

## Panel and Equipment Surge Protector



**VR-120**  
**1-Phase &**  
**3-Phase**



**VR-GEN**

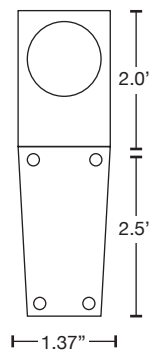
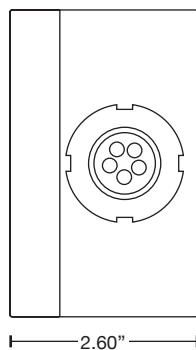
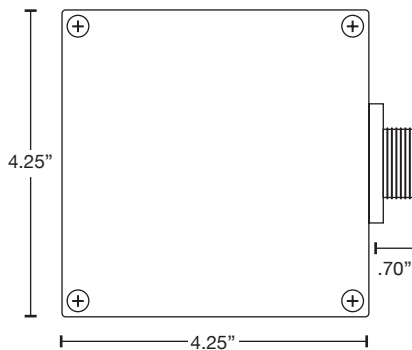
### Features

- I<sub>max</sub>: 120kA per phase
- I<sub>n</sub>: 20kA
- Thermally fused metal oxide varistor (TFMOV) suppression with added gas discharge tube (GDT) technology
- LED indicator and audible alarm
- EMI/RFI noise filtration (~40db)
- Repositionable lid allows for label orientation
- Meets UL 96A lightning protection master label
- NEMA 4X (IP65/IP66) indoor/outdoor rated enclosure
- Lifetime warranty: 1-phase
- 25 year warranty: 3-phase

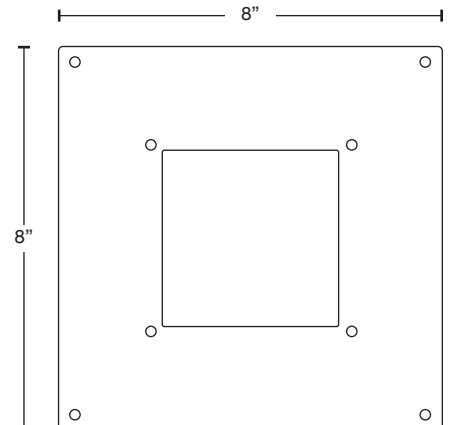


### Add-On Items

- Mounting bracket to allow installation inside of electrical panel - Item# VR-LB
- Flush mount cover - Item# VR-FMC



**Mounting Bracket**



**Flush Mount Cover**

## Part Number Breakdown

### VR(#)-120-4XM

• **Surge Rating:** 120 =120kA/phase

• **Voltage Identifier:** 1=120/240 1-phase, 2=120/208 3-phase Wye, 3=120/120/240 3-phase high-leg Delta, 4=277/480 3-phase Wye, 5=480 3-phase Delta, 6=347/600 3-phase Wye, 7=600 3-phase Delta, 8=220/380 3-phase Wye, 9=240 3-phase Delta

| Description                             |     | VR-GEN                                                                                 | VR1               | VR2                   | VR3                              | VR4                   | VR5                     | VR6                   | VR7                     | VR8                   | VR9                     |
|-----------------------------------------|-----|----------------------------------------------------------------------------------------|-------------------|-----------------------|----------------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| System Voltage                          | VAC | 120/240                                                                                | 120/240           | 120/208               | 120/120/240                      | 277/480               | 480                     | 347/600               | 600                     | 220/380               | 240                     |
| System Wiring                           |     | 3W+G<br>(1-Phase)                                                                      | 3W+G<br>(1-Phase) | 4W+G<br>(3-Phase Wye) | 4W+G<br>(3-Phase High-Leg Delta) | 4W+G<br>(3-Phase Wye) | 3W+G<br>(3-Phase Delta) | 4W+G<br>(3-Phase Wye) | 3W+G<br>(3-Phase Delta) | 4W+G<br>(3-Phase Wye) | 3W+G<br>(3-Phase Delta) |
| Maximum Operating Voltage (MCOV)        | L-N | 150                                                                                    | 150               | 150                   | 150/300                          | 320                   | N/A                     | 550                   | N/A                     | 320                   | N/A                     |
|                                         | N-G | 150                                                                                    | 150               | 150                   | 150/300                          | 320                   | N/A                     | 550                   | N/A                     | 320                   | N/A                     |
|                                         | L-G | 150                                                                                    | 150               | 150                   | 150                              | 320                   | 550                     | 550                   | 750                     | 320                   | 320                     |
|                                         | L-L | 300                                                                                    | 300               | 300                   | 300/300                          | 520                   | 550                     | 750                   | 750                     | 550                   | 640                     |
| Voltage Protection Rating (VPR)         | L-N | 700                                                                                    | 700               | 700                   | 700/1,200                        | 1,200                 | N/A                     | 1,800                 | N/A                     | 1,200                 | N/A                     |
|                                         | N-G | 700                                                                                    | 700               | 700                   | 700/1,200                        | 1,000                 | N/A                     | 1,800                 | N/A                     | 1,200                 | N/A                     |
|                                         | L-G | 700                                                                                    | 700               | 700                   | 700/1,200                        | 1,200                 | 1,800                   | 1,800                 | 1,800                   | 1,000                 | 1,200                   |
|                                         | L-L | 1,000                                                                                  | 1,000             | 1,000                 | 1,800/1,800                      | 2,500                 | 3,000                   | 3,000                 | 2,000                   | 1,800                 | 1,800                   |
| Operating Current (Ic)                  |     | <10 mA                                                                                 | <10 mA            | <10 mA                | <30 mA                           | <10 mA                | <30 mA                  | <10 mA                | <30 mA                  | <10 mA                | <30 mA                  |
| Follow Current (If)                     |     | None                                                                                   |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Maximum Leakage Current (Ipe)           |     | 1 mA                                                                                   |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Frequency (f)                           |     | 50/60/400 Hz                                                                           |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Nominal Discharge Current Per Mode (In) |     | 20kA                                                                                   |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Maximum Discharge Current (Imax)        |     | 120kA Per Phase                                                                        |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Short Circuit Current Rating (SCCR)     |     | 200kA                                                                                  |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| EMI/RFI Filtering                       |     | 1283 Electromagnetic Interference Filter (-40 dB)                                      |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Thermal Disconnecter                    |     | Internal to Each Component                                                             |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Overload Disconnecter                   |     | Internal to Each Device                                                                |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Operating Temperature                   |     | -40 to +85°C                                                                           |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Housing-Enclosure Material              |     | Cast Aluminum                                                                          |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Mounting Type                           |     | Nipple/Wall Mounting, Bracket Mount (Not Included) or Flush Mount (Cover Not Included) |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Environmental Rating                    |     | NEMA 4X, IP65, IP66, Indoor/Outdoor                                                    |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Connection Type                         |     | Lead Length: 36" / #10 AWG                                                             |                   |                       |                                  |                       |                         |                       |                         |                       |                         |
| Standards, Compliance or Recognition    |     | UL 1449 5th Edition Type 1 Listed, UL Listed to US and Canadian Safety Standards       |                   |                       |                                  |                       |                         |                       |                         |                       |                         |