



Permanent Electrical Safety Devices

Thru-Door Voltage Indicator Multi-Environment CAT III/IV* - Hazardous Area Product Data Sheet

Catalog Number **R-3W2**

Class I Division 2

One-Size-Fits-All

The R-3W2 SafeSide™ thru-door voltage indicator provides electrical safety information while the panel doors are safely closed. A “one-size-fits-all” SafeSide™ voltage indicator works on any voltage (40-750VAC/30-1000VDC), in any location on your power system (CAT IV*), and can be installed into most industrial environments. The encapsulated construction, redundant circuit design, and CAT IV* rating means rugged reliability.

Safer Lock-Out Tag-Out (LOTO)

Keeping personnel away from live voltage is foundational to electrical safety. Electrical safety demands a precise answer to the question 'Is voltage present?'. Thru-door voltage indicators provide visibility of voltage from outside the enclosure without exposing personnel to voltage.

More Productivity in Mechanical LOTO

Workers performing mechanical LOTO must isolate electrical energy. An externally-mounted voltage detector provides a means to check voltage inside an electrical panel. Without a voltage indicator, a mechanic performing mechanical LOTO would be required to work in tandem with an electrician using a voltmeter to physically verify voltage inside an electrical panel. In this case, the electrician is exposed to voltage. With SafeSide™ thru-door voltage indicators, the mechanic can verify zero electrical energy without any exposure to voltage.

Reduced Voltage Exposure and Arc Flash Risk

Voltage is the common denominator in an electrical accident or an arc flash; no voltage means no accident, no arc flash. While performing electrical LOTO with a SafeSide™ thru-door voltage indicator installed, the electrician can pre-check the internal voltage state without opening the enclosure. Next, the electrician should replicate a zero voltage reading with his voltmeter as per NFPA 70e 120.1(5). This low-cost, redundant voltage-verification task reduces arc flash risk and increases electrical safety for workers.

Warning: 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).

Voltage Indicator for Any Location¹

R-3W2 Features:

- ⌋ 40-750VAC / 30-1000VDC
- ⌋ UL Hazardous Location (Class 1 Division 2 Group A, B, C, & D)
- ⌋ CAT III/IV* Electrical Rating
- ⌋ UL Type 4X, 12, 13
- ⌋ Potted Construction with 6' Lead



Other Benefits:

- ⌋ Simplifies Personal Protective Equipment
- ⌋ Stored Energy Detector (120.1(6))**
- ⌋ Visible Blades Disconnect (120.1(3))**
- ⌋ Permanent Devices is Less Prone to Damage
- ⌋ Voltage Source Labels (120.2(F)(1)(a))**

**NFPA 70E 2009 Edition

* CAT III 1000V
CAT IV 600V
DC or AC-rms to Ground
(Peak Impulse Transient 8000V
20 repetitions, 2 ohm source)



RoHS



Three Phase 40-750VAC/30-1000VDC UL-Listed Voltage Indicator for Type 4X/12/13 with 30mm Mounting

R-3W2	Hazardous Duty/Multi-Location Voltage Indicator (Suitable for use in Class 1, Division 2 (Zone 2), Groups A, B, C, D hazardous Location, or Non-Hazardous Locations Only)
R-3W2-KB²	Flush Mount Assembly with Bezel and R-3W2 (UL)
R-3W-L	Adhesive-Backed Warning Label (slips over installed R-3W2)
R-3W2-KB-L	Adhesive-Backed Warning Label (slips over installed R-3W2-KB)

Accessories

Door Mount #10NTW Conduit Wire Protection and Isolation Adaptor Kit

R-3W-DR-C3	3Ft #10 NTW Conduit
R-3W-DR-C4	4Ft #10 NTW Conduit
R-3W-DR-C6	5Ft #10 NTW Conduit

R-3W-DIN	Internal Panel Mount DIN Rail Mounting Bracket
R-3W-NPT125	30mm to 1 1/4" R-3W Conduit/Adapter

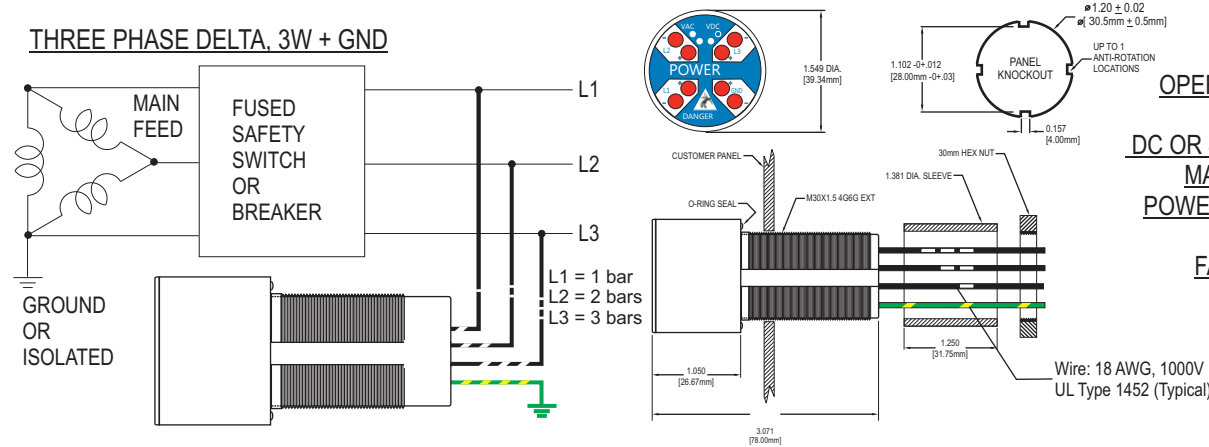
- (1) The R-3W2 environmental ratings cover most industrial applications.
- (2) Must be purchase as an assembly for UL Listing - Bezel is not sold separately.



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DS: R3W2:3/2013
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TYPICAL CONFIGURATION*:



Voltage Indicator



Permanent Electrical Safety Devices

OPERATIONAL RANGE: 3-Phase: 40-750V, 40-600VAC 1-Phase 50/60Hz
Operates up to 400 Hz

DC OR STORED ENERGY: 30 to 1000 VDC

MAXIMUM VOLTAGE: 750VAC/1000VDC - Surge 4300V for 5 seconds

POWER CONSUMPTION: 1.2 Watts @ 750 VAC (Approximately)

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

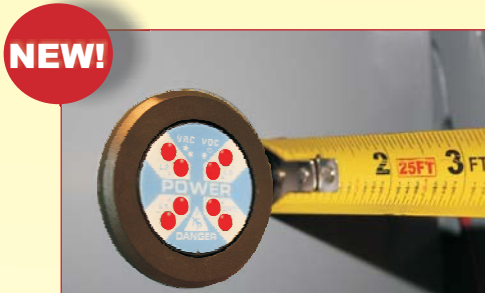
FAILURE CURRENT: Maximum single component failure fault current is 3.7mA @ 750 3-Phase

*For additional mounting configurations, installation instructions, and videos please go to <http://info.graceport.com/PWA>

INDICATOR FLASH RATES for the R-3W2 only (L1,L2,L3,GND)

3-PHASE LINE-TO-LINE	<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

Accessories:



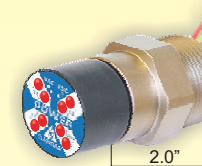
Dimensions of the Bezel - Diameter: 2.25"
Outside cabinet depth: .20"
Inside cabinet depth: 3.50"

New! Bezel-mount Installation for Voltage Indicator!

Create a near-flush look by purchasing your Class 1 Division 2 Voltage Indicator with our new bezel. For a short video on this accessory, please visit <http://info.graceport.com/PWA>

Part Number	Description
R-3W2-KB	Class 1 Div 2 Voltage indicator with Bezel

*Corresponding label available for bezel-mount configurations. Please see <http://info.graceport.com/PWA> for more information.
Note: When mounting the Bezel (part numbers with -KB), the diameter of the cut-out is as follows: 1.701 inches (43.21mm)



Part #: R-3W-NPT125

A 30mm to 1" NPT conduit adapter. This assembly fits into a standard conduit LB for mounting on the outside of an enclosure.



Part #: R-3W-DR-C6

Use this door mount accessory for additional voltage protection. Includes a 30mm adapter and 6' of NW10 flexible conduit. (Allow 4.5" depth into panel).

Voltage Indicator Label



Label dimensions are 3"W x 2.3"H.

This adhesive-back label fits over an installed Voltage Indicator.

Part Number	Description
R-3W-L	Label for Flashing and Class 1 Div 2 Voltage Indicator