RMMV Series

Rack Mount AC/DC Power Supply

Operating and Installation Instructions

52-391 Rev A.02

Warnings and Notices

- WARNING - To reduce the risk of fire or electric shock, do not expose this product to rain or moisture
- WARNING - This installation and all servicing should be made by a qualified service person and should conform to all local codes
- NOTICE - This equipment shall be installed in a manner which prevents unintentional operation from employees, janitors and cleaners working about the premesis, by falling objects, by customers, by building vibration and by similar causes
- NOTICE - This equipment is not intended for use within the patient care areas of a Health Care Facility
- NOTICE - In order to comply with CSA Requirements, mount in rack only. Installer sur support de montage seulement

Symbol Definitions

WARNING - Read the instruction manual to avoid personal injury or property damage

WARNING - Risk of electric shock. Service to be performed by a qualified service person

AlarmSaf 65A Industrial Way, Wilmington, MA 01887 978 658 6717 www.alarmsaf.com

Table of Contents

AlarmSaf 65A Industrial Way, Wilmington, MA 01887 978 658 6717 www.alarmsaf.com

Section 1
Introduction

The RMMV series of rackmount power supplies provides either 24 or 28 VAC for powering CCTV or similar low voltage AC operable equipment *AND* 12 and 24VDC for powering access control or similar DC equipment.

The units are intended for mounting within a standard nineteen inch electronics rack and may not be exposed to rain, moisture, or temperature conditions outside the stated range of operation.

All units:

- Are single phase, cord connected, and operate on 120VAC @ 60 Hz.
- Have separate internal AC and DC supplies, each with its own group of outputs
- Have 8 DC outputs and 16 AC outputs
- DC outputs are selectable for 12VDC or 24VDC by zone
- AC outputs are selectable for 24VAC or 28VAC by zone to overcome long wire runs
- Provide a green LED visual indicator for presence of output voltage by zone on the front panel.
- Utilize a combination master ON/OFF switch and circuit breaker to control primary power.
- Feature a plug-in cord with computer-style power entry module.
- Feature screw-secured plug-in field wiring terminal strips.
- Provide frontal access for changing fuses or zone output voltage configuration.
- Utilize easily-obtainable ATM style 3A fuses unless PTC protected.
- Provide enhanced surge and transient protection.
- Are standard rack mount at 19" width and 3.5" (2RU) height, depth is 10".

Section 2
Applicable Standards / Documents

NFPA Standards
NFPA 72 National Fire Alarm Code
NFPA 70 National Electrical Code

US Standards
UL 294 Access Control System Units
UL 1076 Proprietary Burglar Alarm Units and Systems
UL 1481 Power Supplies for Fire Protective Signaling System
UL 2044 Commercal Closed-Circuit Television Equipment

Canadian Standards
ULC S318 Standard for Power Supplies for Burglar Alarm Systems
ULC S527 Standard for Control Units for Fire Alarm Systems
CAN/CSA-C22.2 No. 107.1-01 General Use Power Supplies
CAN/CSA C22.2 No. 1-98 Audio, Video, and Similar Equipment

Other
MEA Listed
California State Fire Marshal (CSFM) Listed
Applicable Local and State Building Codes
Requirements of the Local Authority Having Jurisdiction (LAHJ)

Note - Although the AC and DC sections of this product comply with the above certifications separately, this preliminary unit as a whole has not yet been listed as a separate product with the listing agencies.

FCC Compliance
This equipment has been tested and found to comply with the limits for Class A digital device pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user is required to correct the interference at his/her own expense.

Listing Compliance Note
This product carries an ETL Listing from Intertek for one or more of the standards listed above. Intertek is recognized by the Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL) and accredited by the Standards Council of Canada as a Testing Organization and Certifying Body. The ETL Listed Mark is recognized by local inspectors and Authorities Having Jurisdiction (AHJs) throughout North America. *As Intertek is an NRTL recognized by OSHA, the ETL Listed Mark is an accepted alternative to UL and, as such, inspectors and AHJs recognize, acknowledge, and accept the mark as proof of product compliance.* For more information about the NRTL program, we encourage you to visit the OSHA Web site at www.osha.gov.

Section 3
System Overview

3.1 Electrical Ratings and Specifications

Manufactured By

AlarmSaf
65A Industrial Way
Wilmington, MA 01887
Tel: 800 987 1050
978 658 6717
Fax: 978 658 8638
www.alarmsaf.com

Model Numbers

RMMV Series

Electrical Ratings and Specifications

Fuse Protected Products							
Model #	*Nominal Input Voltage*	*Max Input Current*	*AC Zones*	*DC Zones*	*Max Total AC Output Current*	*Max Total DC Output Current* *	*Maximum Current per Zone*
RMMV-122428-24F	120 VAC	4.2 Amp	16 x 24/28 VAC	8 x 12/24 VDC	12.5/10 Amp AC	4A @ 24V 4A @ 12V	3 Amp
PTC Protected Outputs							
RMMV-122428-24	120 VAC	4.2 Amp	16 x 24/28 VAC	8 x 12/24 VDC	12.5/10 Amp AC	4A @ 24V 4A @ 12V	1.6 Amp

*** - Note: Maximum total DC load of 12V and 24V supplies must not exceed 4A maximum. Current drawn from the 12V supply must be subtracted from the 24V supply's available current.**

Product Use

When installed in accordance with all standards listed in Section 2 of this document, the AlarmSaf RMMV Power Supply line provides AC power for cameras and related accessories or other AC powered devices and DC power for DC CCTV cameras, access control equipment, IT equipment and related accessories, or other DC powered devices.

3.2 Terminal Descriptions

All terminal strips are removable with locking screws and accept wire sizes from 12-26AWG. Wire should be sized appropriately for voltage drop and current carrying capability. All terminals are labelled for polarity or phasing where appropriate.

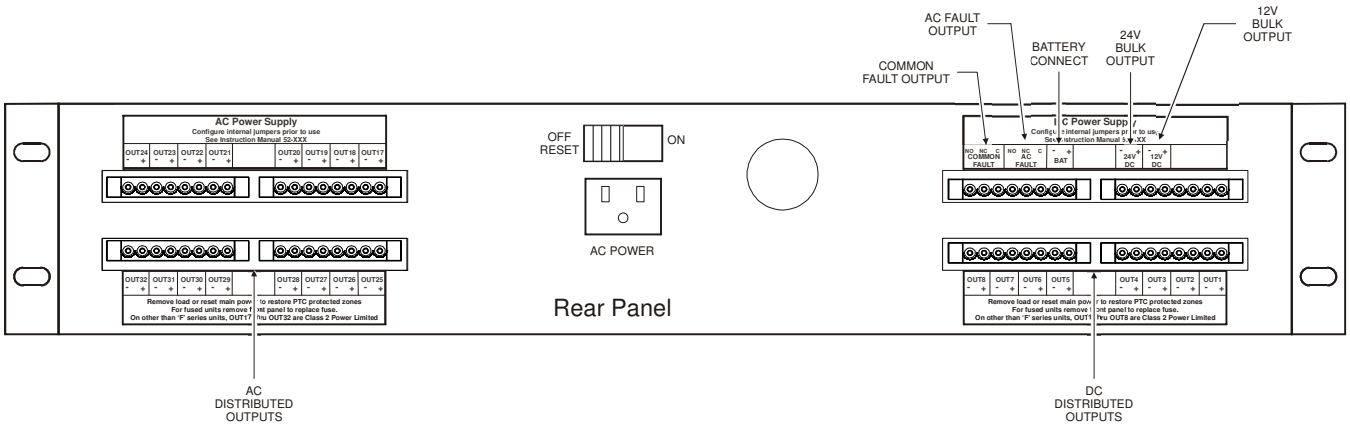


Figure 3.2.1

3.2.1 AC Input

- 120 VAC Input: cord set - AlarmSaf Part# A095057

3.2.2 Distributed DC Outputs (Out1 - Out8)

- Each distributed output is individually over-current protected (3A for fuse protected units, 1.6A for PTC protected units). Each output can be programmed for voltage by front panel jumper selection.

3.2.3 Battery Terminals (BAT +/-)

- Product uses 24V battery set to provide backup to both 12VDC and 24VDC outputs
- Battery only provides backup to the DC portion of the supply
- Terminals internally fused at 15 Amps
- Battery presence detection available by setting internal jumpers
- Minimum battery charging capacity: 7 Amphours
- Maximum battery charging capacity: 80 Amphours within 48 hours
- Contact AlarmSaf for spreadsheet-based battery software, PowerCAD 2.0

Note - It is the responsibility of the installer to determine the minimum battery requirement for the particular application in which the supply is being used. Backup batteries should be serviced at regular intervals as determined by local and/or national codes.

3.2.4 Bulk 24V Output Terminals (24VDC +/-)

- Bulk 24V output of internal supply. Full current capacity of supply is available on this single output terminal set.

3.2.5 Bulk 12V Output Terminals (12VDC +/-)

- Bulk 12V output of internal supply. Full current capacity of supply is available on this single output terminal set.

3.2.6 Fault Outputs (Common Fault / AC Fault)

- Form C Contacts
- Contacts rated at 1A @ 24VDC, 0.5A @ 120VAC
- Fault relays employ "fail-safe" operation and are powered in a non-fault condition (connection between common and NO when no fault exists)
- Each internal supply has independent sets of fault contacts

3.2.7 Distributed AC Outputs

- Each distributed output is individually over-current protected (3A for fuse protected units, 1.6A for PTC protected units).

3.3 Fusing

When replacing fuses in the RMMV, only the equivalent type and rating are to be used. The RMMV utilizes commonly available Automotive Miniature fuses (Type ATM). Units whose model numbers end in "F" employ ATM-3 fuses on the PCB located behind the front panel of the RMMV. An extra fuse is provided on the bottom right corner of the PCB.

The internal PS5-M contains two replacable fuses - the Battery Fuse and the ABC Buss Fuse. Both fuses are rated at 15A (ATM-15). The AC Input fuse is a soldered-in non-replacable fuse. If it is determined that this fuse has opened, the PS5-M board must be returned to AlarmSaf for repair.

The internal SPS4 contains one replacable 7.5A (ATM-7.5) fuse.

Section 4
Installation

4.1 Mounting

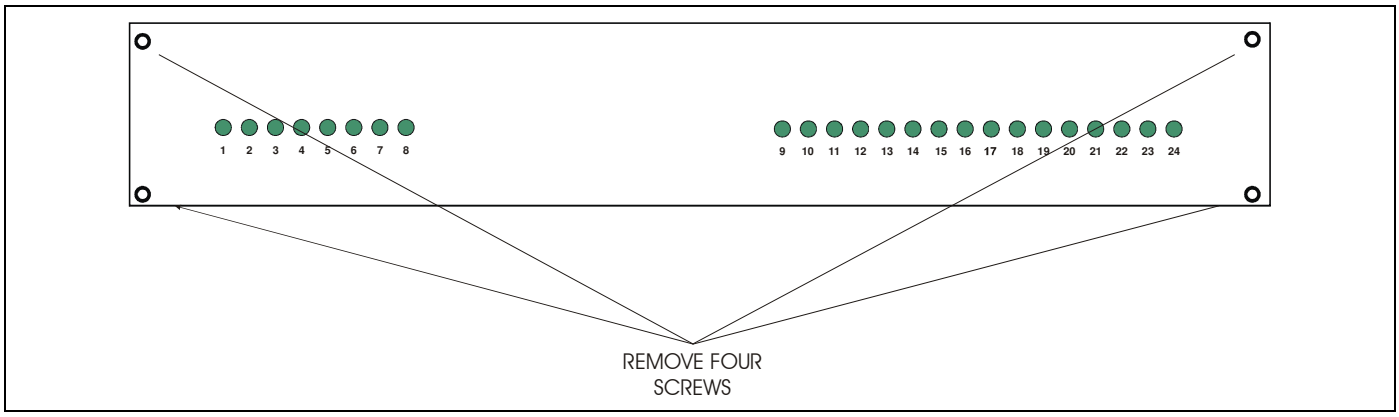
4.1.1 Mount the unit in locations that meet the following temperature and humidity requirements. Do not expose to conditions outside of these ranges.

Temperature	0 °C to 49 °C (32 °F to 120 °F)
Humidity	32 °C (90 °F) @ 93%

Mount the unit in a standard 19" equipment rack using the supplied 10-32 X ¾" machine screws.

- Locate an open 2RU slot in the rack and remove the filler panel(s) (if present)
- Slide the unit into the open slot from the front of the rack
- Install the four supplied 10-32 X ¾" machine screws into the end brackets of the unit

4.1.2 Removing the faceplate of the unit
To remove the faceplate of the RMMV Rack Mount Power Supply, remove the four screws at the corners of the faceplate. Pull out gently on the faceplate to disengage the LEDs from the holes in the faceplate.



4.1.3 Replacing the faceplate of the unit
Gently slide the faceplate over the output LEDs and secure with the four screws previously removed..

4.2 Wiring

4.2.1 Wire Routing

All wiring must be installed in accordance with NFPA70 [NEC760] and all local code requirements.

Power Limited wiring requires that power limited and nonpower limited wiring remain physically separated. All power limited circuits must remain at least one quarter inch (¼") away from any nonpower limited circuit wiring.

4.2.2 AC Power Connection

Before using the distributed power outputs, the unit must be connected to the main electrical power. Use the supplied cord set to plug the unit into the rack power strip and verify that the AC indicator light built into the main ON/OFF switch on the rear panel and the Green LED's on the front panel are illuminated when the unit is turned on.

Shut off the electrical power to the location of the unit, and then complete the general installation.

4.2.3 Field Wiring

Locate the field terminal wiring blocks on the back panel of the unit and remove the terminal block from the header (there are two locking screws on either end of the terminal block). Connect the wiring for the connected equipment to the terminal block. The back panel of the enclosure is labeled with the function and polarity or phase indications (See also section 3.2). Replace the terminal block on the header and tighten the locking screws.

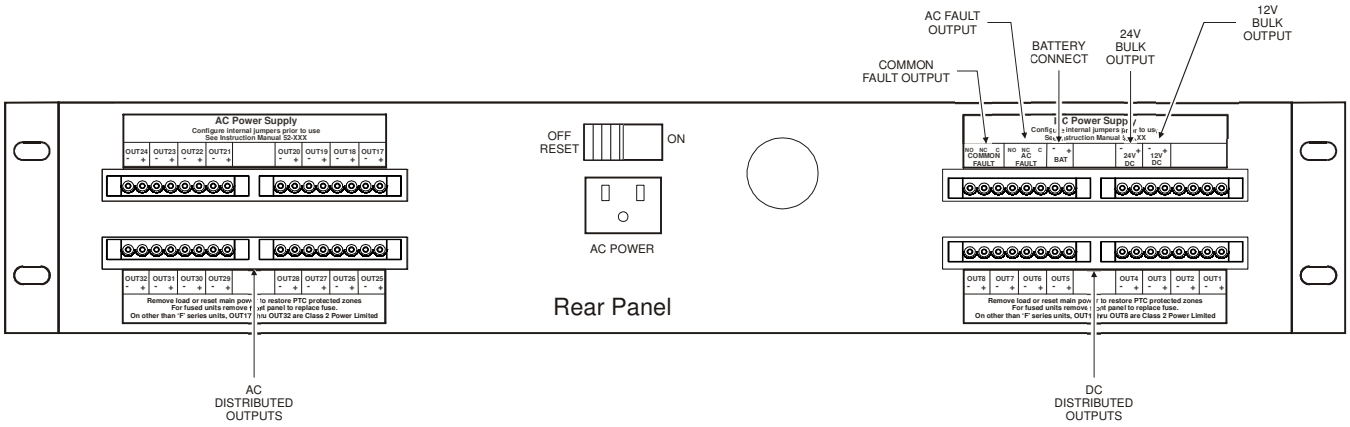


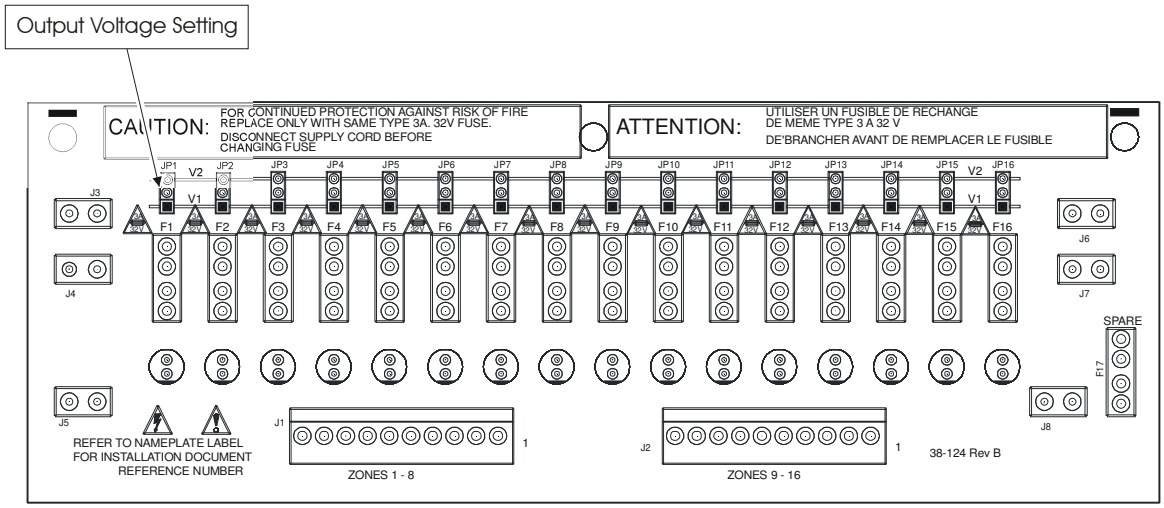
Figure 4.2.1

Section 5
Operating the RMMV Rack Mount Power Supply

5.1 Jumper Configuration

5.1.1 AC Zones

Each individual AC output zone may be configured for a 24VAC or 28VAC output. The output setting is controlled by the movable jumper plugs behind the front panel (JP1-JP16). The upper setting (V2) is for a 28VAC output, the lower setting (V1) is for a 24VAC output.



5.1.2 DC Zones

5.1.2.1 Internal Jumper and Switch Configuration

Before powering the system, the jumpers on the internal board(s) must be set for proper operation. Do not change jumper or switch settings while the unit is powered or damage to the system may occur.

5.1.2.1.1 PS5-M Jumper and Switch Settings

Each unit contains one PS5-M board. The switch and jumpers need to be configured for desired operation.

5.1.2.1.1.1 DC Voltage Setting

Before installing an RMMV system, the output voltage setting switch of the PS5-M board must be set. Do not change the switch setting while the unit is powered or damage to the system may occur. In the RMMV, the switch should always be set away from the green AC visual indicator for 24V (the PC board is labeled with the voltage settings).

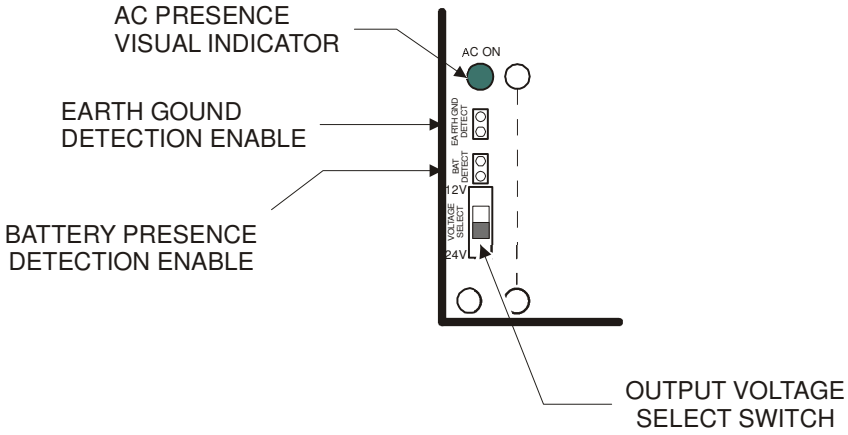


Figure 5.2.1.1

5.1.2.1.1.2 Jumper Settings

For proper operation, the jumpers on the internal PS5-M should be set appropriately. These jumpers may be set with the unit powered or unpowered.

Jumper	Description	Settings	Default
JP10 (Bat Detect)	Battery Presence Fault Detection	Jumper On - Enable Jumper Off - Disable	Enable
JP9 (Earth Ground Detect))	Earth Ground Fault Detection	Jumper On - Enable Jumper Off - Disable	Enable
JP5, JP6, JP7 (Buss 1 / Buss 2)	ABC Buss Select	Buss 1	Buss 1

5.1.2.1.1.2.1 JP10 (Bat Detect) - Battery Presence

This jumper allows disabling of the battery presence detection for applications where no backup battery set is used.

5.1.2.1.1.2.2 JP9 (Earth Ground Detect)

This jumper allows disabling of the Earth Ground Fault detection for applications that either don't require Earth Ground Fault detection, or for applications where Earth Ground Fault detection is already provided by the panel.

5.1.2.1.1.2.3 JP5, JP6, JP7 (Buss 1 / Buss 2)

The fuse should be set for Buss 1 under all conditions in the RMMV

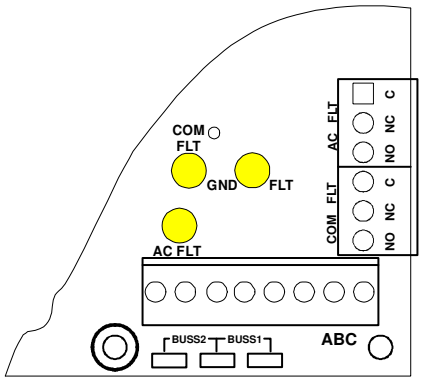


Fig 5.1.1.2

5.1.2.1.2 SPS4 Jumper Settings

The SPS4 has two jumpers for setting its output voltage. It is factory set for 12VDC out. If a different voltage is required, the jumpers must be changed as follows:

Voltage Output	JP1	JP2
5VDC	Left	Left
12VDC	Left	Right
5-18VDC Adjustable*	Right	Left

* - When using the adjustable range, adjust the output voltage using potentiomer R5

5.2 Visual Indicators

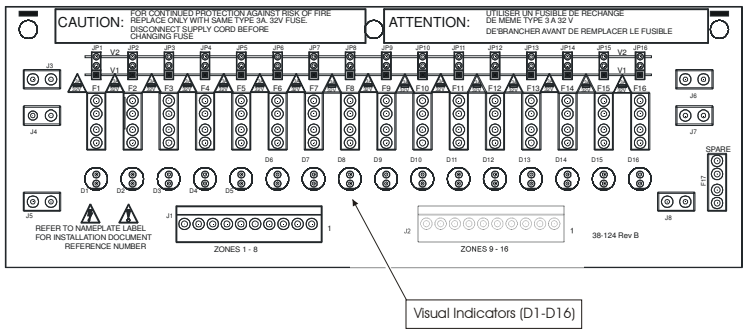
5.2.1 External Visual Indicators

5.2.1.1 Illuminated Power Switch / Circuit Breaker

The power switch will illuminate red when the power switch is in the "on" position and power is present.

5.2.1.2 Front Panel Indicators

All units have front panel indicator LEDs. Each output has one LED which illuminates when voltage is available at the corresponding output terminals.



5.2.2 Internal Visual Indicators

5.2.2.1 Indicators on the internal PS5-M Board

The PS5-M contains five visual status indicators.

LED	Description	Color	Conditions
AC ON (D19)	AC Power	Green	Lights when AC voltage is present on the input
DC OUT (D15)	DC Output	Green	Lights when DC voltage is present on the output
AC FLT (D22)	AC Fault	Yellow	Lights when the AC input voltage is low or missing
COM FLT (D16)	Common Fault	Yellow	See Section 5.2.2.1.4
GND FLT (D23)	Earth Ground Fault	Yellow	Lights under an Earth Ground Fault condition

5.2.2.1.1 AC ON

For safety reasons, this LED illuminates any time there is AC voltage present at the AC input, regardless of the AC fault status, battery state of charge, or power supply condition.

CAUTION - Always check for AC presence with a volt meter before servicing

5.2.2.1.2 DC OUT

This LED illuminates when DC voltage is available at the DC+/DC- terminals.

5.2.2.1.3 AC FLT

This LED illuminates when the AC input voltage falls below approximately 85% of the nominal input voltage setting.

5.2.2.1.4 COM FLT

This LED illuminates on any of the following conditions:

- High or Low Battery Voltage
- High or Low Output Voltage
- Missing / Damaged Battery
- Earth Ground Fault
- Fault received on ABC connector

5.2.2.1.5 GND FLT

This LED illuminates whenever there is an Earth Ground Fault between either positive or negative rail of the power supply output.

5.2.2.2 Indicators on the SPS4 Board

The SPS4 contains three visual indicators

LED	Description	Color	Conditions
DC IN (D7)	DC Input	Green	Lights when DC voltage is present on the input
DC OUT (D8)	DC Output	Green	Lights when DC voltage is present on the output
FLT (D6)	Fault	Yellow	Lights when the SPS4 detects a fault condition

5.2.2.2.1 DC IN

This LED illuminates whenever there is DC voltage present on the input of the SPS4.

5.2.2.2.2 DC OUT

This LED illuminates when DC voltage is available at the outputs of the SPS4.

5.2.2.2.3 FLT

This LED illuminates if the DC output of the SPS4 goes either high or low or if the output fuse (F1) ruptures.

AlarmSaf 65A Industrial Way, Wilmington, MA 01887 978 658 6717 www.alarmsaf.com

5.3 Troubleshooting

WARNING - Installation and service should only be performed by a qualified service person and should conform to all local codes

5.3.1 AC Section Troubleshooting

Condition	Possible Cause	Solution
No green output LEDs lit and no output voltages present	Power cord unplugged	Verify both ends of the power cord are plugged in
	No power to Rack's power strip	Verify power to Rack
	Power switch off	Verify that the power switch on the back panel is in the "On" position
	Tripped circuit breaker	The power switch also serves as a circuit breaker. Switch to "Off/Reset" for 30 seconds, verify output wiring integrity, then switch back to "On"
One zone's green output LED is not lit and it's output isn't present	Blown fuse (Fused models only)	Verify output wiring integrity, then replace fuse (Power down unit while changing fuse)
	Tripped PTC (Power-Limited models only)	Verify output wiring integrity, then pull voltage selection jumper for 30 seconds (note it's position before removing)
	Missing or damaged jumper	Verify that the zone's jumper is present and intact
Output Zone LEDs vary in brightness	Normal	This is a normal condition. 28V zones will have a brighter output LED than 24V zones

5.3.2 DC Section Troubleshooting

Condition	Possible Cause	Solution
No output voltages present	Power switch off	Verify that the power switch on the back panel is in the "On" position
	Tripped input circuit breaker	The power switch also serves as a circuit breaker. Switch to "Off/Reset" for 30 seconds, verify output wiring integrity, then switch back to "On"
	Excessive total system loading	Verify total system loading less than the maximum
	Internal problem	Contact AlarmSaf
One output voltage not present	Blown output fuse or PTC	Verify output wiring integrity and loading, then replace fuse behind the front panel. If the unit uses PTC protection for the output, verify output wiring integrity and loading, remove the buss selection jumper for the output for 30 seconds, then replace the jumper.
	Excessive loading on output	See above
	Internal problem	Contact AlarmSaf
The output voltage is incorrect	Incorrect switch setting	Verify proper switch setting
	Excessive loading on output	Verify that individual and total output current is less than rated current

	AC trouble	Verify presence of at least 102VAC on the input, the AC switch is ON, and the input circuit breaker is not tripped
	Bad / Incorrect Battery Set	Verify that a good battery set of the proper voltage is connected to the RMMV
	The internal PS5-M has shut down	If the PS5-M experiences an overtemperature, overload, or output voltage outside +/-10% regulation fault ten times within 52 seconds, the supply will shut down and transfer to battery until AC power is cycled.
The Common Fault relay is indicating a fault condition	Blown battery fuse on the internal PS5-M	Verify fuse is intact - Check wiring integrity before replacing fuse
	Excessive loading on output	Verify that output current is less than the rated current
	Improper ABC cable connection to the internal PS5-M	Verify proper connection of the ABC cable(s)
	Bad, Incorrect, or Missing Battery Set	Verify that a good battery set of the proper voltage is connected properly to the RMMV
	Earth Ground Fault	An impedance exists in the system between earth ground and the output of the supply.
	Internal problem	Contact AlarmSaf
The AC Fault relay is indicating a fault condition	Low or Missing AC	Verify the presence of at least 102VAC on the input, the AC switch is ON, and the input circuit breaker is not tripped
	Blown AC fuse on the internal PS5-M	This fuse is nonreplacable - Contact AlarmSaf
No battery presence detection	Battery not connected	Verify connection of an appropriate battery set, and the integrity of the wiring between the battery set and the RMMV
	Bat Detect Jumper (JP10) set incorrectly on the internal PS5-M	Verify correct setting of Bat Detect jumper
	Internal problem	Contact AlarmSaf

Section 6
Specifications

6.1 Electrical Specifications

6.1.1 Input Voltage	120VAC nominal
6.1.2 Input Power	504W Max
6.1.3 Input Frequency	50-60Hz
6.1.4 Minimum Battery Charge Capacity	7 Amphours
6.1.5 Maximum Battery Charge Capacity	80 Amphours
6.1.6 Maximum Battery Charge Current	2Amperes Maximum
6.1.7 Maximum Battery Standby Current	80mA plus total output load
6.1.8 DC Output Zones	8 x 12/24VDC
6.1.9 AC Output Zones	16 x 24/28VAC
6.1.10 Zone Output Current	3A (Fused) or 1.6A (PTC)
6.1.11 Total DC Output Current	8A / 4A @ 12VDC / 24VDC
6.1.12 Total AC Output Current	12.5A / 10A @ 24VAC / 28VAC

6.2 Temperature Specifications

6.2.1 Ambient Temperature Range	0°C to 49°C (32°F to 120°F)
6.2.2 Ambient Humidity	93% at 32°C (90°F) maximum
6.2.3 BTU Output	TBD

6.3 Mechanical Specifications

6.3.1 Weight	18 lbs
6.3.2 Overall Size	19.00"W x 10.75"D x 3.50"H *Note: Depth includes terminal strips on back panel and LEDs on front panel*

Wiring and using an RMBE Series Battery Enclosure with the RMMV

The RMBE Series of Battery Enclosures provides battery backup in a standard 19 inch 2RU rack mountable enclosure. It can be configured for single or dual output. Each output can be configured for either 12 or 24VDC. Configuration of the RMBE series is by pluggable jumpers on the back panel of the enclosure. Each battery in the enclosure is protected by a 9 ampere PTC to provide protection against overcurrent, short circuit, or incorrect configuration.

CAUTION - A lead acid battery can supply extremely large currents, presenting a risk of personal injury or property damage if care is not taken when installing, configuring, or servicing the RMBE.

CAUTION - A fully loaded RMBE can weigh more than 31 pounds, as installed. Care must be taken when installing to prevent injury to the installer. Also, ensure that the rack that the RMBE is being installed into can withstand the total weight of the equipment installed. The RMBE should be installed near the bottom of the rack to ensure rack stability.

Configuring the Rear Panel Jumpers on the RMBE

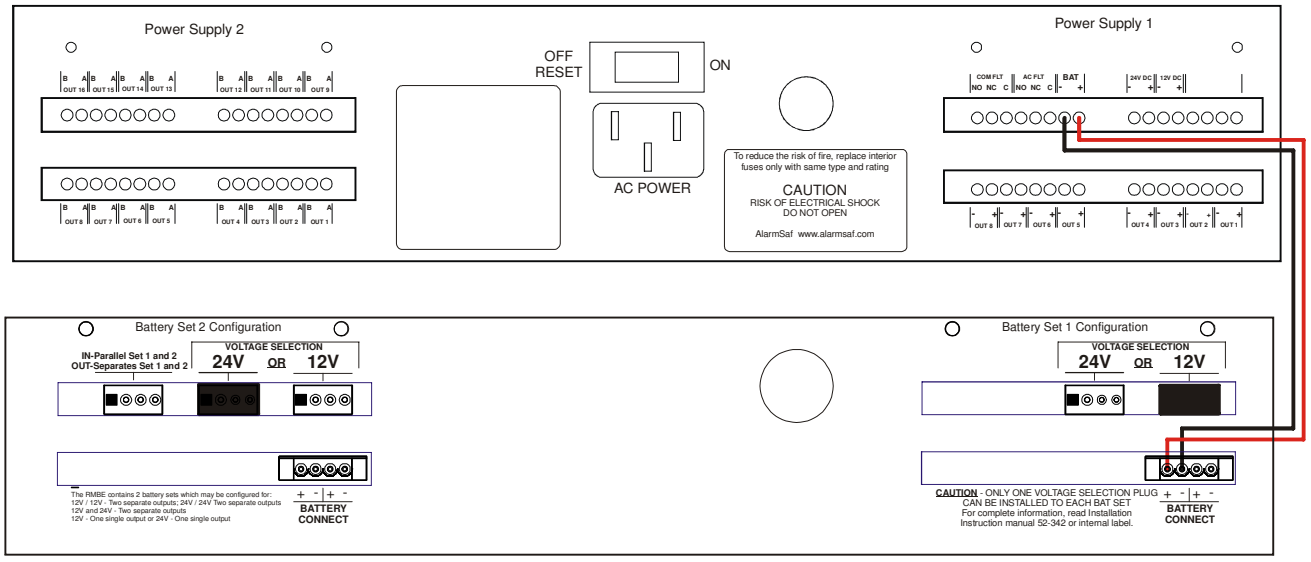
The rear panel jumpers configure the output of the RMBE unit. Each RMBE unit is shipped with 4-pin configuration jumpers to be plugged into the appropriate socket(s) on the rear panel of the enclosure. All jumpers are the same and may be used in any position.

CAUTION - Before connecting the RMBE to any other equipment, the rear panel configuration jumpers must be set correctly or damage to the system may occur.

Each output has two jumper sockets to configure the voltage of its internal battery set. To configure the voltage, a jumper must be placed into ONE of the two "Voltage Selection" sockets, as appropriate.

Additionally, a socket is provided to parallel the two internal battery sets to create a single battery set. To parallel the battery sets and create a single output, ***ensure both battery sets are set for the same voltage***, then insert a jumper into the socket labelled "Parallel Set 1 and 2".

CAUTION - If using the "Parallel Set 1 and 2" jumper to parallel the two battery sets, ensure that both voltage setting jumpers are set to the same selection BEFORE inserting the paralleling jumper or damage to the system may occur. Additionally, if the voltage selection jumpers need to be changed, ensure that the paralleling jumper is REMOVED first or damage to the system may occur.



Wiring the RMBE to an RMMV Rack Mount Power Supply

Wiring between the RMBE and RMMV must be sized appropriately for the maximum current. The terminal strips on the RMBE will accept AWG 12-26. Each battery set has two parallel outputs - both of which are marked for polarity. If the "Parallel Set 1 and 2" jumper is in place, all four outputs are paralleled, and any one of them may be used for connection. If more amphour capacity is required than available in a single RMBE, multiple RMBE enclosures may be paralleled together for increased capacity.

CAUTION - If paralleling multiple RMBE enclosures, ensure that the voltage selection and paralleling jumpers are set appropriately <u>BEFORE</u> wiring them together or damage to the system could occur.

Configuration Options

The following amphour and voltage combinations are possible with an RMBE with the appropriate jumper settings.

Voltage - Batt Set 1	Voltage - Batt Set 2	Parelleling Jumper	Output 1	Output 2
12V	12V	Out	14AH @ 12V	14AH @ 12V
12V	12V	In	28AH @ 12V (Single Output)	
12V	24V	Out	14AH @ 12V	7AH @ 24V
24V	12V	Out	7AH @ 24V	14AH @ 12V
24V	24V	Out	7AH @ 24V	7AH @ 24V
24V	24V	In	14AH @ 24V (Single Output)	

Glossary

ABC	See "Accessory Board Connector"
Accessory Board Connector	Connector present on some AlarmSaf power supplies and accessory boards, allowing plug-in expansion of the system
Accessory Board	An AlarmSaf product for use with AlarmSaf power supplies containing an ABC connector. These boards allow plug-in expansion of the functionality of the system. Examples of accessory boards include, but are not limited to, voltage distribution (simple and controlled), secondary DC-DC power supplies, and NAC Circuit expanders.
AC-DC Converter	A DC power supply whose voltage input is either direct from the AC line or though a step-down AC transformer
Buss 1 (B1)	The primary DC voltage in a system. Typically the higher of the two voltages in dual voltage systems
Buss 2 (B2)	The secondary DC voltage in a system. Only dual voltage systems use this voltage.
Class 2 Power Limited	A voltage output or wiring which conforms to NEC Article 725.
Controlled Distribution	Voltage distribution providing on/off control for the outputs. Control can be from FAI, an access control panel, card reader, or other device. The MB8(F) and CMB8(F) accessory boards, and the APD8(F) are examples of controlled distibution.
DC-DC Converter	A DC power supply whose voltage input comes from another DC source. DC-DC converters allow multi-voltage system backup with a single battery set.
FAI	See "Fire Alarm Interface"
Fire Alarm Interface	Input present on some AlarmSaf products allowing control of output(s) in the system. Typically used for dropping power to maglocks on egress doors during a fire alarm condition, but can also be used for other control functions, such as resetting smoke detectors
Power Limited	A voltage output or wiring which conforms to NEC Article 725.
PTC	A resettable overcurrent protection device, similar to a fuse or circuit breaker.
Rack Mount	A product which has an enclosure that allows mounting in a standard 19 inch equipment rack
Simple Distribution	Voltage distribution without any control function for the distributed outputs. Power is always available to the outputs. The PD8(F) accessory board is an example of simple distribution.
Voltage Distribution	Splitting a bulk power supply output into multiple, current limited outputs to prevent a single circuit failure from talking down an entire system. The multiple terminal outputs also simplify wiring by providing a pair of terminals for each circuit, rather than wiring several circuits to a single pair of terminals.

AlarmSaf 65A Industrial Way, Wilmington, MA 01887 978 658 6717 www.alarmsaf.com