

Installation Instructions

871F 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 to be covered:

Conduit 1/2 inch NPT

871F-P50BP80-T4
871F-P50BN80-T4
871F-N65BP80-T4
871F-N65BN80-T4

Conduit PG13.5

871F-P50BP80-Q4
871F-P50BN80-Q4
871F-N65BP80-Q4
871F-N65BN80-Q4

General Specifications

Environmental

Certifications	cULus Listed and CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 2, 3, 4, 6, 6P, 12, and 13, IP67 (IEC 60529), 1200 psi (8270 kPa) washdown; micro connector versions also meet IP69K (IEC 60529)
Operating Temperature [C (F)]	-25...+70° (-13...+158°)

Electrical

Load Current	≤200 mA
Load Current, Min.	1 mA
Leakage Current	≤10 μA
Operating Voltage	10...30V DC
Voltage Drop	≤2.5V
Repeatability	≤2%
Hysteresis	≤5% typical
Protection Type	False pulse, transient noise, reverse polarity, short circuit, overload
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm amplitude, 3 planes

Optical

LEDs	Green: Power Orange: Output Energized
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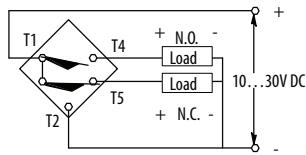
Mechanical

Housing Material	Valox®
Connection Types	Conduit Opening: 1/2-14 NPT thread, PG13.5 thread

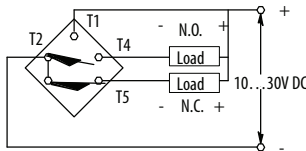
Wiring Diagrams

Conduit Style 1/2 inch NPT

Complementary Normally Open and Normally Closed Outputs
PNP (Sourcing)

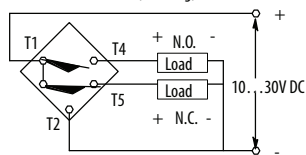


NPN (Sinking)

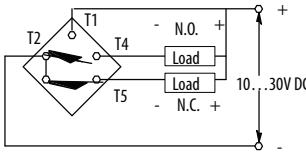


Conduit Style PG13.5

Complementary Normally Open and Normally Closed Outputs
PNP (Sourcing)

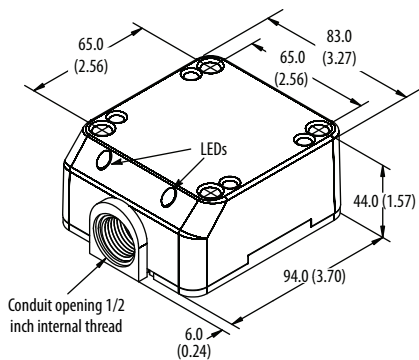


NPN (Sinking)



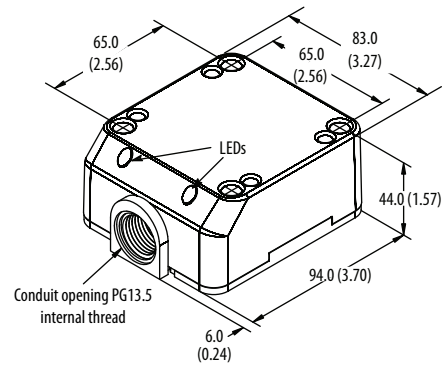
Approximate Dimensions [mm (in.)]

Conduit Style 1/2 inch 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

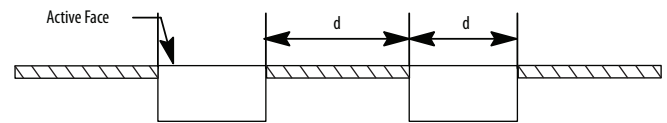


Mounting Space

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.

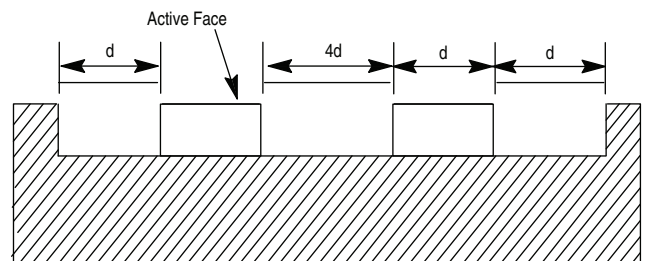
Flat Pack Style (871F)



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)



Rockwell Automation maintains current product environmental information on its website at

<http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

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