

3-Phase Voltage Portal Combo Unit



Permanent Electrical Safety Devices (PESDs) are defined as external devices permanently mounted to electrical systems that, directly or indirectly, reduce the risk of arc flash and/or shock hazard by providing feedback on the voltage state within the enclosure and eliminating proximate exposure to that same voltage. PESD combo units include voltage portals and voltage indicators.

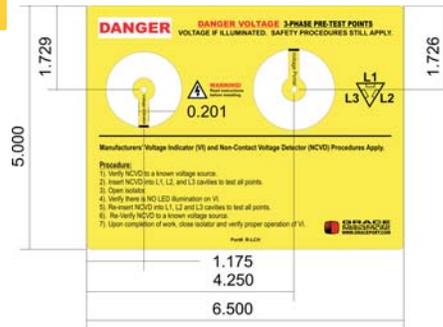
Voltage Indicators: Flashing or non-flashing device that monitors both AC and DC voltage. They are externally mounted and give a visual indication outside the panel to the presence or absence of voltage. Voltage indicators are also available in Class 1 Div 2, solid-on LEDs.

Part numbers include: R-3W, R-3W2, R-3W-SR



Voltage Portals: Non-conductive, encapsulated point that allows for the detection of the presence of voltage through a panel door with a non-contact voltage detector (NCVD).

Part numbers include: R-1A003 and R-T3



Part #	Description
R-T3W-LCH	R-3W/T3/Horizontal Combo Label
R-T3W-LCF	R-3W/T3/Flange Combo Label
R-T3WS-LCH	R-3W-SR/T3/Horizontal Combo Label
R-T3WS-LCF	R-3W-SR/T3/Flange Combo Label
R-T3W2-LCH	R-3W2/T3/Horizontal Combo Label
R-T3W2-LCF	R-3W2/T3/Flange Combo Label

PESDs and NFPA 70E

The NFPA 70E states that the following principles are foundational to ensuring a zero energy state:

- **Locate all sources of electrical energy.**^[1] Voltage portals and voltage indicators installed will locate each source.
- **Physically contact voltage detector to the electrical energy.**^[2] Voltage indicators are hardwired to the source.
- **Test between each phase and phase to ground.**^[3] Voltage indicators check voltage between phase-phase-ground
- **Verify voltage detector before and after use.**^[4] A non-contact voltage detector (NCVD) can be verified before and after use.

Please note: Employers are responsible to train employees in selecting and properly using a voltage detector.^[5] It is also the responsibility of employers to provide a written lock-out/tag-out procedure and train employees on those procedures.^[6] Follow manufacturer's instructions when using a non-contact voltage detector. All other safety procedures apply.

NFPA 70 References: [1] Annex G 6.1, [2] 110.6 (D) (4)(e), [3] 120.1(5), [4] 120.2(F)(2)(f)(1), Annex G 3.4, [5] 120.2(C)(2) [1] Annex G 6.1, [2] 110.6 (D) (4)(e), [3] 120.1(5), [4] 120.2(F)(2)(f)(1), Annex G 3.4, [5] 120.2(C)(2)

Warning: Verify an electrical conductor has been de-energized using an adequately rated voltage detector before working on it. Follow appropriate Energy Control (Lockout/Tagout) procedures as per OSHA Subpart S; the current edition of NFPA 70E; and the current edition of CSA Z462.



Catalog Number
R-T3

3-Phase Voltage Portal

Grace Engineered Products' SafeSide® R-T3, a non-contact voltage portal, has three phases combined into one single unit. Operators now have a single test location for all three phases, which takes up less space on the electrical panel and reduces installation time.

The SafeSide® R-T3 also reduces arc flash risk while increasing electrical safety and productivity by providing electricians and maintenance personnel a single no-touch voltage portal on the outside of grounded metallic electrical enclosures. The SafeSide® R-T3 interface, installed on an electrical panel, allows electricians and maintenance personnel to use a NCVD pen to check line voltage before and after they open the main disconnect. The ability to pre-verify electrical isolation prior to opening an electrical panel puts an additional safety barrier between people and hazardous voltage.

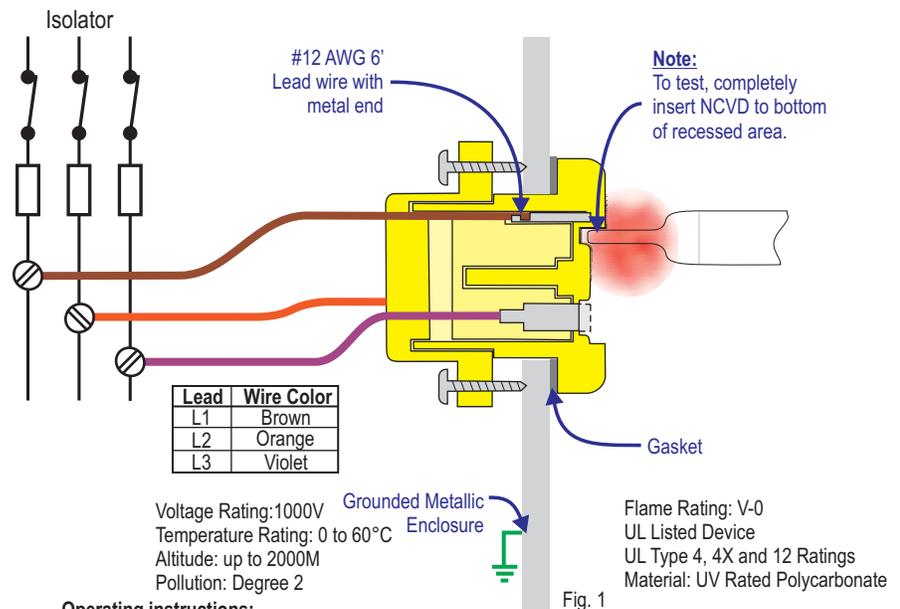


FEATURES

- >3-phases combined into one unit
- >Integral 6' #12 AWG lead wire
- >Installs in a 30mm hole for easy installation
- >Rugged polycarbonate construction for safety
- >UV outdoor rated so you can mount it anywhere
- >UL Type 4, 4X, 12 Rated

Part #	Description
R-T3	Three-phase Voltage Portal installs in a 30mm hole
R-T3-LF	Flange mount adhesive label, 8.75" x1.90"
R-T3-LH	Door/Side mount adhesive label, 5.50" x4.00"

Warning: Non-Contact Voltage Detectors (NCVD) require solidly grounded power systems for proper operation. Using NCVDs and/or SafeSide® voltage portals on power systems with a floating, isolated grounds, or other ungrounded systems will result in false-negative voltage indication (voltage present, but not indicated by the NCVD). Follow the NCVDs' manufacturer operating instructions for proper procedures and operation of the NCVD.



Operating instructions:

- 1.) Verify proper operation of Non-Contact Voltage Detector (NCVD) to a known source. With the Isolator closed and the electrical panel powered, verify the NCVD indicates voltage when completely inserted into the bottom of the recessed area of the R-T3 interface (figure 1). If the NCVD does not indicate voltage, then proceed with Lock-out/Tag-out (LOTO) procedure as per NFPA 70E Annex G or other approved procedure.
- 2.) Open the isolator, insert the NCVD individually into the recessed area of the installed R-T3 interface. If the phases have been isolated, then the NCVD should not sense voltage on the R-T3 interface and the panel has been pre-verified. From here on follow approved electrical LOTO procedure.

UL E311256



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UL TYPE 4, 4X, 12
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