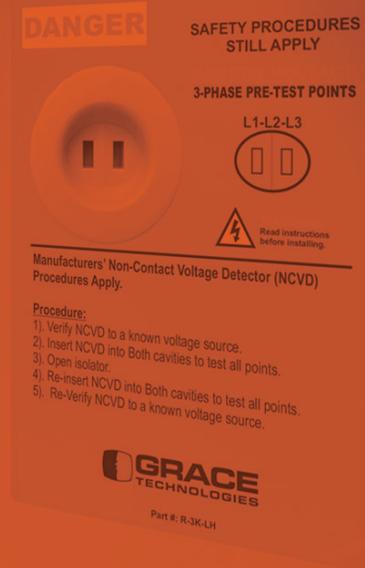


R-3K VOLTAGE PORTAL

Verify voltage presence using a
Non-Contact Voltage Detector
(NCVD) pen



EASY INSTALL PASS-THRU FEATURES

- ▶ The **voltage portal** is a Permanent Electrical Safety Device (PESD) that is easy to install on grounded metallic electrical enclosures (Type 4, 4X, and 12) without the need for additional wiring when used with R-3W series voltage indicators.
- ▶ Allows task qualified workers to quickly and safely validate electrical energy from outside the electrical enclosure with a NCVD pen.
- ▶ The **voltage portal** works in both 3-Phase and 1-Phase applications, improving accuracy during voltage presence verification.
- ▶ Provides a safer and more productive verifying voltage presence, while exceeding NFPA 70E and meeting the OSHA energy isolation principle.



R-3K

OPERATION

The **voltage portal** allows the task qualified maintenance worker to safely and productively perform voltage presence verification from outside a grounded electrical enclosure. Installed on the door or flange of an electrical cabinet using a 1/2" or 30mm standard punch hole with site specific procedure labels, workers can perform a voltage test using an adequately rated CAT III/CAT IV NCVD pen during mechanical Lockout/Tagout (LOTO). The voltage portal is typically connected to the load side of the electrical disconnect by a qualified electrician.

VOLTAGE PORTAL TECHNICAL SPECIFICATIONS

	CAT IV		CAT III & IV	
		 R-3KW-LCH  R-3KW-LCF	 R-3KW2-LCH  R-3KW2-LCF	 R-3KWS-LCH  R-3KWS-LCF
COMPONENT CODE	R-3K R-3K-KIT*	R-3KW-LCH R-3KW-LCF	R-3KW2-LCH R-3KW2-LCF	R-3KWS-LCH R-3KWS-LCF
Voltage Type	AC			
Mounting Location	External (door mounted)			
Lead Connections*	3-Phase, 3-Wire, or 1-Phase, 2-Wire			
Operational Temperature Range	-20°C to +60°C			
Operational Voltage Range	1000VAC Maximum - <i>Minimum voltage sensing value vary by the type and class of NCVD pen used</i>			
Pollution Degree	2			
Chemical Resitance**	Characteristics of polycarbonate material apply			
Wiring Specifcations	Allows Wires from 18AWG -12 AWG			
Installation	30mm pushbutton hole			
Certifications	cUL Listed (#E311256) Type 4, 4X, 12, CE			

* Heat shrink caps included with product (for use with customer supplied wires.)

** See Voltage Portal Chemical Resistance Application Note for more details.

**Already have a voltage indicator or portal and what to upgrade to a combo unit?
Ask your sales representative about our EZ-Upgrade packages.**

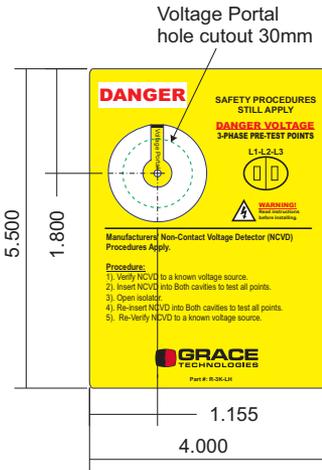
FOR MORE INFORMATION VISIT PESD.COM OR CALL **1.800.280.9517**

Warning: Verify an electrical conductor has been de-energized using an adequately rated test instrument before working on it. Follow appropriate Energy Control (Lockout/Tagout) procedures as per OSHA Subpart S.

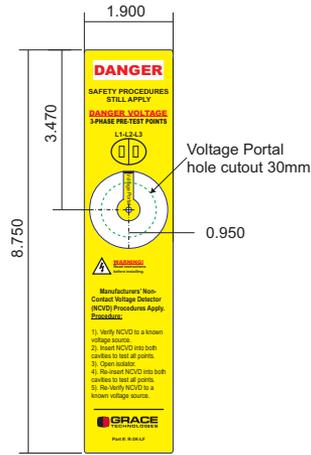
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LABELS



R-3K-LH Horizontal Label



R-3K-LF Vertical Label

Custom label variations available upon request.
Please call 1-800-280-9517 for more information.

ACCESSORIES



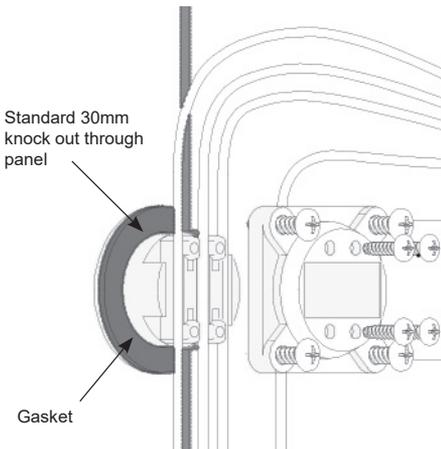
Heat Shrink Caps.....R-ACC-CAPS
Heat Shrink Caps are included in R-3K-KIT only.



Fluke® NCVD Pen.....R-1A-PEN
Sensing Range: 90 - 1000VAC

Add a "- J" to the end of any voltage portal part number to also receive the NCVD pen with your order.

R-3K DETAIL



R-3K WIRING

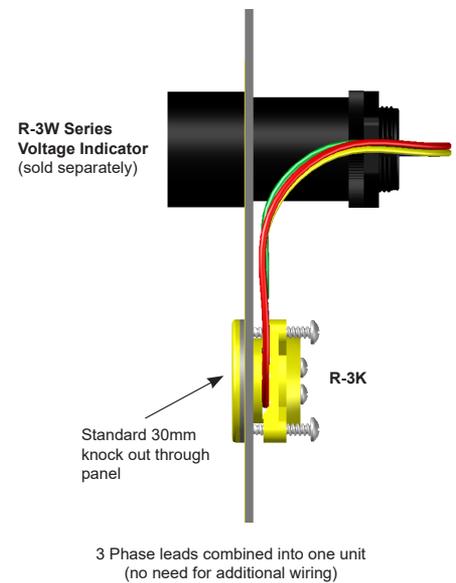
Independently:

- The R-3K can be connected directly to the source using customer supplied wires ranging from 12-AWG to 18-AWG.
- Pass the desired lead wires (L1, N, GND for single phase; or L1, L2, L3 for three phase) through the voltage portal device and terminate the wire ends using heat shrink end caps (available upon request).

With a Voltage Indicator Combination:

- The R-3K can be installed using the wires from new or existing voltage indicators. (See detail to the right for use with an existing voltage indicator).
- With the indicator installed, simply pass the existing indicator leads through the portal.
- This combination provides a safety redundancy for voltage presence indication with flashing or non-flashing LED lights from the voltage indicator.

R-3K WITH AN EXISTING VOLTAGE INDICATOR DETAIL



FOR MORE INFORMATION VISIT PESD.COM OR CALL 1.800.280.9517

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FREQUENTLY ASKED QUESTIONS

Q: How do voltage portal PESDs and NCVD pens assist during mechanical LOTO?

A: Once the voltage portal is properly installed, wired, and documented, a task qualified person can safely perform the presence of voltage test using a NCVD pen from outside the electrical cabinet during mechanical LOTO.

Q: Why should I use voltage portals ONLY on grounded metallic enclosures?

A: NCVD pens used with voltage portals rely on a capacitive coupling to ground, which makes the NCVD less versatile than a phase-to-phase/phase-to-ground voltmeter test. However, with voltage portals installed and the panel energized, workers can test the voltage portal with the NCVD to ensure it works. This means a capacitive ground connection exists and will always exist because panels do not move and workers stand in the same place when they test.

Q: Can I use voltage portals and NCVD pens on ungrounded systems?

A: No, ungrounded and isolated grounded systems may not always create a capacitive coupling to detect the voltage with a NCVD pen.

Q: What is the advantage of installing a voltage portal in an electrical cabinet?

A: The ability to safely verify voltage presence for mechanical LOTO and pre-verify for electrical LOTO prior to opening an electrical panel using a Voltage Portal and NCVD pen puts an additional safety barrier between the worker and hazardous voltage.

Q: Can I use voltage portals and NCVD pens on DC voltage systems?

A: No, voltage portals and NCVD pens work only on AC voltage systems up to 1000 Volts. Voltage range and accuracy of the NCVD pen vary by manufacturer.

Q: Why should I use an adequately rated NCVD pen with voltage portals?

A: Most NCVD pens have a specific sensing range and ratings within which they are specified to operate properly. Some are designed to work on the low voltage control circuit applications, others specified for residential and industrial environments. When selecting your NCVD pen, be sure to pick the one that meets your application environment and voltage ratings. Most industrial applications use 1000 Volts, CAT IV Rated NCVD pens.

Q: Where should I use the optional Heat Shrink Caps?

A: Heat Shrink Caps included in your kit are used in applications where the customer intends to use the R-3K voltage portal to standalone when no voltage is present at the door to pass the wires through the device. It can be also used in applications where customers prefer to have a redundant connection to the source voltage with a separate set of wires to the device.

Q: Can I use R-3K pass-thru voltage portals by themselves?

A: R-3K voltage portals can be used to verify the voltage presence of any door mounted device with a 12-18 gauge wire and also with new or existing R-3W voltage indicators. Passing the phase leads of the door mounted device or voltage indicator through the voltage portal saves installation time as there is no need for additional wiring and connections.