

**Selection Guide**

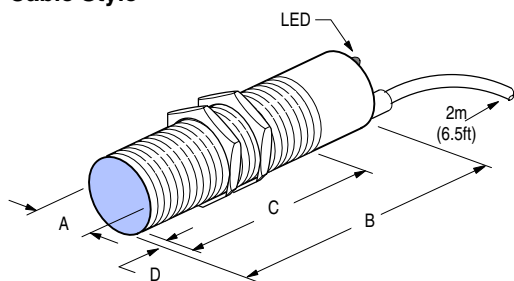
Barrel Diameter	Nominal Sensing Distance mm (inches)	Shielded	Output Configuration	Switching Frequency (Hz)	Catalog Number		
					Cable Style	Mini QD Style	Micro QD Style
12mm	2 (0.08)	Y	N.O.	15	872C-A2N12-A2	—	872C-A2N12-R3
			N.C.		872C-A2C12-A2	—	872C-A2C12-R3
	4 (0.16)	N	N.O.	15	872C-A4N12-A2	—	872C-A4N12-R3
			N.C.		872C-A4C12-A2	—	872C-A4C12-R3
18mm	5 (0.20)	Y	N.O.	15	872C-A5N18-A2	872C-A5N18-N3	872C-A5N18-R3
			N.C.		872C-A5C18-A2	872C-A5C18-N3	872C-A5C18-R3
	10 (0.39)	N	N.O.	15	872C-A10N18-A2	872C-A10N18-N3	872C-A10N18-R3
			N.C.		872C-A10C18-A2	872C-A10C18-N3	872C-A10C18-R3
30mm	10 (0.39)	Y	N.O.	15	872C-A10N30-A2	872C-A10N30-N3	872C-A10N30-R3
			N.C.		872C-A10C30-A2	872C-A10C30-N3	872C-A10C30-R3
	15 (0.59)	N	N.O.	15	872C-A15N30-A2	872C-A15N30-N3	872C-A15N30-R3
			N.C.		872C-A15C30-A2	872C-A15C30-N3	872C-A15C30-R3
Recommended Standard QD Cordset (-6F = 1.8m (6ft), -2 = 2m (6.5ft))					889N-F3AFC-6F	889R-F3ACA-2	

**QD Cordsets and Accessories**

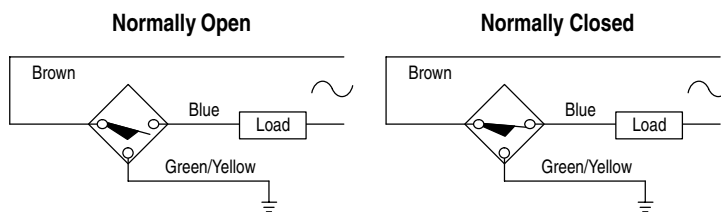
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Terminal Chambers	5-19
Mounting Brackets	2-188 - 2-192
End Caps	2-198
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**Dimensions—mm (inches)**

**Cable Style**



**Wiring Diagrams**



**NOTE:** Load can be switched to brown wire.

Thread Size	Shielded	mm (inches)			
		A	B	C	D
M12 X 1	Y	12.0 (0.47)	70.0 (2.76)	60.0 (2.36)	—
	N			54.0 (2.13)	6.0 (0.24)
M18 X 1	Y	18.0 (0.71)	60.0 (2.36)	50.0 (1.96)	—
	N			42.0 (1.65)	8.0 (0.31)
M30 X 1.5	Y	30.0 (1.18)	60.0 (2.36)	50.0 (1.96)	—
	N			38.0 (1.50)	12.0 (0.47)

## 872C 2-Wire AC

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C AC Cable Style  
12, 18, 30mm  
page 2-47



872C AC Mini  
Quick-Disconnect Style  
18, 30mm  
page 2-47



872C AC Micro  
Quick-Disconnect Style  
12, 18, 30mm  
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### Specifications

	12mm	18 & 30mm
<b>Load Current</b>	≤300mA	≤500mA
<b>Minimum Load Current</b>	2mA	
<b>Inrush Current (1 cycle)</b>	≤2A	≤8A
<b>Leakage Current</b>	≤2mA	
<b>Operating Voltage</b>	20–250V AC	
<b>Voltage Drop</b>	≤5V	
<b>Repeatability</b>	≤5%	
<b>Hysteresis</b>	≤15% typical	
<b>False Pulse Protection</b>	Incorporated	
<b>Transient Noise Protection</b>	Incorporated	
<b>Approvals</b>	CE marked for all applicable directives	
<b>Enclosure</b>	NEMA 1, 2, 3, 4, 12, 13 IP67 (IEC 529) Nickel-plated brass barrel	
<b>Connections</b>	Cable: 2m (6.5ft) length 3-conductor PVC Quick-Disconnect: 3-pin micro style 3-pin mini style	
<b>LED</b>	Red: Output Energized, 360° visibility	
<b>Operating Temperature</b>	–25°C to +70°C (–13°F to +158°F)	
<b>Shock</b>	30g, 11ms	
<b>Vibration</b>	55Hz, 1mm amplitude, 3 planes	

### Correction Factors

Target Material	Correction Factor
Steel	1.0
Stainless Steel	0.9
Brass	0.5
Aluminum	0.45
Copper	0.4

### Features

- 2-wire operation
- 3-conductor or 3-pin connection
- 20–250V AC
- Normally open or normally closed output
- False pulse and transient noise protection
- Extended sensing distance on 18mm unshielded models
- CE marked for all applicable directives



### Description

Bulletin 872C WorldProx inductive proximity sensors are self-contained, general purpose, solid-state devices designed to sense the presence of ferrous and nonferrous metal objects without touching them.

The switch body consists of a plastic face and a nickel-plated brass barrel. It meets NEMA 1, 2, 3, 4, 6P, 12, 13 and IP67 (IEC529) enclosure standards. The electronic circuitry is fully potted for protection against shock, vibration, and contamination.

All models have a 360° visible LED. Cable models have a translucent end cap which glows when the LED indicator is on, and is visible from almost every angle. Quick-disconnect models have a four porthole LED design for better visibility from most angles. In addition to making installation easier, 360° visibility may facilitate troubleshooting.

These sensors are available in 8, 12, 18 and 30mm diameters. Connection options include a 2m PVC cable, mini, micro, and pico quick-disconnect.

### Features

- Threaded, nickel-plated brass barrel
- 360° visible LED
- Cable or quick-disconnect styles
- Short circuit protection
- Overload protection
- Transient noise protection
- False pulse protection
- Reverse polarity protection
- UL listed, c-UL listed, and CE marked for all applicable directives

### Styles

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DC 2-Wire	page 2-49
DC 3-Wire	page 2-51
DC 3-Wire Short Barrel	page 2-55
DC 3-Wire Extended Sensing	page 2-59
DC 2-Wire QuadroPlex	page 2-62
DC 4-Wire Complementary Output	page 2-64
AC/DC 2-Wire Relay Output	page 2-66

### QD Cordsets and Accessories

Quick-Disconnect Cables	page 5-1
Mounting Bracket, Spring Return Style	page 2-188
Mounting Bracket, Swivel/Tilt Style	page 2-190
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Mounting Nuts	page 2-199
Lock Washers	page 2-201

### General Information

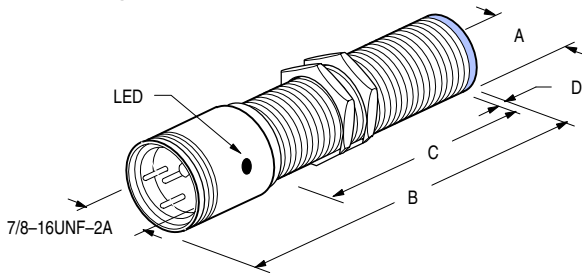
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# 872C 2-Wire AC

Plastic Face/Threaded Nickel-Plated Brass Barrel

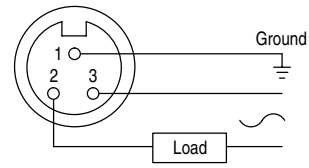
## Dimensions—mm (inches)

### Mini QD Style



## Wiring Diagrams

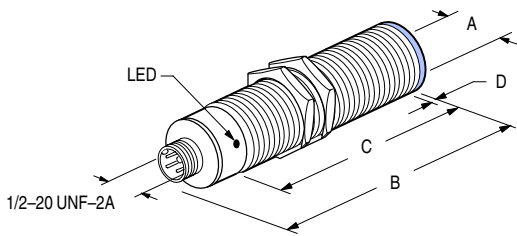
### Normally Open or Normally Closed



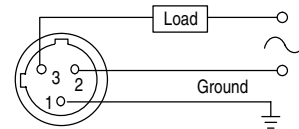
**Note:** Load can be switched to pin 3.

Thread Size	Shielded	mm (inches)			
		A	B	C	D
M18 X 1	Y	18.0 (0.71)	90.5 (3.56)	53.5 (2.09)	—
	N			45.5 (1.77)	8.0 (0.31)
M30 X 1.5	Y	30.0 (1.18)	90.0 (3.54)	56.0 (2.20)	—
	N			44.0 (1.73)	12.0 (0.47)

### Micro Quick-Disconnect Style



### Normally Open or Normally Closed



**Note:** Load can be switched to pin 2.

Thread Size	Shielded	mm (inches)			
		A	B	C	D
M12 X 1	Y	12.0 (0.47)	80.0 (3.15)	60.0 (2.36)	—
	N			54.0 (2.13)	6.0 (0.24)
M18 X 1	Y	18.0 (0.71)	80.0 (3.15)	60.0 (2.36)	—
	N			52.0 (2.05)	8.0 (0.31)
M30 X 1.5	Y	30.0 (1.18)	80.0 (3.15)	60.0 (2.36)	—
	N			48.0 (1.89)	12.0 (0.47)