



A CSW Industrials Company

PRODUCT DATA SHEET

**RSH-50 VRMDC KIT**

Surge Protector & Voltage Range Monitor with Disconnect Breaker

**Description**

The RSH-50 VRMDC KIT combines the RSH-VRM60A, RSH-50, & 60A disconnect breaker in a NEMA 3R enclosure, for an all-in-one equipment solution. The RSH-50 Surge Protective Device (SPD) uses Gas Discharge Tube (GDT) Technology along with Thermally Fused Metal Oxide Varistors (TMOV) for ultimate protection.

**Applications**

Protects single-phase equipment from electrical surges and voltage disturbances by utilizing safety thermal fusing and gas discharge tube surge protection technology, combined with the ability to monitor the line protecting equipment against over and under voltage conditions that can cause damage to circuit boards and motors. The unit includes a service disconnect and is fully programmable to set the voltage cutoff range from 90V to 300V while storing up to 300 events.



**Characteristics | Features**

RSH-50 Surge Protector and RSH-VRM60A Voltage Range Monitor with 60A Disconnect Breaker inside a NEMA 3R/IP66 enclosure

Over-Under Voltage Protection with Adjustable Auto Cut-Off and Auto Restore Delay Time; Over-Under Voltage Cutoff Delay can be adjusted from 0.5 to 60 Seconds; Load Restore Delay adjustable from 1 to 600 Seconds 120/240 Single Phase

Magnetic Latching Relays for Maximum Reliability

Large Easy to Read LCD Digital Display with Dual Red and Green LED Diagnostics Indicators

Easy Set Up, Field Programmable, No Laptop or Programming Tool Required

Stores up to 300 over/under voltage and power-loss events in Resettable Internal Memory

Non-volatile Memory retains all settings and event log when power is lost

Universal 35mm Snap-on Din-Rail Receiver

Snap-on Finger Guard Screw Terminal Covers

Large Box Lugs for easy wire Insertion



Type 1 SPD  
5ME8  
RSH-50



Open-type  
Operating Control  
5NT1  
RSH VRM60A

**Packaging**

Code	Size	Qty. per Case	Lbs. per Case	Cubic Ft per Case
96424	RSH-50 VRMDC KIT	1	5	0.45

# RSH-50 VRMDC KIT

Surge Protector & Voltage Range Monitor with Disconnect Breaker

### Installation Instructions

- Device must be installed in an enclosure suitable for the application and environment for which it is being used. Connected load shall not exceed 60 amps.
- Confirm power is OFF prior to performing the installation.
- Use the appropriate wire size and type based on the connected load and torque to the specified ratings.
- Connect input and output connections, replace finger guard covers and then restore power.
- Confirm power LED is illuminated and proceed to programming functions.
- Optional mounting feet included to secure enclosure to wall or structure.

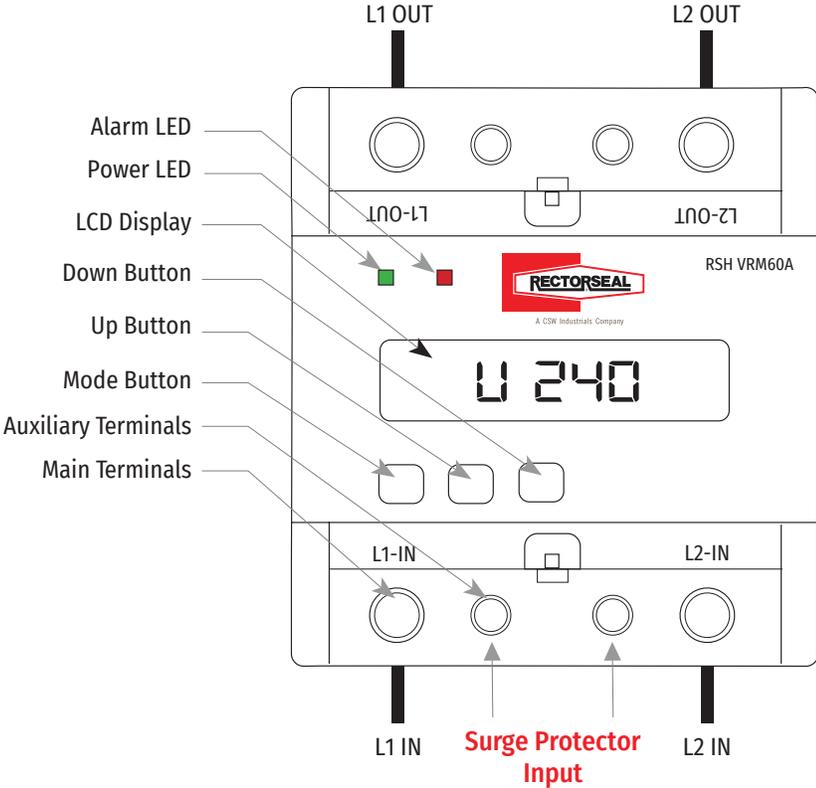
### Diagram

#### Main Terminals

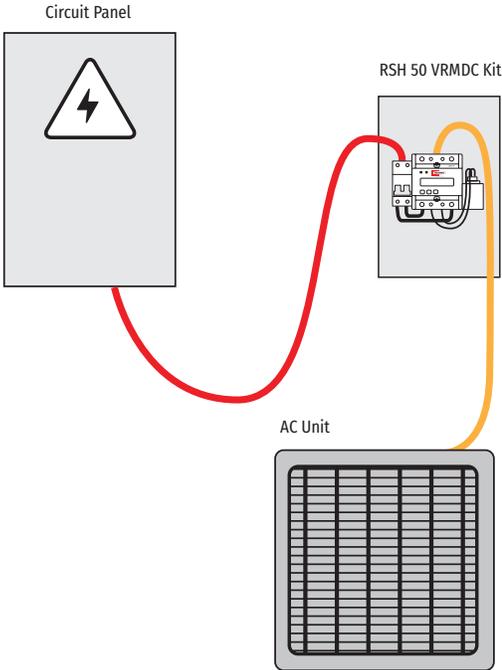
- CU7 Copper Conductors Only
- 10-14 AWG 35 IN. LBS.
- 8 AWG 40 IN. LBS.
- 4-6 AWG 45 IN. LBS.
- 2-3 AWG 50 IN. LBS.

#### Auxiliary Terminals

- CU7 Copper Conductors Only
- 12-16 AWG 20 IN. LBS.



### New Install with 60 Amp Disconnect



### Programming Instructions

**Start Up:** At power up, load will remain disconnected for 4 minutes. This delay is not adjustable. To view event logs, press UP button. **E 1** - Over voltage events, **E 2** - Under voltage events, **E 3** - Outages

To enter program mode - Press and hold MODE button for 2 seconds

**Mode U0** - Utility over-voltage set point. Use the UP & DOWN buttons to set the desired over-voltage cut off point between 85-300 vac Press MODE button to advance to next setting.

**Mode UL** - Utility under-voltage set point. Use the UP & DOWN buttons to set the desired under-voltage cut off point between 85-300 vac. Press MODE button to advance to next setting.

**Mode SU** - Over/under delay. Use the UP & DOWN buttons to adjust the delay time between .5 and 60 seconds before the load is disconnected when an under or over voltage condition is present. Press MODE button to advance to next setting.

**Mode SP** - Load restore delay. Use the UP & DOWN buttons to adjust the delay time between 1 and 600 seconds before the load is restored after normal power levels have returned.

**Mode EC** - Event-log clear. To retain stored events, set to **1**. To clear ALL stored events, set to **0**. Press and hold the MODE button for 2 seconds to save changes and exit.

# RSH-50 VRMDC KIT

## Surge Protector & Voltage Range Monitor with Disconnect Breaker

### Coverage for the RSH-VRM Voltage Range Monitoring Device and the 60AMP Disconnect Breaker

#### 3-Year Limited Product Warranty

PSP Products, Inc. ("Manufacturer") warrants this product to be free from defects in material or workmanship for a period of three (3) years following the date of purchase.

The warranty does not cover defects or malfunction caused by misuse, abuse or improper maintenance, failure to follow operating instructions, improper installation or application, acts of God, or normal wear and tear. Also, the warranty will not apply to damage caused by unauthorized alteration, modification, or repair of the product.

Manufacturer shall not be liable for any costs of removal or installation. Manufacturer's sole and exclusive obligation under this warranty shall be limited to repair or replacement of the defective item.

This limited warranty gives you specific legal rights, and you also may have other rights that vary from state to state or country to country. The laws of certain jurisdictions do not allow limitations on implied warranties or the exclusion or limitation of certain damages, so some or all the above disclaimers, exclusions or limitations may not apply or apply fully to you.

### Coverage for the RSH-50 Surge Protective Device (SPD) for Single-Phase System

#### Lifetime Product Warranty

PSP Products, Inc. ("Manufacturer") will, at its sole discretion, repair or replace any RSH-50 Surge Protection Device (SPD) that is defective or is damaged by an electrical surge (including those caused by lightning) for the lifetime of the product from the date of installation by the original owner or owner of record of the premises (User) at no cost to the User.

#### Connected Equipment Warranty

Manufacturer will, at its sole discretion, repair or replace heating, ventilation and air conditioning equipment that is damaged as a result of SPD failure during a surge event. Coverage is applicable only if the SPD (1) was fully functional immediately prior to the claim event; (2) was properly installed per the installation instructions; and (3) sustained surge damage as a result of the claim event.

Damage claims must be made within 14 days of the occurrence and the SPD returned to Manufacturer within 30 days of the occurrence with the original purchase receipts of the SPD. Returned SPDs require an RMA (Return Materials Authorization) number and a completed Warranty Claim Form (contact Warranty Assistance for details), and the SPD must be determined to have failed based on Manufacturer's test procedures.

This coverage is secondary to any applicable warranties, service contracts and all other insurance. If the claim is found to be valid, Manufacturer will pay up to the deductible amount of the homeowner's insurance or the cost of the damage, whichever is less, subject to a \$5000.00 limit per occurrence. All the above items must be met in order to have a valid claim.

The above coverage applies to the User only and is the exclusive remedy under this warranty, whether based on contract, tort, including negligence, or otherwise. Manufacturer reserves the right to audit the damages, site and/or cost of repairs and may require a notarized proof of loss. This warranty does not cover damage associated with sustained over voltages, vandalism, theft, normal wear and tear, obsolescence, abuse, unauthorized modification or alteration, misuse, improper installation or catastrophic events including direct lightning hit.

Except as expressly provided by this warranty, Manufacturer disclaims liability for any incidental, indirect, special or consequential damages arising out of the sale or use of SPDs (including without limitation: lost business profits, loss of data and all freight, mileage, travel time and insurance charges associated with warranty coverage claims). Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state. This warranty is valid in the United States and Canada only.

**⚠ CAUTION** Effective surge suppression requires correct wiring and all SPDs must be properly grounded for this warranty to be honored.

**Warranty Assistance Call 1-866-280-8810**

PO Box 4108, Manassas, VA 20110

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## HIGH VOLTAGE WARNING

Turn off power at the main service panel before installing.



**Voltage or current hazard, follow these instructions or it could result in serious bodily injury or death.**

Most electric product-related incidents are caused by failure to observe basic safety rules or precautions. Rectorseal cannot anticipate every possible circumstance that might involve a potential hazard.

### Requirement

Installation **MUST** be completed by a qualified licensed tradesman in the field of electrical installation. This would include a thorough understanding of the requirements of NFPA 70: National Electrical Code® and all local codes.

### Installation Process

The Installation must conform to these instructions and the local code authority having jurisdiction and the requirements of the power company. In the absence of code requirements follow NFPA 70 (latest edition) National Electric Code.

The Code which may be ordered from: National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269.

### Limited Warranty



For more information on our product warranty, visit [rectorseal.com](http://rectorseal.com).

Manufactured for

**RectorSeal, LLC**

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