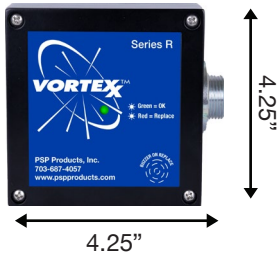
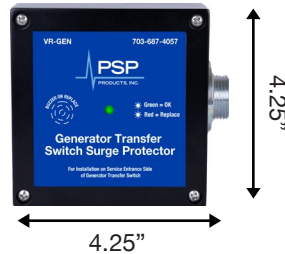


## VR-120 Surge Protectors



## VR-GEN Surge Protectors



**IMPORTANT: FLAT BLADE TERMINALS MUST BE INSTALLED UNDER MAIN CONDUCTOR AND NOT BETWEEN THE CONDUCTOR AND LUG SCREW TERMINAL TO CONFORM TO PROPER INSTALLATION STANDARDS. USE ONLY THE TERMINALS SUPPLIED, IF TERMINALS ARE DAMAGED OR MISSING CONTACT PSP PRODUCTS FOR REPLACEMENTS.**

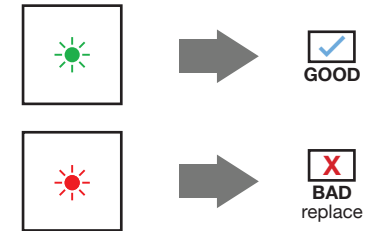
## Installation Instructions

1. Confirm VR device is rated for your system by comparing voltage measurements to the line voltage on the product label.
2. Turn off all power supplying this equipment before working on or inside the equipment.
3. See installation diagrams below and match to your specific installation type.
4. If installing on a breaker, use a 20A-60A breaker and verify lug on breaker provides solid connection to SPD wiring.
5. In some jurisdictions, provided flat tabs can be used in the bottom of the lug.
6. As a Type 1, no breaker is required.
7. Install in accordance with all pertinent articles of the National Electric Code.
8. Confirm that the electrical terminals used to attach this device are identified for these conductors.
9. Keep conductor length as short as possible with no sharp bends.
10. Do not loop or coil wires.
11. Ensure a high quality ground is in place.
12. Turn on all power supplying this equipment.
13. Verify diagnostic indicator is illuminated and no audible alarm is present.
14. Install cover and/or close door on equipment fixture.

-40/+185°F max. -40/+85°C max. IP66	P/N
	<b>VR-120 VR-GEN</b>
<b>AC Network</b>	
Nominal Voltage	120VAC
Max. Operating Voltage (MCOV)	150VAC
Max. Discharge Current (Imax)	120kA
Nominal Discharge Current (In)	20kA

## Installation Notes

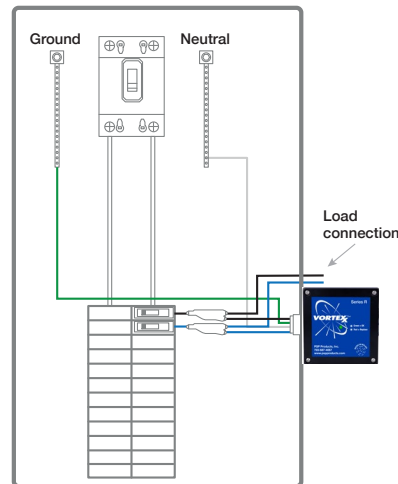
- Designed to allow installation inside of electrical panel using optional L-bracket.
- Designed to allow installation inside of a finished wall using optional flush mount cover.



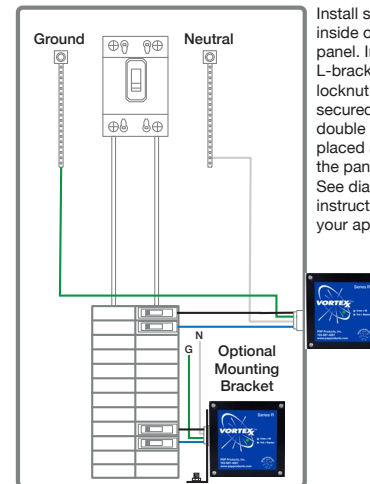
## Diagnostic Operation

- LED GREEN = Normal operation
- LED RED = Fault, check phase voltage and connections. If OK, replace unit.
- Audible Alarm ON = Fault, check phase voltage and connections. If OK, replace unit.

**Diagram A Type 1 Installed on Occupied Breaker**

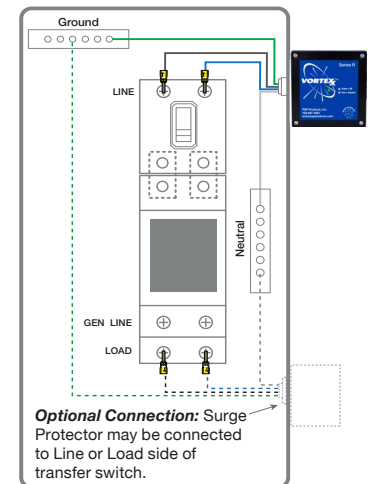


**Diagram B Internal Panel Mount**



Install small L-bracket inside of the electrical panel. Insert nipple through L-bracket and secure with locknut. Device may be secured alternatively using double sided tape, when placed at the bottom of the panel. See diagram A for wiring instructions, depending on your application.

**Diagram C Type 1 Install: Transfer Switch with Piggyback Connectors or Ring Terminals**



**Optional Connection:** Surge Protector may be connected to Line or Load side of transfer switch.



**Technical Assistance: 703-687-4057**

**Important: Risk of electrical shock.**

*This device should only be installed by qualified personnel.*

# Vortex<sup>TM</sup> Series R 1-Phase Whole House Surge Protector Warranty

## Lifetime Product Coverage

PSP will, at its sole discretion, repair or replace any Vortexx Series R 1-Phase Surge Protection Device (SPD) that is defective or is damaged by an electrical surge (including those caused by distant lightning) for the lifetime of the product from the date of the installation by the original owner or owner of record of premises.

## Down Line Coverage

PSP Products will repair or replace (whichever is less) electrical appliances and electronics that are damaged as a result of a transient surge\* greater than the capacity of the SPD, originating at the main utility service entrance. Maximum lifetime coverage per household: \$100,000. Coverage is applicable only if the service entrance SPD (1) was fully functional immediately prior to the claim event, and properly installed per the installation instructions and to NEC guidelines and (2) the SPD received a transient surge greater than its capacity as indicated by the diagnostic LEDs.

External items that are mounted outside of the house are covered under this warranty only if the surge is found to have originated from the main circuit panel due to Service Entrance SPD at end of life, as indicated by diagnostic LEDs. This provision is stated because all exterior wiring is vulnerable to surges caused by nearby lightning strikes. To best protect your exterior items, additional surge protection devices installed at the unit are highly recommended.

Any electronic devices that are connected to phone lines, data lines, coax connections, cable, antennas, satellite receivers, internet, or any other external connections must have a surge protection device for each of the external signals connected to the device, or this warranty is voided.

This warranty does not cover charges for diagnostic fees or any installation/removal or service charges or shipping of damaged SPD to PSP. Damage claims must be made within 14 days of the occurrence and the damaged unit returned to PSP within 30 days of the occurrence with the original purchase receipts of the items damaged, including the SPD. Returned damaged units require an RMA number to be assigned by PSP Products prior to receiving, as well as a completed PSP claim form. The damaged SPD must be determined to have failed as indicated by diagnostic LEDs and based on PSP's test procedures.

This coverage is secondary to any and all applicable warranties, service contracts and all other insurance or other responsible third parties if the claim is found to be valid, PSP Products will pay up to the deductible amount of the home owners insurance or the cost of the damage, whichever is less. The reimbursement is limited to \$1000 per item/system repaired or replaced. All of 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, including negligence, or otherwise. PSP reserves the right to audit damage, site and/or cost of repairs, test grounding system, and may require a notarized proof of loss and proof of homeowners insurance deductible. Claims must be made within 14 days of damage. This warranty does not cover damage associated with sustained over voltages, open neutral, voltage swells, over/under voltage conditions, unstable power, vandalism, theft, normal wear and tear, obsolescence, abuse, unauthorized modification or alteration, misuse, improper installation or catastrophic events including direct or nearby lightning strike. Except as expressly provided by this warranty, PSP disclaims liability for any incidental, indirect, special or consequential damages arising out of the sale or use of any PSP products (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. All surge protection devices must be properly grounded for the warranty to be honored.

**Warranty Assistance Call 703-687-4057**

PSP Products, 8618 Phoenix Drive, Manassas VA 20110

Register Online at: [www.pspproducts.com](http://www.pspproducts.com)

\*Transient surge as defined by Institute of Electrical and Electronics Engineers (IEEE)