1.) Follow all Local, State, and National Electrical Codes when installing this equipment. 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 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 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 to 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 be illuminated. LED appearance for differing voltages as follows: 32-159V(FLASH) 160-329V(SHIMMER) 330V+(SOLID ON). The type of power system grounding configuration determines if the GRD indicator normally 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 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 illuminates.

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 ensure a proper ground connection.
4.) Complete installation by removing power and reconnecting the phase lead-wire or fuse and re-apply power and re-verify that L1, L2, & L3 LEDs illuminate.

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 120.15(5), 120.2 (F)(2)(f)(1-6), OSHA 1910.333(b)(2)(iv)(B).
Time Saving Accessories

Part#: R-3W-NPT125
30mm to 1¼” 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-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 1½” NPT conduit. Die-cast AL with female threads. (Ships with right hand & left hand nameplates.)

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

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