

871P 2-wire AC Rectangular Sensors

Can Sensors



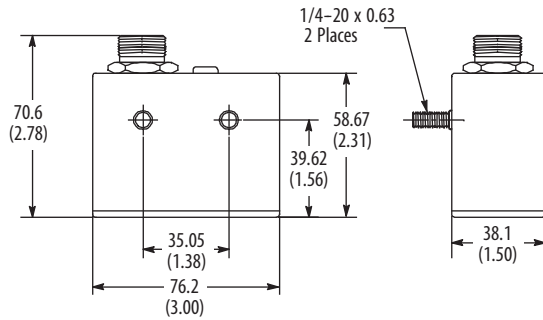
871P AC Long Range
76 X 36 X 58 mm

Specifications

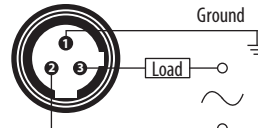
Attribute	871P
Load Current, Max.	300 mA
Load Current, Min.	15 mA
Leakage Current	<1.5 mA
Inrush Current	<5 A (20 ms)
Operating Voltage	30...150V AC RMS
Line Frequency	40...60 Hz
Voltage Drop	<15V @ 300 mA
Repeatability	≤2%
Hysteresis	10% typical
Protection Type	False pulse, transient noise, short circuit, and overload
Certifications	UL Listed and CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 3, 4, 4X, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270 kPa) washdown
Connection Type	3-pin mini style
Status Indicator	Red: Output Energized
Operating Temperature	-20...+70 °C (0...160 °F)

Approximate Dimensions [mm (in.)]

Long-Range Mini QD Style



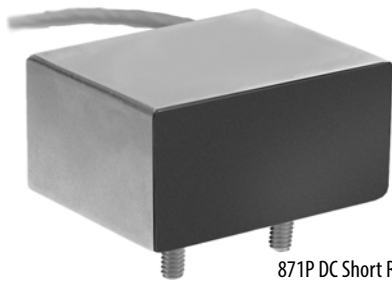
Wiring Diagrams



Note: Load can be switched to pin 2.

871P 4-wire DC Rectangular Sensors

Can Sensors



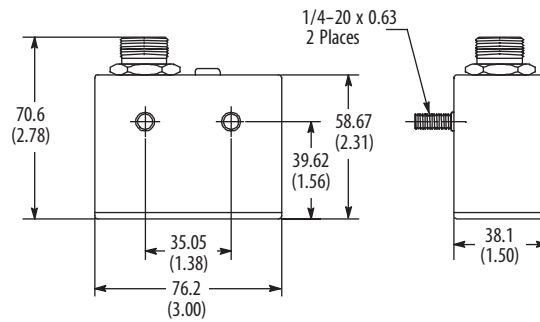
871P DC Short Range
76 X 36 58 mm

Specifications

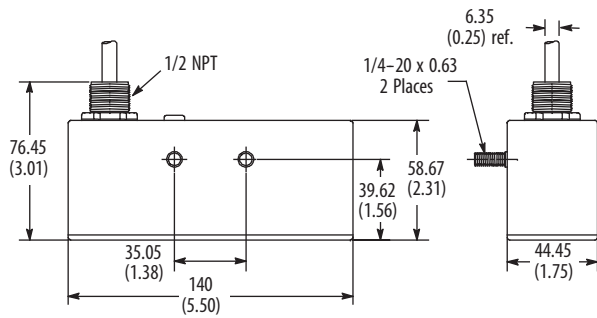
Attribute	871P
Load Current	300 mA
Operating Voltage	10...30V DC
Operating Current	25 mA (off), 55 mA (on)
Voltage Drop	≤2.5V
Repeatability	≤2%
Hysteresis	3...15%
Protection Type	False pulse, transient noise, short circuit, overload, and reverse polarity
Enclosure Type Rating	NEMA 1, 3, 4, 4X, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270 kPa) washdown
Connection Type	<ul style="list-style-type: none"> A2: 2 m (6.6 ft) shielded PVC jacketed cable, 4-wire, #22 AWG, 1/2 in. NPT N4: 4-pin mini quick-disconnect
Status Indicator	Red: Output energized
Operating Temperature	-20...+70 °C (0...160 °F)
Housing Material	Stainless steel, plastic face
Mounting	Two stainless steel studs

Approximate Dimensions [mm (in.)]

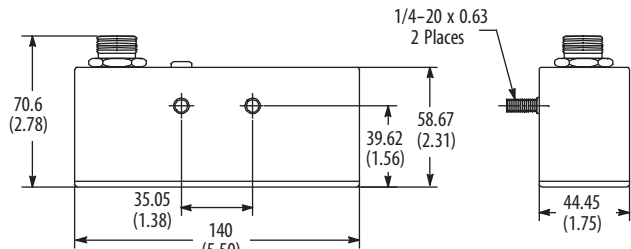
Conduit Style



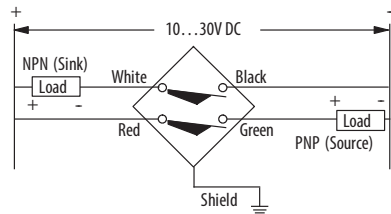
Long Range Cable Style



Long Range Mini QD Style

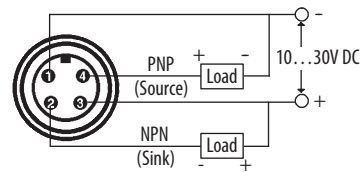


Cable Style



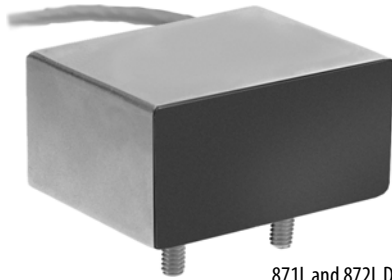
Note: Red and black wires must be connected for proper operation.

Mini QD Style



871P 4-wire DC Motion Rectangular Sensors

Can Sensors



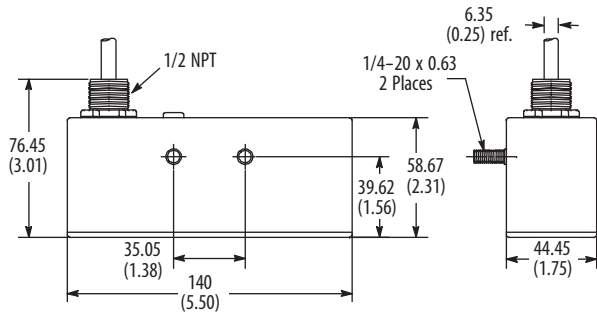
871L and 872L DC
Mini Quick-disconnect Style

Specifications

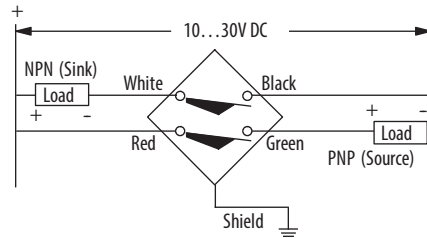
Attribute	871P
Load Current	300 mA
Operating Voltage	10...30V DC
Operating Current	25 mA (off), 55 mA (on)
Voltage Drop	≤2.5V
Repeatability	≤2%
Hysteresis	3...15%
Output Time Delay	0.5 s after motion stops
Protection Type	False pulse, transient noise, short circuit, overload, and reverse polarity
Enclosure Type Rating	NEMA 1, 3, 4, 4X, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270 kPa) washdown
Connection Type	<ul style="list-style-type: none"> A2: 2 m (6.6 ft) shielded PVC jacketed cable, 4-wire, #22 AWG, 1/2 in. NPT N4: 4-pin mini quick-disconnect D4: 4-pin micro quick-disconnect
Status Indicator	<ul style="list-style-type: none"> Red: Output energized Dim Blink: Cans moving Bright Steady: No motion
Sensitivity Adjustment	Sensing range adjust
Operating Temperature	-20...+70 °C (0...160 °F)
Housing Material	Stainless steel, plastic face
Mounting	Two stainless steel studs

Approximate Dimensions [mm (in.)]

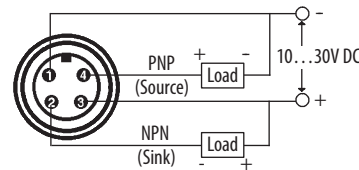
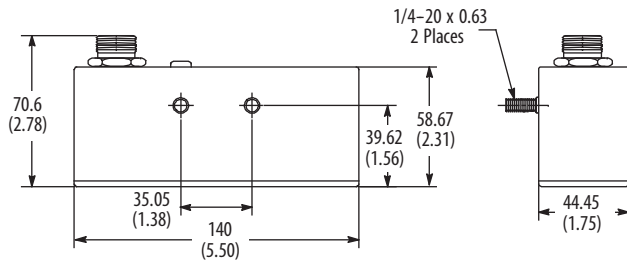
Cable Style



Wiring Diagrams



Mini and Micro QD Style



871P 4-wire DC Motion Rectangular Sensors

Can Sensors



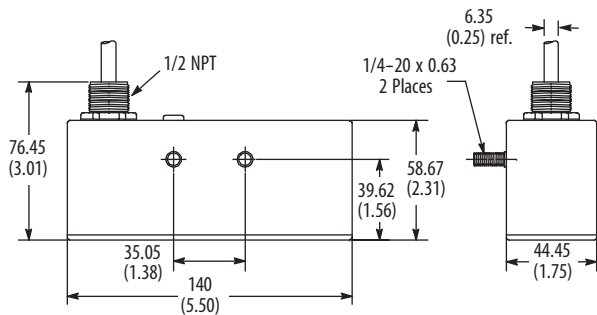
871L and 872L DC
Mini Quick-disconnect Style

Specifications

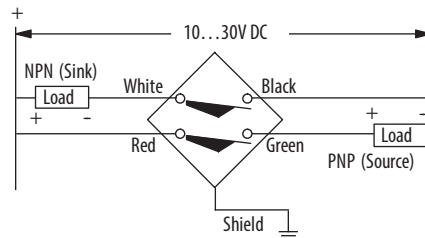
Attribute	871P
Load Current	300 mA
Operating Voltage	10...30V DC
Operating Current	25 mA (off), 55 mA (on)
Voltage Drop	≤2.5V
Repeatability	≤2%
Hysteresis	3...15%
Output Time Delay	0.5 s after motion stops
Protection Type	False pulse, transient noise, short circuit, overload, and reverse polarity
Enclosure Type Rating	NEMA 1, 3, 4, 4X, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270 kPa) washdown
Connection Type	<ul style="list-style-type: none"> A2: 2 m (6.6 ft) shielded PVC jacketed cable, 4-wire, #22 AWG, 1/2 in. NPT N4: 4-pin mini quick-disconnect D4: 4-pin micro quick-disconnect
Status Indicator	<ul style="list-style-type: none"> Red: Output energized Dim Blink: Cans moving Bright Steady: No motion
Sensitivity Adjustment	Sensing range adjust
Operating Temperature	-20...+70 °C (0...160 °F)
Housing Material	Stainless steel, plastic face
Mounting	2 stainless steel studs

Approximate Dimensions [mm (in.)]

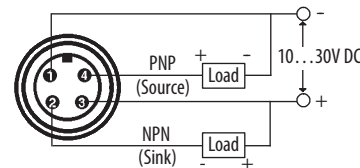
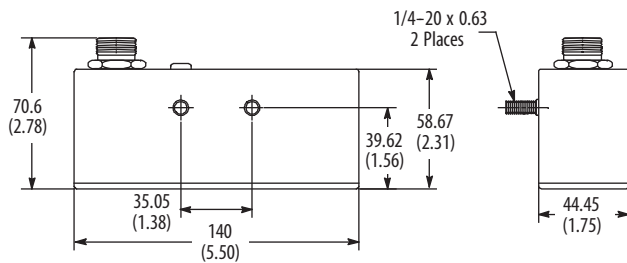
Cable Style



Wiring Diagrams



Mini and Micro QD Style



871P VersaCube® 3-wire DC Rectangular Sensors

General-purpose



871P DC Micro
Quick-disconnect Style



871P DC Mini
Quick-disconnect Style

Specifications

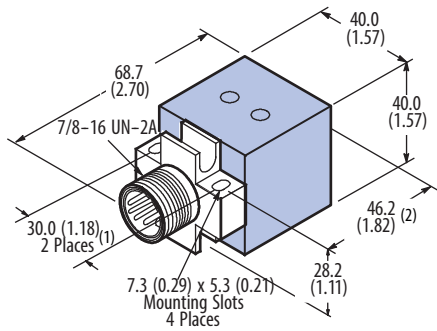
Attribute	871P
Load Current	≤200 mA
Leakage Current	≤10 µA
Operating Voltage	10...60V DC
Voltage Drop	<2.5V @ 200 mA
Repeatability	≤5%
Hysteresis	5% typical
Protection Type	False pulse, transient noise, short circuit, overload, and reverse polarity
Certifications	c-UL-us Listed and CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 2, 3, 4, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270 kPa) washdown; micro connector versions also meet IP69K (IEC 529)
Housing Material	<ul style="list-style-type: none"> • Body: Plastic • Base: Zinc
Connection Type	Quick disconnect: 4-pin mini style, 4-pin micro style
Indicator Status Indicators	<ul style="list-style-type: none"> • Orange: Output energized • Green: Power
Operating Temperature	-25...+70 °C (-13...+158 °F)
Shock	30 g (1.06 oz), 11 ms
Vibration	55 Hz, 1 mm amplitude, 3 planes

Correction Factors

Target Material	Correction Factor
Steel	1.0
Stainless Steel	0.7...0.8
Brass	0.4...0.5
Aluminum	0.3...0.4
Copper	0.2...0.3

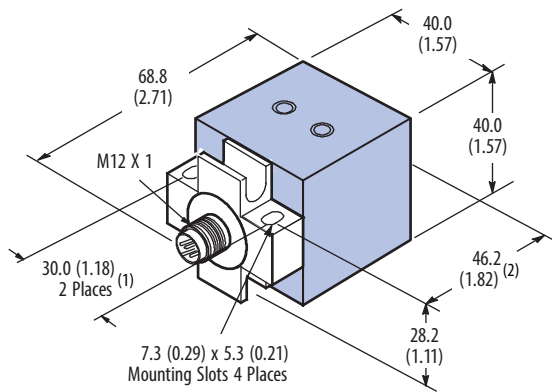
Approximate Dimensions [mm (in.)]

Cable Style



- (1) With retrofit adapter, spacing between mounting holes becomes 20.0 (0.79).
- (2) With retrofit adapter, distance from face to mounting holes becomes 60.0 (2.36).

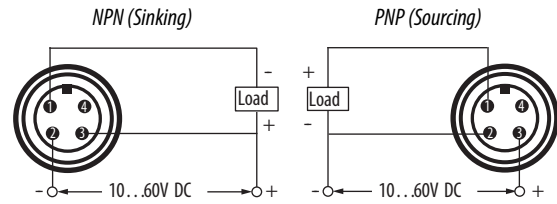
Mini and Micro QD Style



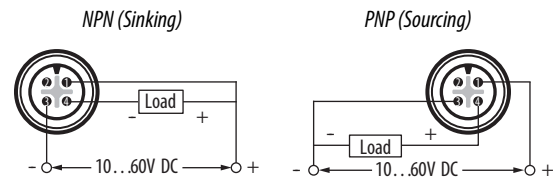
- (1) With retrofit adapter, spacing between mounting holes becomes 20.0 (0.79).
- (2) With retrofit adapter, distance from face to mounting holes becomes 60.0 (2.36).

Wiring Diagrams

Normally Open or Normally Closed



Normally Open or Normally Closed



ATTENTION: Unit must be mounted to a grounded metal frame or grounded via field wiring lug per NEC requirements. Recommended grounding lug is included with the mounting kit (catalog number 871A-PKIT).

871P VersaCube 4-wire DC Rectangular Sensors

General-purpose



871P DC Micro
Quick-disconnect Style
(Standard Zinc Mounting Bracket)



871P DC Micro DC
Quick-disconnect Style
(Optional Stainless-steel Mounting L-Bracket)

Specifications

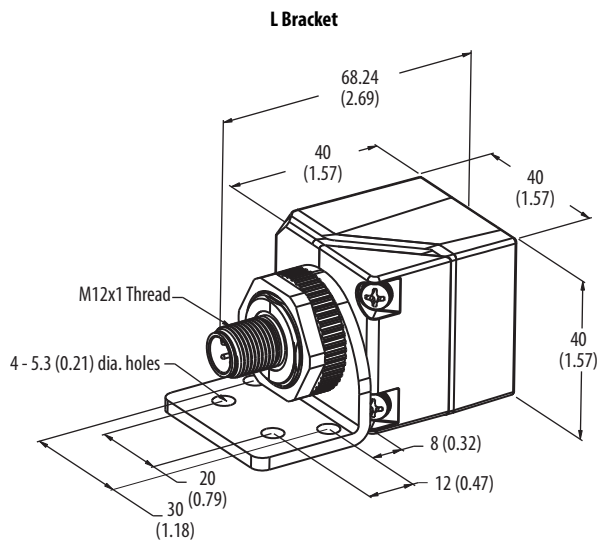
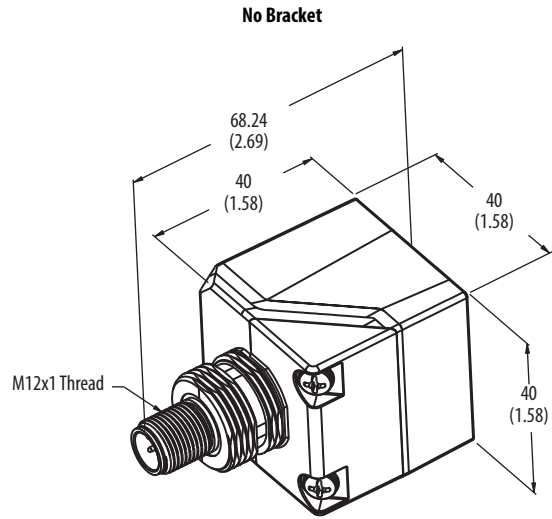
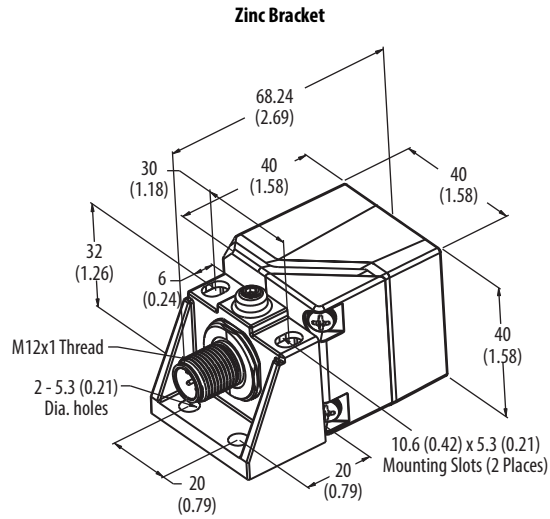
Attribute	871P
Load Current	≤200 mA from -25...+50 °C (-13...+122 °F) ≤100 mA from 50...70 °C (122...158 °F)
Leakage Current	≤10 µA
Operating Voltage	10...30V DC
Voltage Drop	<2.5V @ 200 mA
Repeatability	≤10%
Hysteresis	10% typical
Protection Type	False pulse, transient noise, short circuit, overload, and reverse polarity
Weld Field Immunity	1000 Gauss
Certifications	c-UL-us Listed and CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 2, 3, 4, 6, 6P, 12, 13; IP67 (IEC 529), IP68, IP69k, 1200 psi (8270 kPa) washdown; Plastic body, zinc bracket, optional stainless steel L-bracket
Connection Type	Quick Disconnect: 4-pin micro style
Indicator Status Indicators	<ul style="list-style-type: none"> • Power: Green • Output that is energized: Amber • Margin indication: Amber flashing (target within 80...100% of operating distance) • Short circuit or overload: Green and amber flashing
Operating Temperature	-25...+70 °C (-13...+158 °F)
Shock	30 g (1.06 oz), 11 ms
Vibration	55 Hz, 1 mm amplitude, 3 planes

Correction Factors

Target Material	Correction Factor
Steel	1.0
Stainless Steel	1.0
Brass	1.0
Aluminum	1.0
Copper	1.0

IMPORTANT The 871P VersaCube® is offered with ToughCoat Finish on the sensor face. This finish is a proprietary epoxy-based material that resists the adhesion and accumulation of weld-slag particles, which improves and extends sensor performance.

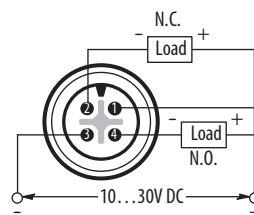
Approximate Dimensions [mm (in.)]



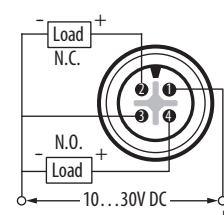
Wiring Diagrams Micro QD Style

Complimentary Normally Open and Normally Closed

NPN (Sinking)



PNP (Sourcing)



871P VersaCube 2-wire DC Rectangular Sensors

General-purpose



871P DC 872L DC Micro Quick-disconnect Style

Specifications

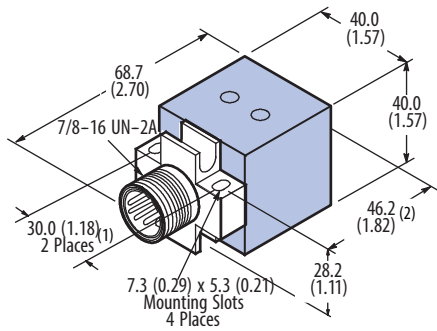
Attribute	871P
Load Current	2...100 mA
Inrush Current	≤2 A
Leakage Current	≤1.5 mA @ 20V, ≤1.7 mA @ 120V, ≤2.0 mA @ 250V
Operating Voltage	20...250V AC/DC
Voltage Drop	<10V
Repeatability	≤10% of effective operating distance
Hysteresis	12% typical
Protection Type	False pulse, transient noise, short circuit, and overload
Certifications	c-UL-us Listed and CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 2, 3, 4, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270 kPa) washdown; micro connector versions also meet IP69K (IEC 529)
Housing Material	Plastic body, zinc base
Connection Type	Quick Disconnect: 3-pin mini style, 3-pin micro style
Indicator Status Indicators	<ul style="list-style-type: none"> • Red: Output energized • Green: Power (short circuit if flashing)
Operating Temperature	-25...+70 °C (-13...+158 °F)
Shock	30 g (1.06 oz), 11 ms
Vibration	55 Hz, 1 mm amplitude, 3 planes

Correction Factor

Target Material	Correction Factor
Steel	1.0
Stainless Steel	0.7...0.8
Brass	0.4...0.5
Aluminum	0.3...0.4
Copper	0.2...0.3

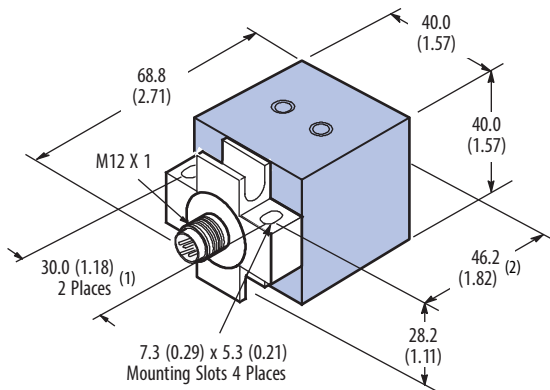
Approximate Dimensions [mm (in.)]

Mini QD Style



- (1) With retrofit adapter, spacing between mounting holes becomes 20.0 (0.79).
- (2) With retrofit adapter, distance from face to mounting holes becomes 60.0 (2.36).

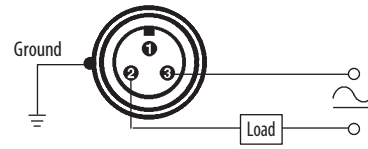
Micro QD Style



- (1) With retrofit adapter, spacing between mounting holes becomes 20.0 (0.79).
- (2) With retrofit adapter, distance from face to mounting holes becomes 60.0 (2.36).

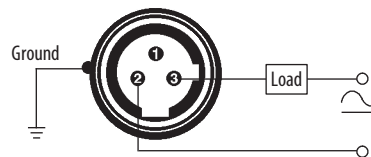
Wiring Diagrams

Normally Open or Normally Closed



Note: Load can be switched to pin 3.

Normally Open or Normally Closed



Note: Load can be switched to pin 2.



ATTENTION: Unit must be mounted to a grounded metal frame or grounded via field wiring lug per NEC requirements. Recommended grounding lug is included with the mounting kit (catalog number 871A-PKIT).

871P VersaCube 3-wire DC Rectangular Sensors

Weld Field Immune and ToughCoat Finish



871P DC 872L DC Micro Quick-disconnect Style



871P DC Mini Quick-disconnect Style

Specifications

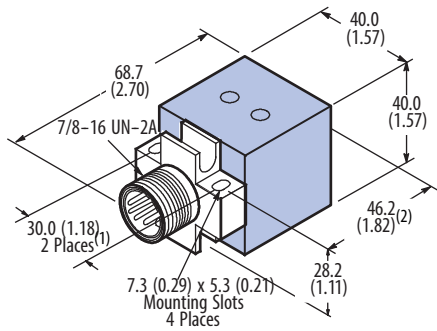
Attribute	871P
Load Current	≤200 mA
Leakage Current	≤10 μA
Operating Voltage	10...60V DC
Voltage Drop	<2.5V @ 200 mA
Repeatability	≤10% of effective operating distance
Hysteresis	12% typical
Protection Type	False pulse, transient noise, short circuit, overload, and reverse polarity
Weld Field Immunity	1000 Gauss
Certifications	UL Listed, c-UL Certified, and CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 2, 3, 4, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270 kPa) washdown; micro connector versions also meet IP69K (IEC 529)
Housing Material	Plastic body, zinc base
Connection Type	Quick Disconnect: 4-pin mini style, 4-pin micro style
Indicator Status Indicators	<ul style="list-style-type: none"> • Orange: Output energized • Green: Power
Operating Temperature	-25...+70 °C (-13...+158 °F)
Shock	30 g (1.06 oz), 11 ms
Vibration	55 Hz, 1 mm amplitude, 3 planes

Correction Factor

Target Material	Correction Factor
Steel	1.0
Stainless Steel	0.7...0.8
Brass	0.4...0.5
Aluminum	0.3...0.4
Copper	0.2...0.3

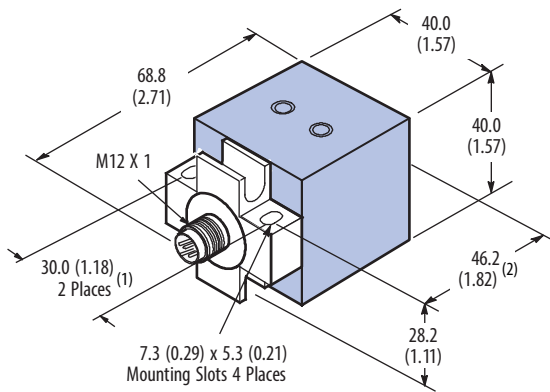
Approximate Dimensions [mm (in.)]

Mini QD Style



- (1) With retrofit adapter, spacing between mounting holes becomes 20.0 (0.79).
- (2) With retrofit adapter, distance from face to mounting holes becomes 60.0 (2.36).

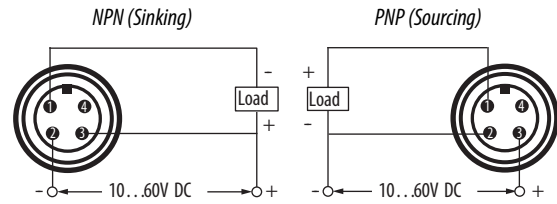
Micro QD Style



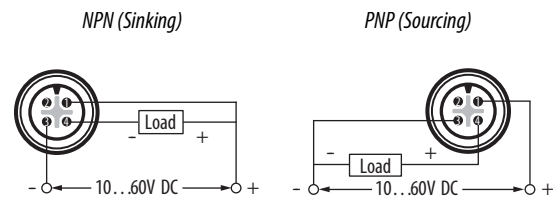
- (1) With retrofit adapter, spacing between mounting holes becomes 20.0 (0.79).
- (2) With retrofit adapter, distance from face to mounting holes becomes 60.0 (2.36).

Wiring Diagrams

Normally Open or Normally Closed



Normally Open or Normally Closed



ATTENTION: Unit must be mounted to a grounded metal frame or grounded via field wiring lug per NEC requirements. Recommended grounding lug is included with the mounting kit (catalog number 871A-PKIT).