

872C WorldProx™ 4-Wire DC Complementary Output

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC Cable Style
12, 18, 30mm
page 2-63



872C DC Micro
Quick-Disconnect Style
12, 18, 30mm
page 2-63



Specifications

Load Current	≤200mA
Leakage Current	≤10μA
Operating Voltage	10–30V DC
Voltage Drop	≤1.6V
Repeatability	≤8%
Hysteresis	≤10% typical
False Pulse Protection	Incorporated
Transient Noise Protection	Incorporated
Reverse Polarity Protection	Incorporated
Short Circuit Protection	Incorporated
Overload Protection	Incorporated
Approvals	UL listed, c-UL certified and CE marked for all applicable directives
Enclosure	NEMA 1, 2, 3, 4, 6P, 12, 13, IP67 (IEC 529); Nickel-plated brass barrel
Connections	Cable: 2m (6.5ft) length 4-conductor PVC Quick-Disconnect: 4-pin micro style
LED	Red: Output Energized, 360° visibility
Operating Temperature	-25°C to +70°C (-13°F to +158°F)
Shock	30g, 11ms
Vibration	55Hz, 1mm amplitude, 3 planes

Description

Bulletin 872C inductive proximity sensors are self-contained, solid-state devices designed to sense the presence of metal objects without touching them. These special 4-wire complementary output models provide both a normally open and a normally closed output in a single sensor. They are ideal for applications in which one load must be turned on and a second turned off in response to the same event.

Each device is enclosed by a plastic face and a nickel-plated brass housing which meet NEMA 1, 2, 3, 4, 12, 13 and IP67 (IEC 529) enclosure standards. The electronic circuitry is potted for protection against shock, vibration, and contamination.

These sensors are available in 12, 18 and 30mm diameters. Connection options include 2m (6.5ft.) PVC cable or micro quick-disconnect.

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

Features

- 4-wire operation
- 4-conductor or 4-pin connection
- 10–30V DC
- Complementary normally open and normally closed outputs
- Short circuit, false pulse, reverse polarity, overload and transient noise protection
- UL listed, c-UL certified and CE marked for all applicable directives

Spare Allen-Bradley Parts

Inductive Proximity Sensors

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Product Selection

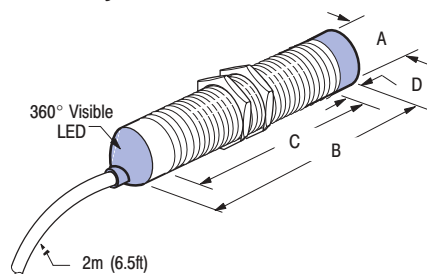
Barrel Diameter	Nominal Sensing Distance mm (inches)	Shielded	Output Configuration		Switching Frequency (Hz)	Catalog Number		
						Cable Style	Micro QD Style	
12mm	3 (0.12)	Y	N.O. and N.C.	PNP	2000	872C-D3BP12-E2	872C-D3BP12-D4	
18mm	5 (0.20)				1000	872C-D5BP18-E2	872C-D5BP18-D4	
30mm	10 (0.39)				500	872C-D10BP30-E2	872C-D10BP30-D4	
Recommended Standard QD Cordset (-2 = 2m (6.5ft))							889D-F4AC-2	

QD Cordsets and Accessories

Description	Page Number
Other Cordsets Available	7-8
Terminal Chambers	7-20
Mounting Brackets	2-186 - 2-190
End Caps	2-196
Mounting Nuts	2-197 - 2-198

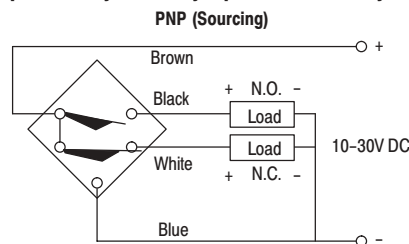
Dimensions—mm (inches)

Cable Style



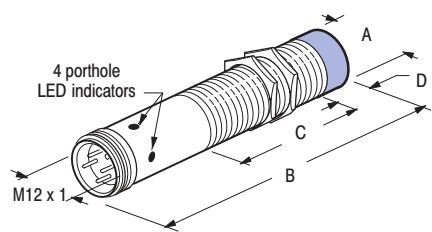
Wiring Diagram

Complementary Normally Open and Normally Closed

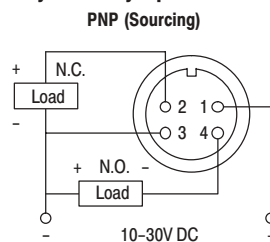


Thread Size	Shielded	mm (inches)		
		A	B	C
M12 X 1	Y	12.0 (0.47)	50.8 (2.00)	46.7 (1.84)
M18 X 1	Y	18.0 (0.71)		
M30 X 1.5	Y	30.0 (1.18)		

Micro QD Style



Complementary Normally Open and Normally Closed



Thread Size	Shielded	mm (inches)		
		A	B	C
M12 X 1	Y	12.0 (0.47)	65.0 (2.56)	38.1 (1.50)
M18 X 1	Y	18.0 (0.71)		48.7 (1.88)
M30 X 1.5	Y	30.0 (1.18)		