RedGear

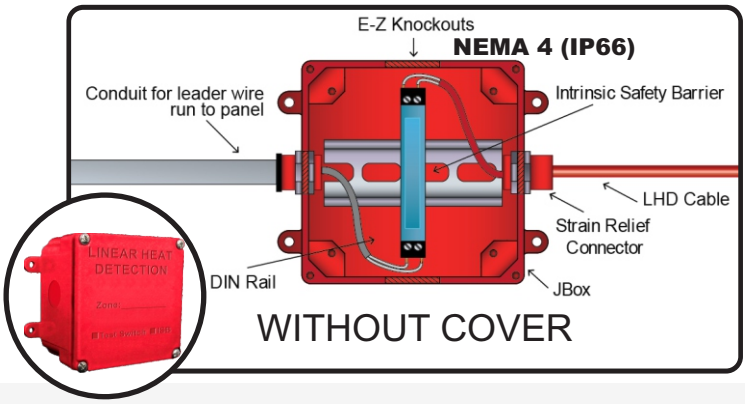
Intrinsic Safety Barrier
Special Hazard Applications

Cut Sheet

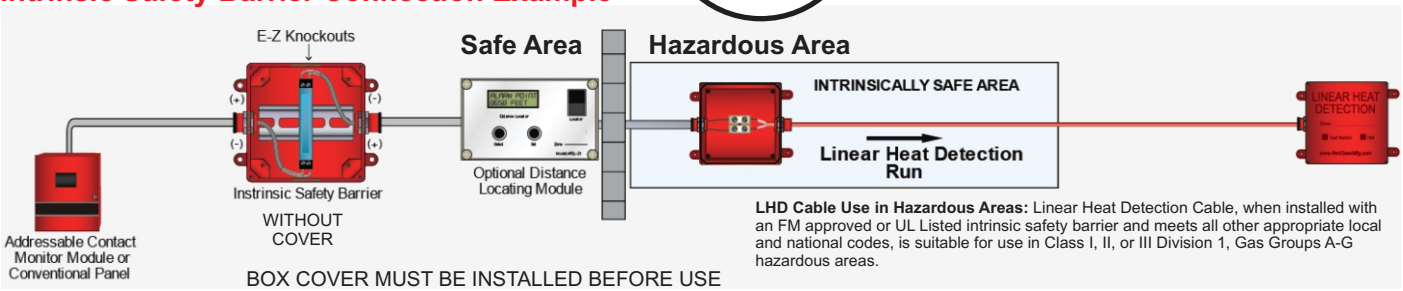
Part Number: RG5224 (Conventional)
RG5225 (Addressable)

Description

Intrinsic safety barriers are a protection technique for safe seperation of linear heat detection equipment in hazardous areas. These barriers are energy limiting and utilized zener diodes which direct voltage spikes to ground. Each barrier contains a replaceable 160mA fuse which protects the barrier from pole reversal and voltage spikes at the input side. Grounding wires are run in conduit or raceways separate from any non-intrinsically safe wiring. One barrier is required for each zone of detection.



Intrinsic Safety Barrier Connection Example



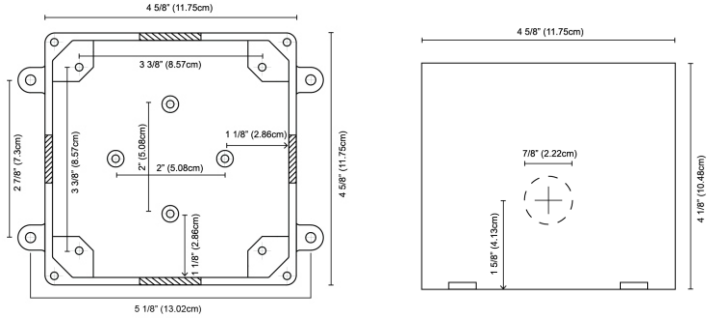
LHD Cable Use in Hazardous Areas: Linear Heat Detection Cable, when installed with an FM approved or UL Listed intrinsic safety barrier and meets all other appropriate local and national codes, is suitable for use in Class I, II, or III Division 1, Gas Groups A-G hazardous areas.

BOX COVER MUST BE INSTALLED BEFORE USE

Installation Notes

- Intrinsically safe wiring must always be routed in conduit or raceways separate from non-intrinsically safe wiring.
- Ground conductor wire shall not be smaller than 12 AWG
- A ground fault on the positive leg of the initiating circuit will result in a false alarm condition.
- Barrier to Ground must not exceed 1 ohm.
- Where possible, the barrier should be mounted as close to the hazardous area as possible. This will minimize the length of intrinsically safe conductors within the nonhazardous location.

Details



Specifications
Intrinsic Safety Barrier

Dimensions (W x H x D):	4 5/8" x 4 1/8" x 4 5/8" 11.75cm x 10.48cm x 11.75cm
Weight:	1.07 lbs (.49 kg)
Current Limitation:	Resistive
Rated Voltage:	24VDC - 28VDC max.
Rated Current:	100 mA max.
Leakage Current:	1µA unless stated otherwise
Replaceable Fuse Rating:	160mA per channel
Mounting Location:	Non-Hazardous or Class 1 Div.2
Temperature Effect:	<0.25%/10K
Short Circuit Proof:	Yes, unless stated otherwise
FrequencyRange:	100kHz@I_{sc}>50mA
GroundingMethod:	Through mounting platform
OperatingTemperature:	-4°to+140°F(-20°Cto60°C)
Enclosure Mounting:	35mm DIN Rail in HDJ/ELR Box
HumidityRange:	To95%,non-condensing

Note: Please refer to all federal, state and local codes, and manufacturer's recommendations prior to design or installation.

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