen allows the removal of busses and modules from system monitoring. Busses with at least 20V cannot be removed from configuration. Modules and busses are automatically inventoried if data is being received by the controller.

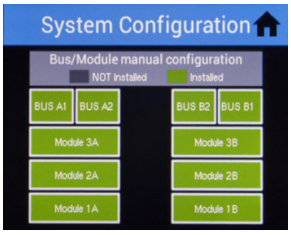


Figure 27. System Configuration

5.6.3 Test Modes

This screen allows the user to test the major alarm relay and onboard audible alarm. Exiting the menu will automatically turn off the relay.
Note: if a major alarm is present on the system, the major alarm test feature will not operate.

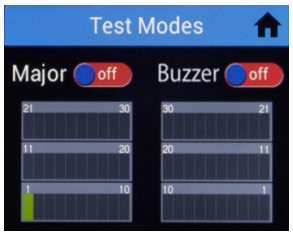


Figure 28. Test Modes

5.6.4 Restore Defaults

This screen allows the user to restore:

- Bus calibration
- Load calibration
- Breaker ampacity
- Brightness/buzzer
- Breaker inventory
- Breaker alarm threshold

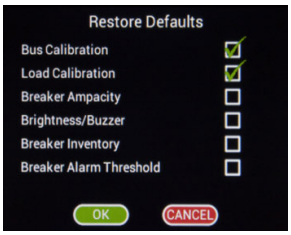


Figure 29. Restore Defaults

5.7 Review System Status via the Embedded Web Server

The optional embedded Ethernet module provides remote monitoring via IP-based Ethernet networks and a web browser. To view the system status, you will need to connect the Ethernet port on the rear of your v30/30 distribution panel to your network. By default, the Ethernet module is configured from the factory with a static IP address and network settings, as defined below.

5.7.1 Default Static Network Settings

Use these default settings to set up a local network to communicate with the embedded web server:

- IPV4 Address: **192.168.123.123**
- Subnet Mask: **255.255.255.0**
- Default Gateway: **192.168.123.1**
- Primary DNS: **192.168.123.1**
- Secondary DNS: **8.8.8.8**

Once you establish a connection to the embedded Ethernet module, use the following credentials to gain access to the protected data and administrative pages:

- Username: **root**
- Password: **password**

5.7.2 Real-time Status

Upon loading the v30/30 web server, the real-time status will be displayed.

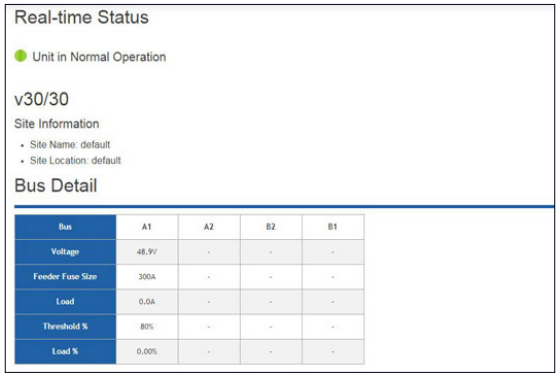


Figure 30. Real-time Status

Site Information

User can configure these settings under Administration --> Site Settings.

- Site name
- Site location

Bus Detail

- Voltage
- Feeder fuse size
- Load
- Alarm threshold %
- Load % based on feeder fuse size

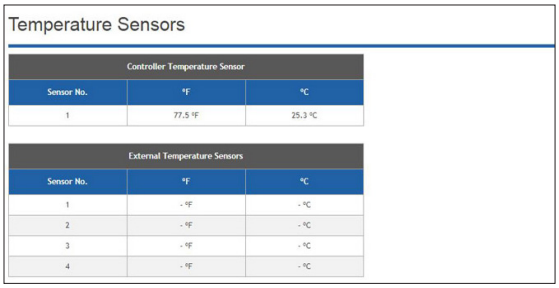


Figure 31. Temperature Sensors

Internal Temperature Sensor

- Controller temperature sensor in Fahrenheit and Celsius

External Temperature Sensor

- Up to (4) external temperature sensors in Fahrenheit and Celsius

Module Detail

- SNMP channel mapping
- Channel no.
- Load per channel
- Ampacity per channel
- Breaker inventory status
- Breaker status (ON/OFF)

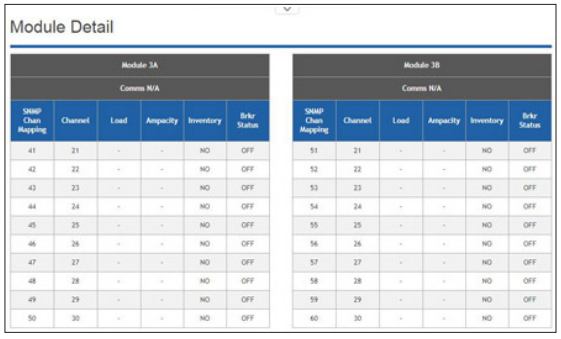


Figure 32. Module Detail

5.7.3 Administration

When accessing the web server for first time, it is necessary to configure the administration settings. Click on the "Administration" tab to access these settings.

Notification Settings

Alert Email Settings

- Enable/disable breaker trip alerting
- Enable/disable threshold alerting
- Enable SNMP trap notification, email notification or both
- Set email notifications per alert
- Set notification rate in minutes

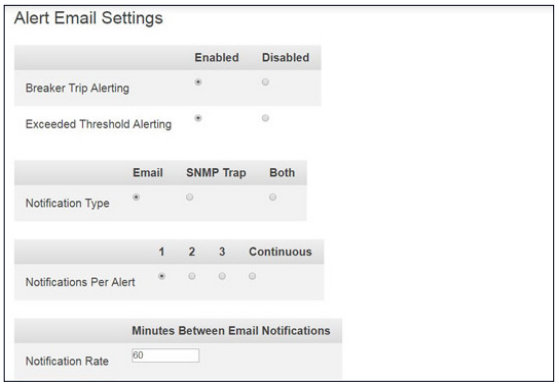


Figure 33. Notification Settings

Email and SNMP Settings

Configure SNMP Settings

- SNMP trap source address
- SNMP trap destination address
- Configure email settings
- Configure SMTP server
- Enter user name email address and password
- Enter email recipients
- Send test email message

Note: SMTP server must be configured on port 25.

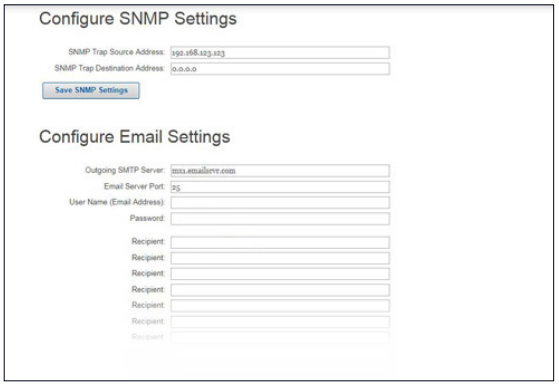


Figure 34. Email and SNMP Settings

Site Settings

Configure Site Settings

- Site name
- Site location

Figure 35. Site Settings

Network Settings

Network Configuration Settings

- IP v4 settings
- IP v6 settings

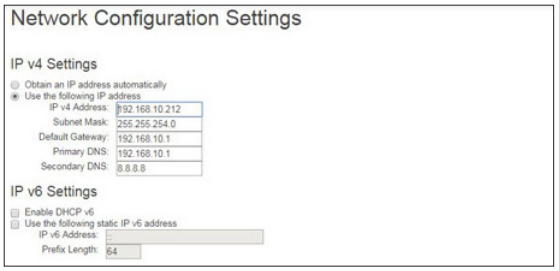


Figure 36. Network Settings

Upload Firmware

Follow the instructions on this page to upgrade the firmware on your embedded ethernet module.

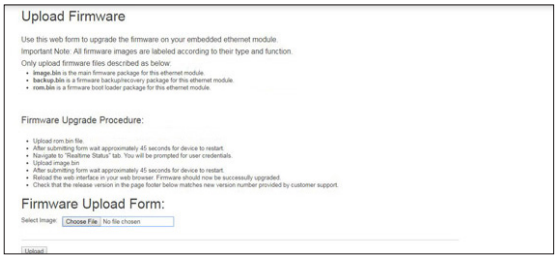


Figure 37. Upload Firmware

Reboot Device

This page allows the user to reboot the embedded Ethernet module while not disrupting normal operation of power equipment.

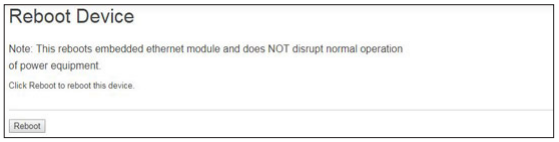


Figure 38. Reboot Device

6.0 Product Specifications

Table 15. Technical Specifications

ELECTRICAL	
Voltage	-42 to -60V DC
Number of Busses	Quad isolated (2A/2B)
Alarm Contacts	Form-C, 60VDC @ 0.5A max
Circuits	Up to 60 (30A/30B)
Input Current	300A max per input; 600A max total load
Load Per Circuit	35A max
Maximum Input Interruption Device	375A

MECHANICAL	
Dimensions L x H x D	19" x 7" x 13.2" (18" w/lacing bar)
Weight	55 lbs (w/six circuit breaker modules installed)

ENVIRONMENTAL	
Operating Temperature	45°C
Humidity	0 to 95% RH non-condensing
Elevation	-500 to 3000m

Table 16. Agency Certifications

UL	
UL File Number	E473904
UL Standard	ANSI/UL 60950-1

7.0 Models and Accessories

Table 17. V30/30 Model Configuration

DESCRIPTION	PART NUMBER
V30/30 Distribution Panel Chassis (w/o Circuit Breaker Modules)	C016-2040-10

Table 18. Required Components

DESCRIPTION	PART NUMBER
V30/30 Breaker Module (10 Position Each); QTY. 6 Required for Each V30/30 Unit	C016-2045-10

Table 19. Accessories

DESCRIPTION	PART NUMBER
Remote Temperature Sensor -67 to +257°F (-55 to +125°C) Note: up to 30 QTY can be ordered per V30/30 Distribution Panel	C016-2049-10
Main Remote Temperature Sensor Kit; Includes: - (2) Probes - (1) 7ft. Host Cable w/Ferrites - (1) 7ft. Sensor to Sensor Cable	C016-2033-10
Secondary Remote Temperature Sensor Kit; Includes: - (2) Probes - (1) 7ft. Sensor to Sensor Cable - (1) 20ft. Sensor to Sensor Cable	C016-2032-10
Secondary Remote Temperature Sensor Kit; Includes: - (2) Probes - (1) 7ft. Sensor to Sensor Cable - (1) 30ft. Sensor to Sensor Cable	C016-2034-10
7ft. White Cat 5e Host Cable (Includes Ferrites)	C745-504-10
7ft. White Cat 5e Patch Cable	C745-503-10
20ft. White Cat 5e Patch Cable	C745-069-10
30ft. White Cat 5e Patch Cable	C745-074-10
Rear Rack Mounting Kit; V30/30	C750-282-10

Table 20. Supported Circuit Breakers

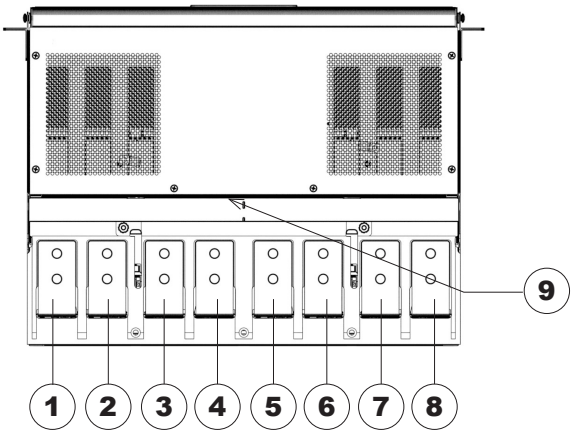
DESCRIPTION	PART NUMBER
2A Slimline Circuit Breaker	C470-711-10
3A Slimline Circuit Breaker (Not UL Listed)	C470-700-10
5A Slimline Circuit Breaker	C470-701-10
10A Slimline Circuit Breaker	C470-702-10
15A Slimline Circuit Breaker	C470-712-10
20A Slimline Circuit Breaker	C470-703-10
25A Slimline Circuit Breaker	C470-709-10
30A Slimline Circuit Breaker	C470-704-10

Table 21. Supported Output Cable Whips

Note: All cable assemblies are unterminated unless otherwise specified.

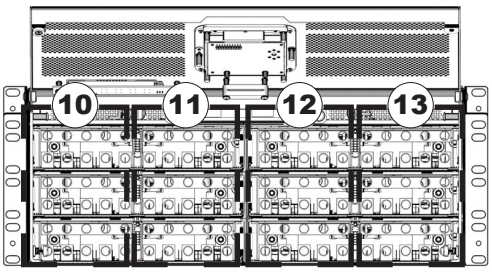
AWG	LENGTH	COLOR	PART NUMBER
#10	7’	Red/Black	C745-420-10
		Blue/Black	C745-422-10
		Red/Red Tracer	C745-437-10
		Blue/Blue Tracer	C745-433-10
	12’	Red/Black	C745-290-10
		Blue/Black	C745-424-10
		Red/Red Tracer	C745-438-10
		Blue/Blue Tracer	C745-434-10
#12	7’	Red/Black	C745-421-10
		Blue/Black	C745-425-10
		Red/Red Tracer	C745-298-10
		Blue/Blue Tracer	C745-299-10
	12’	Red/Black	C745-293-10
		Blue/Black	C745-294-10
		Red/Red Tracer	C745-197-10
		Blue/Blue Tracer	C745-198-10
#14	7’	Red/Black	C745-436-10
		Blue/Black	C745-427-10
		Red/Red Tracer	C745-432-10
		Blue/Blue Tracer	C745-435-10
	12’	Red/Black	C745-296-10
		Blue/Black	C745-429-10
		Red/Red Tracer	C745-227-10
		Blue/Blue Tracer	C745-228-10

Appendix A: Mechanical Drawings

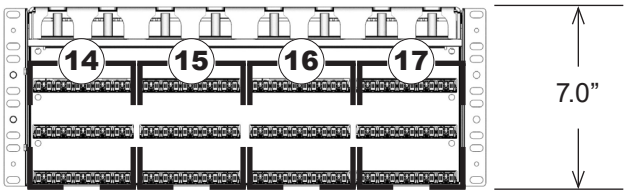


TOP

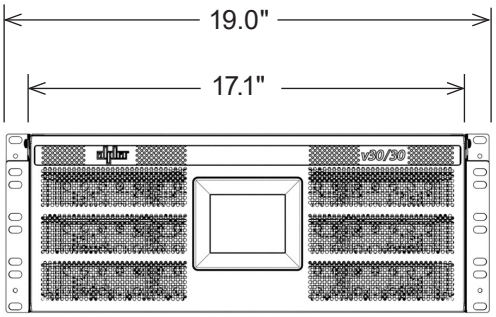
1. Input power RTN (+); B1
2. Input power HOT (-); B1
3. Input power HOT (-); B2
4. Input power RTN (+); B2
5. Input power RTN (+); A2
6. Input power HOT (-); A2
7. Input power HOT (-); A1
8. Input power RTN (+); A1
9. Form-C dry alarm contact for remote alarm monitoring; 8p8c (RJ-45) modular jacks
10. Circuit breaker positions; A1
11. Circuit breaker positions; A2
12. Circuit breaker positions; B2
13. Circuit breaker positions; B1
14. Output power; B1
15. Output power; B2
16. Output power; A2
17. Output power; A1
18. Chassis ground



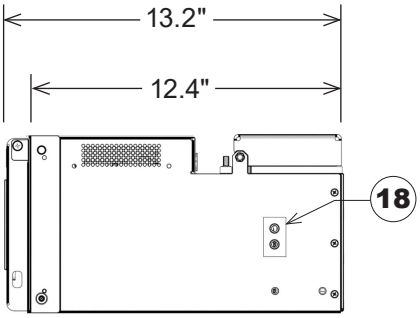
FRONT/LID OPEN



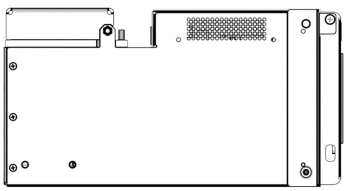
REAR



FRONT/LID CLOSED

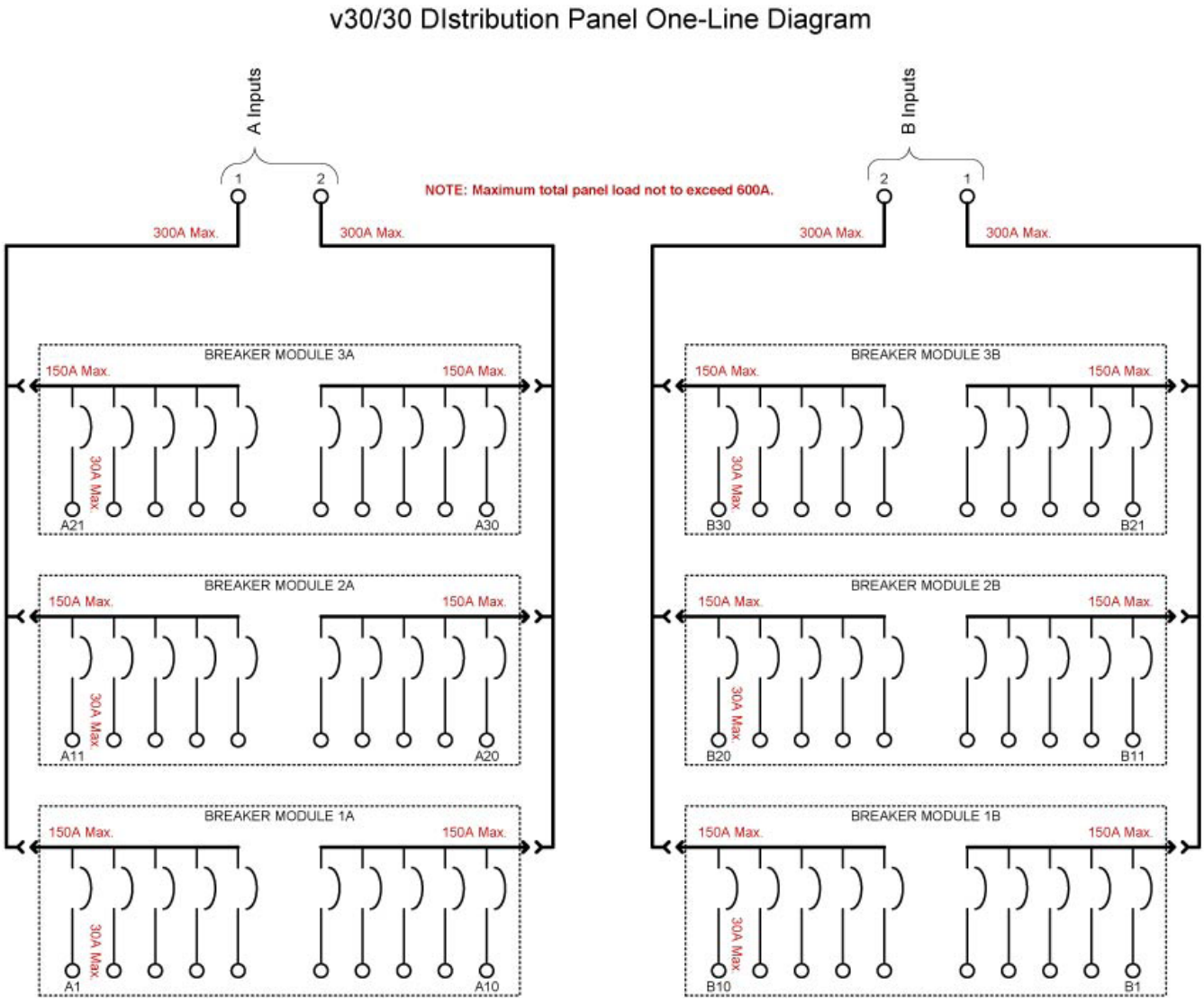


LEFT



RIGHT

Appendix B: One-Line Diagram



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C048-781-30 R01, Rev. B (01/2020)

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