

# FLEX-MOUNT VOLTAGE INDICATOR

Trusted indication. More places.



5-Wire  
Configuration

## FLEX-MOUNT VOLTAGE INDICATOR FEATURES

- ▶ A Permanent Electrical Safety Device (PESD) that is easily installed virtually anywhere on electrical equipment.
- ▶ Installed through an M20 or ¾" conduit knockout (adapter supplied), the Flex-Mount comes fully potted with CAT III & IV ratings and is ideal for both AC & DC applications.
- ▶ Flex-Mount can be installed on any side of electrical equipment for optimal LED visibility and factory supplied labels are provided for directional mounting.
- ▶ Allows maintenance personnel to safely pre-verify voltage presence, making LOTO more productive by enhancing compliance to NFPA 70E standards and the OSHA energy isolation principle.



R-3D2

### OPERATION

**Flex-Mount voltage indicator** is a Permanent Electrical Safety Device (PESD) that conveniently mounts onto any electrical equipment. This 3-phase voltage indicator uses redundant, longlife LEDs (flashing or non-flashing options available) to provide a visual representation of energy presence with the flexibility of being mounted virtually anywhere (alternate mounting position labels provided). In addition to the four-wire option, the Flex-Mount is the first voltage indicator to utilize an optional five-wire configuration for use on wye power systems. The Flex-Mount comes fully potted with CAT III & CAT IV ratings that can be hardwired directly to the voltage source and is ideal for use in both AC & DC applications. Once incorporated into a facility's electrical safety procedure, qualified personnel can safely and productively validate voltage presence without being exposed to hazards.

### TECHNICAL SPECIFICATIONS

COMPONENT CODE	CAT III & IV RATED			
	R-3D2	R-3D2-SR	R-3D2-W5	R-3D2-SRW5
Voltage Indicator	Flashing LEDs	Non-Flashing LEDs	Flashing LEDs	Non-Flashing LEDs
Lead Connections	4 Wire		5 Wire	
Operating Temperature	-20°C to +55°C			
Operational Voltage Range	20-600 VAC 50/60/400Hz			
Operational Range DC or Stored Energy	20 to 1000 VDC (20 to 750 VDC for Safety Applications)			
Wiring Specifications	#12 AWG (3ft long), PVC Insulation with nylon jacket, 90°C @ 1000V, UL-1452			
Installation	M20 or 3/4" Conduit Knockout			
Certifications	cUL Listed (#E334957) Type 4X, 12, 13 CAT III, IV, Class 1 Div 2, IP67, CE			

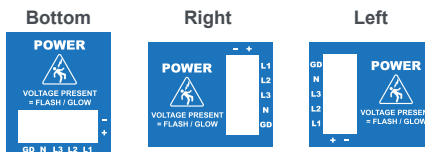
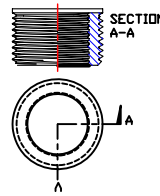
### DIMENSIONS



Factory Installed Label (top)

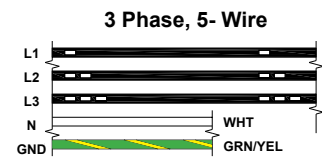
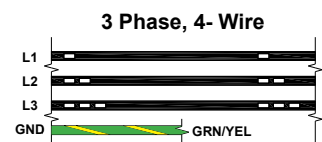
### ACCESSORY KIT AND LABELS

- ▶ 2 O-Rings (M20 and 3/4")
- ▶ 3/4" Adaptor
- ▶ 2 Nuts (M20 and 3/4")
- ▶ Channel ring
- ▶ 3 labels
- ▶ Alcohol prep pad



(For additional mounting positions)

### WIRE IDENTIFICATION



**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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## APPLICATION IDEAS

Flex-Mount voltage indicator can be installed on any electrical equipment including, but not limited to, the following:

- NEMA Type motor disconnects and IEC load switches
- Safety disconnect switches
- Breaker panels and load centers used in commercial and industrial buildings
- Critical pump facility applications
- Compressors and motors used in process and manufacturing facilities
- Frequently maintained power generators with synchronizing systems
- Uninterruptible power supplies used in data centers and healthcare facilities
- DC safety switches and solar strings used in solar harvesting plants.

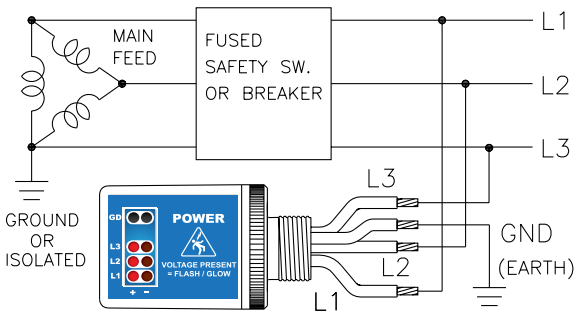


## WIRING CONFIGURATIONS Please refer to the technical app note for additional wiring details.

### AC APPLICATIONS

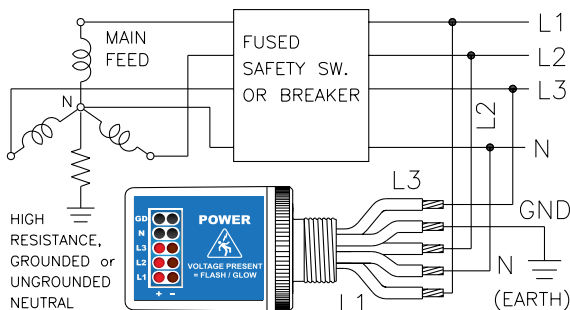
#### R-3D2 & R-3D2-SR

##### THREE PHASE DELTA, 3W + GND



#### R-3D2-W5 & R-3D2-SRW5

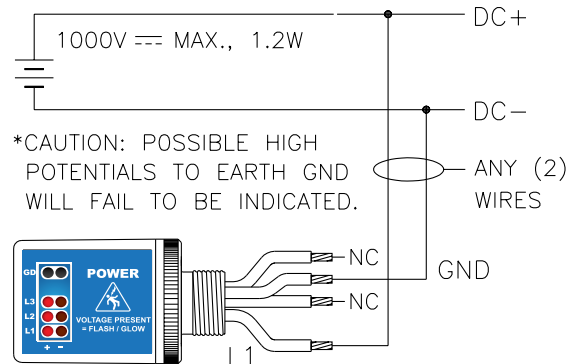
##### THREE PHASE WYE, 4W + GND



### DC APPLICATIONS

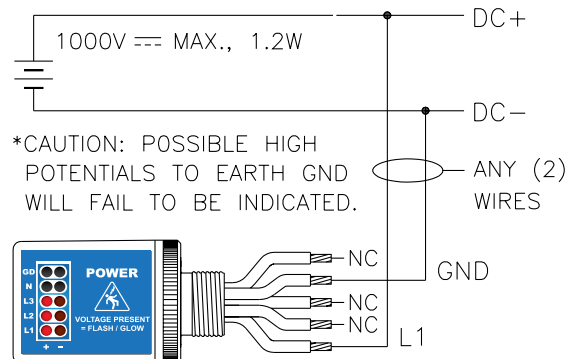
#### R-3D2 & R-3D2-SR

##### DC SINGLE SOURCE, 2W ONLY NON-SAFETY APPLICATION



#### R-3D2-W5 & R-3D2-SRW5

##### DC SINGLE SOURCE, 2W ONLY NON-SAFETY APPLICATION



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## FREQUENTLY ASKED QUESTIONS

**Q: What are the added benefits of Flex-Mount voltage indicator?**

A: Flex-Mount adds the benefit of directional mounting which enables optimal LED visibility (optional flashing or non-flashing) from the top, bottom, left side or right side of any electrical equipment with an M20 or 3/4" conduit knockout. In addition to the four-wire option, the Flex-Mount is the first voltage indicator from Grace PESDs® available in a NEW five-wire configuration for use on wye power systems.

**Q: Do I need to follow any specific safety procedures when installing and using Flex-Mount?**

A: Always follow all local, state, and national electric codes when installing this device. The installation must be in accordance with the National Electric Code or Canadian Electrical Code as applicable, including issues such as the length of wires. If applicable, wiring shall be enclosed and routed in accordance with Class 1, Division 2 wiring methods as specified in the NFPA 70, Article 501.10(B).

**Q: Do I need any special tools for installing Flex-Mount voltage indicators?**

A: No, standard tools will suffice. To install Flex-Mount voltage indicator, simply tighten the Hex nut until the knurled round base seats against the mounting surface so the O-ring is compressed 10 in-lbs. However, the housing may still be manually rotated. If so, increase torque to 15 to 30 in-lbs. in order to restrict rotational movement. Do NOT overtighten.

**Q: What is supplied in the hardware kit that comes with the Flex-Mount voltage indicator?**

A: The factory supplied hardware kit consists of 3 Labels, alcohol pad, 3/4" nut, 20mm nut and channel ring. See mounting instructions shipped with the device.

**Q: What are the extra labels for?**

A: Each unit comes with a factory installed TOP mount label. Alternate adhesive mounting position labels (RIGHT, LEFT, & BOTTOM) are provided for directional mounting. The label of choice overlays the existing label within the recessed label area. For maximum bond strength the contact surface should be thoroughly cleaned with the provided alcohol prep pad and allowed to dry untouched.

**Q: Do I need fuse protection?**

A: Always follow all local, state, and national electric codes when installing this equipment. Overcurrent protection of supply leads may be necessary. When determined necessary, use a low .1A or .125A 600VAC fast acting fuse like KTK-1/10 or -1/8.

**Q: What mounting style is the device configured in when shipped from the factory?**

A: The unit is shipped preassembled for mounting in a 3/4" K.O. Alternative mounting for M20 K.O. mount is as follows: remove K.O. adapter and the 3/4" outer O-ring. Insert the supplied channel ring in the outer channel. Regardless of mounting methods, for the best O-ring sealing performance, verify the external contact surface is clean, flat, and free of debris.

**Q: Can the wires be cut to desired length?**

A: Yes, you may cut wires to desired length. Make sure to allow for enough wire length to properly route it back to the intended terminal location with all necessary bends. A minimum wire length of 6" MUST be maintained.

**Q: How does the Flex-Mount voltage indicator increase productivity and improve safety?**

A: Productivity increases come from allowing more first line employees to become task qualified to perform mechanical LOTO through simpler, streamlined procedures and easier verification. In many instances, maintenance personnel, operators, cleaners and other first line personnel can perform tasks that historically were delegated to electricians or other highly-trained, specialized personnel. Confidence in their safety leads to greater productivity. Flex-Mount voltage indicator improves safety by continuing to indicate where (1) disconnects failed (stuck blades), (2) capacitive energy needs time to dissipate, (3) back fed power exists and (4) helps to ensure the correct Lock-Out point has been de-energized.

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