

Installation Instructions

871F 2-wire AC/DC Proximity Sensors

IMPORTANT: SAVE THESE INSTRUCTIONS FOR FUTURE USE.

WARNING



Suitable for use in Class 1, Division 2, Groups A, B, C, D or nonhazardous locations only.

Explosion hazard: substitution of components may impair suitability for Class 1, Division 2.

Explosion hazard: Do not disconnect equipment unless power has been switched off or the area is known to be nonhazardous.

871F for Hazardous Locations

Models covered:

Conduit 1/2-14 NPT

871F-R50N80-T2

871F-K65N80-T2

Conduit PG13.5

871F-R50N80-Q2

871F-K65N80-Q2

General Specifications

Electrical

Load Current	≤ 100 mA
Minimum Load Current	5 mA
Leakage Current	≤ 1.8 mA @ 24V ≤ 1.8 mA @ 120V ≤ 2.0 mA @ 250V
Operating Voltage	20...250V AC/DC
Voltage Drop	≤ 10V
Repeatability	≤ 5%
Hysteresis	≤ 10% typical
False Pulse Protection	Incorporated
Transient Noise Protection	Incorporated
Short Circuit Protection	Incorporated
Overload Protection	Incorporated

Environmental

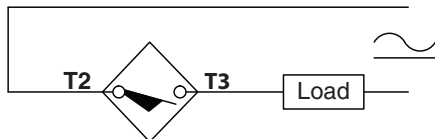
Certifications	cULus Listed, and CE Marked for all applicable all directives
Enclosure	NEMA 1, 2, 3, 4, 6, 6P, 12 and 13, IP67 (IEC529) 1200 psi (8270 kPa) washdown Division 2 Class I: Groups A, B, C, D

Mechanical

Housing material	Valox®
Connections	Conduit Opening: 1/2-14NPT thread, PG 13.5 thread
LEDs	Green: Power Orange: Output Energized
Operating Temperature [C (F)]	-25...+70° (-13...+158°)
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm amplitude, 3 planes

Wiring Diagram

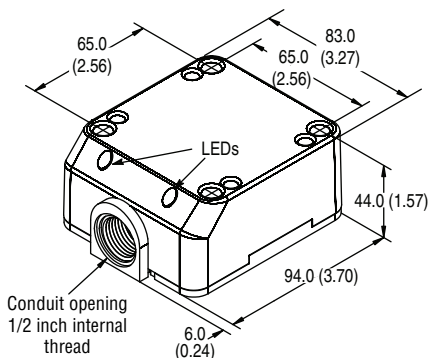
Conduit Style 1/2-14 NPT, PG13.5
Normally Open



Note: Load can be switched to terminal 2.

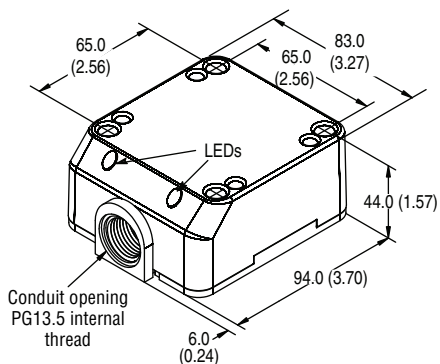
Approximate Dimensions [mm (in.)]

Conduit Style 1/2-14 NPT



Suggested mounting: M5 or SAE#10 cap screw should be used with a split lock washer to install the unit.

Conduit Style PG13.5

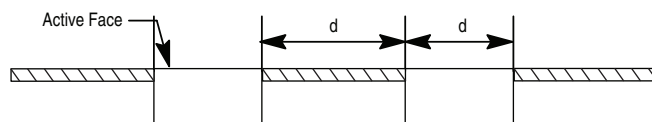


Mounting Space

Spacing Between Shielded Sensors (flush-mountable) and Nearby Metal Surfaces

Shielded proximity sensors allow the electro-magnetic field to be concentrated to the front of the sensor face. Shielded construction allows the proximity to be mounted flush in surrounding metal without causing a false trigger.

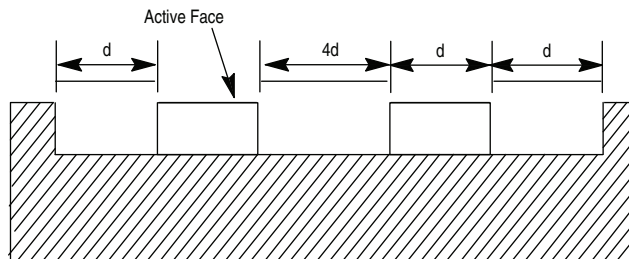
Flat Pack Style (871F)



Spacing Between Unshielded Sensors (nonflush-mountable) and Nearby Metal Surfaces

Longer sensing distances can be obtained by using an unshielded sensor. Unshielded proximity sensors require a metal-free zone around the sensing face. Metal immediately opposite the sensing face should be no closer than three times the rated nominal sensing distance of the sensor.

Flat Pack Style (871F)



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