

⚠ BE SURE POWER IS SHUT OFF PRIOR TO INSTALLING THIS DEVICE

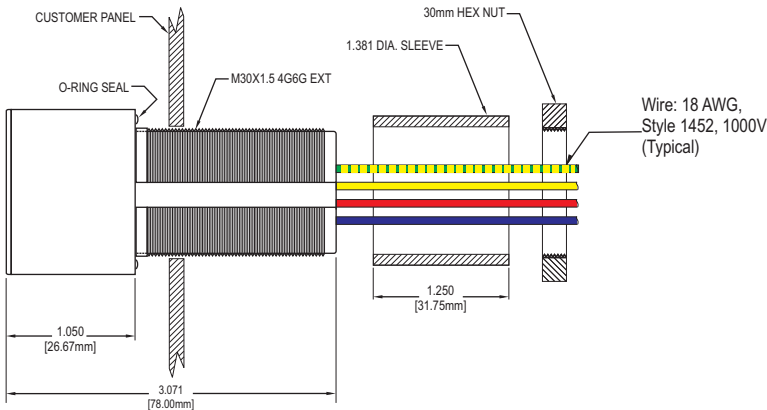
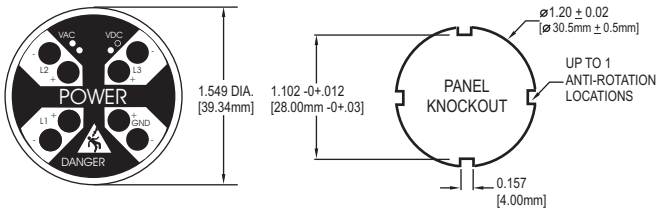
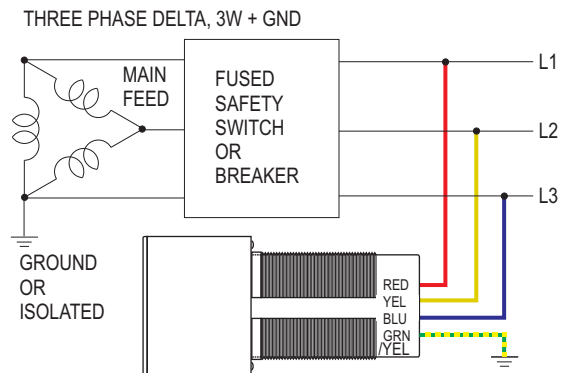


Figure 1



TYPICAL CONFIGURATIONS



⚠ CAUTION

- ALWAYS connect the **GRN/YEL (GND)** conductor to earth ground.
- Location of device & internal hardware/wiring **MUST** allow free operation of ON/OFF disconnect mean
- If device is not used as recommended, the protection by the device may be impaired.
- Means of anti-rotation is required (see knock-out for one or more tab locations).
- The O-ring material is FVMQ fluorosilicone. Please refer to a Chemical Compatibility chart for your application(s).
- Maximum single component failure fault current is 3.7mA @ 750V 3~.
- Do not operate above 750V 3~ or 1000V = @ 55°C ambient.
= Direct Current ~ Alternating Current

INSTALLATION INSTRUCTIONS

- 1.) Follow all Local, State, and National Electrical Codes when installing this equipment. Overcurrent protection of the supply leads may be necessary. The installation of overcurrent protection shall be in accordance with the requirements in the NEC (NFPA 70) or end product standard(s) when used in the final installation. The installation shall be used on a flat surface of a type 4X, 12, or 13 enclosure, or equivalent elevated ambient rating.
- 2.) Locate the unit in visual proximity to the control panel ON/OFF disconnect and within wiring distance to incoming Main Lines and Earth Ground. Mount the unit through a 30.5 mm knockout hole on the three-phase control panel to be monitored. To meet Type 4X, 12, or 13 sealing requirements, mount on a flat surface of a Type 4X, 12, or 13 enclosure. (Fig.1)
- 3.) For Delta configured power, connect Red, Yellow and Blue wires to Phases L1, L2, and L3 on the fused or disconnect side of the three-phase line voltage. **The GRN/YEL (GND) wire MUST be connected to Earth Ground.** (Fig.2 & 3)
- 4.) Wye configured power with grounded Neutral is connected the same as for Delta in step 3. The Green wire **DOES NOT** connect to neutral but to Earth Ground. **Caution:** The neutral will not be monitored for voltage by the Detector, only Phase-to-Phase and Phase-to-Ground voltage will be detected. To include neutral monitoring go the step 5.
- 5.) Ungrounded or high resistance Wye configured power requires 2 additional units to include Neutral monitoring. Wire as shown in Figure 4.
- 6.) For DC configured power wire as per Figure 5.
- 7.) **TURN POWER ON.** For typical 3-phase systems with normal voltage applied, the L1, L2, and L3 indicators should flash at a rate according to the detected voltage level. The type of power system grounding configuration determines if the GRD indicator normally visually indicates (FAQ's at www.pesd.com). **TURN POWER OFF.** All indicators should be extinguished. **Note:** If a "+" indicator for one line and a "-" indicator for another line are still visual indicating, **STORED ENERGY** is present and must be removed or discharged. **All** indicators must be extinguished or a shock hazard is present on the monitored lines. Proceed to GRD verification steps below.

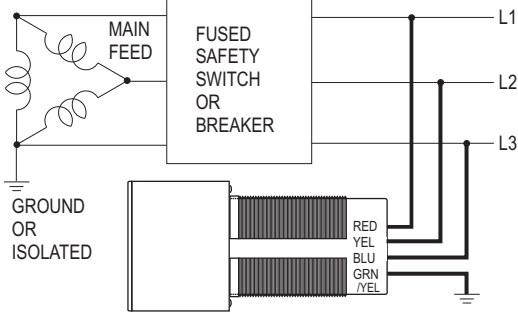
To complete proper installation, verify grounding of the GRD lead-wire. Under normal operation, the power system determines if GRD LEDs illuminate.

- 1.) Apply power to the R-XXX, if the GRD LEDs do not illuminate, proceed to step 2.)
- 2.) Remove power and re-establish an electrical safe work condition to allow one phase lead-wire to be disconnected from its source by either disconnecting wire or pull a fuse.
- 3.) Re-apply power and verify that the GRD LEDs now illuminate to insure a proper ground connection.
- 4.) Complete installation by removing power and reconnecting the phase lead-wire or fuse and reapply power and re-verify that L1, L2, & L3 LEDs illuminate.

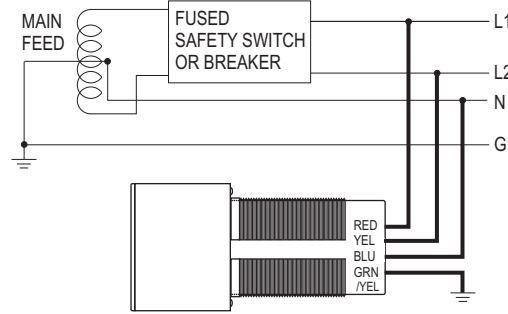
⚠ WARNING

BEFORE OPENING A PANEL, TURN POWER OFF! (Steps 1-7 must first verify proper operation of indicators.)
SAFETY PROCEDURES STILL APPLY: Before working on an electrical conductor, verify zero electrical energy with proper voltage testing instrument and the proper procedure as per NFPA 70E 120.1(5), 120.2 (F)(2)(f)(1-6), OSHA 1910.333(b)(2)(iv)(B).

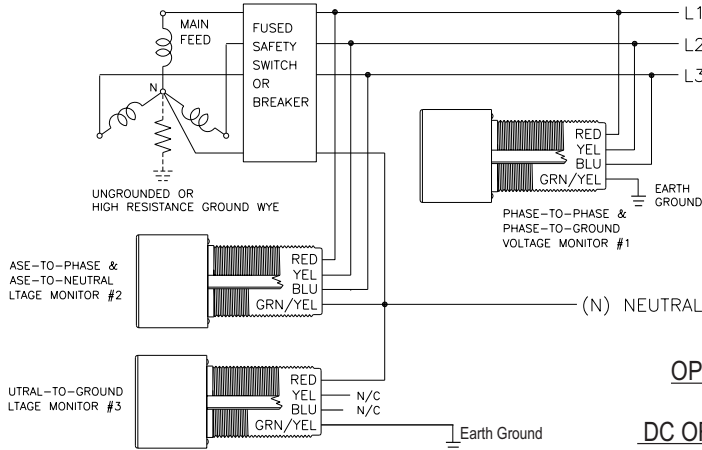
THREE PHASE DELTA, 3W + GND (Figure 2)



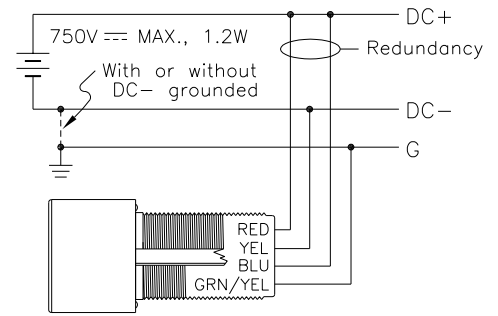
SINGLE PHASE, 3W + GND (Figure 3)



THREE PHASE WYE 4W + GND (Figure 4)



DC SINGLE SOURCE, 2W + GND (Figure 5)



INDICATOR FLASH RATES (L1,L2,L3,GND)

3-PHASE LINE-TO-LINE (VAC)	<29	30	120	240	480	600	750
FLASHES/SEC (TYPICAL)	0	1.3	4.2	5.8	7.3	8	8.8
DC OR STORED ENERGY (VDC)	<27	30	48	110	300	600	1000
FLASHES/SEC (TYPICAL)	0	1.6	2.5	4.5	6.9	8.8	9.1

OPERATIONAL RANGE: AC Single or 3-Phase: 40-600V 50/60Hz (UL)

Operates up to 400 Hz

DC OR STORED ENERGY: 30 to 1000 VDC

MAXIMUM VOLTAGE: 750VAC/1000VDC (UL)

POWER CONSUMPTION: 1.2 Watts @ 750 VAC (Approximately)

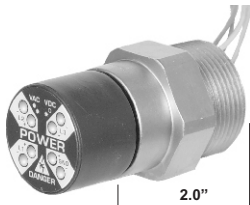
TEMPERATURES: Operate: -20°C to +55°C, Storage: -45°C to +85°C

FAILURE CURRENT: Maximum single component failure fault current is 3.7mA @ 750V 3~

For additional information, see SAFESIDE Technical Info:
www.pesd.com

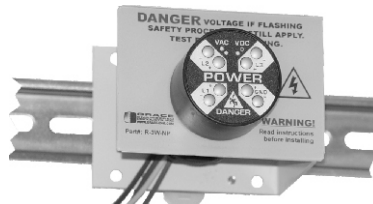
Note: All above rating are LINE-TO-LINE or LINE-TO-GND

Time Saving Accessories



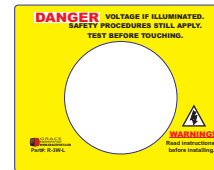
Part#: R-3W-NPT125

30mm to 1/4" NPT conduit adapter.



Part#: R-3W-DIN

See voltage sources inside your panel with our DIN rail bracket. (3"W x 2.3"H x 2.5"D)



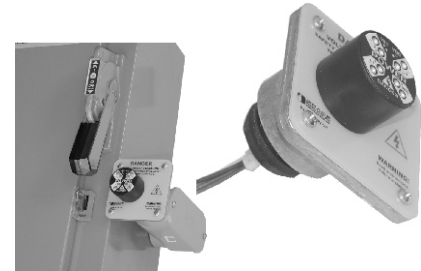
Part#: R-3W-L

Warning Nameplate (3"W x 2.3"H)



Part#: R-3W-DR-C6

Door mount kit for additional voltage protection. Includes a 30mm adapter and 6' of NW10 flexible conduit. (With bending radius, allow for 4.5" depth into panel)



Part#: R-3W-NPT150-NP

Warning plate flange for 1/2" NPT conduit. Die-cast AL with female threads. (Ships with right hand & left hand nameplates.)