

871ZC 2-Wire AC/DC Weld Field Immune

Thermoset Plastic Face/Threaded Copper Barrel



871ZC AC/DC Mini
Quick-Disconnect Style
12, 18, 30mm
page 2-103



Features

- 2-wire operation
- 3-pin connection
- 40–250V AC/DC
- Normally open or normally closed output
- Weld field immunity
- Short circuit, false pulse, overload, and transient noise protection
- UL listed, CSA certified, and CE marked for all applicable directives

Specifications

	12mm	18 & 30mm
Load Current	5–250mA	5–400mA
Inrush Current (1 cycle)	≤2A	≤4A
Leakage Current	≤1.7mA at 120V AC	
Operating Voltage	40–250V AC/DC	
Voltage Drop	≤5V at 250mA, 10V at 10mA	≤5V at 400mA, 10V at 10mA
Repeatability	≤10% at constant temperature	
Hysteresis	7% typical	
False Pulse Protection	Incorporated	
Transient Noise Protection	Incorporated	
Short Circuit Protection	Incorporated, trigger at 5A typical	Incorporated, trigger at 8A typical
Overload Protection	Incorporated, trigger at 340mA typical	Incorporated, trigger at 550mA typical
Weld Field Immunity	20,000A at 1 inch	
Reverse Polarity Protection (DC output)	Incorporated	
Approvals	UL listed, CSA certified, and CE marked for all applicable directives	
Enclosure	NEMA 1, 2, 3, 3R, 4, 4X, 6, 6P, 12, 13, IP67 (IEC 529) Copper barrel	
Connections	Quick-Disconnect: 3-pin micro style 3-pin mini style	
LEDs	Orange: Output Energized Green: Power/Short Circuit (flashing)	
Operating Temperature	–25°C to +70°C (–13°F to +158°F)	
Shock	30g, 11ms	
Vibration	55Hz, 1mm 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	0.3–0.4

Allen-Bradley

Inductive Proximity Sensors
871ZC 2-Wire AC/DC Weld Field Immune
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Product Selection

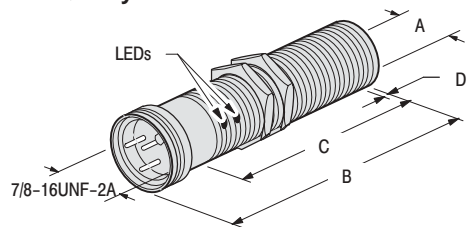
Barrel Diameter	Nominal Sensing Distance mm (inches)	Shielded	Output Configuration	Switching Frequency (Hz)	Catalog Number	
					Mini QD Style	Micro QD Style
12mm	2 (0.08)	Y	N.O.	30	871ZC-BW2N12-N3	871ZC-BW2N12-R3
			N.C.	20	871ZC-BW2C12-N3	871ZC-BW2C12-R3
18mm	5 (0.20)	Y	N.O.	30	871ZC-BW5N18-N3	871ZC-BW5N18-R3
			N.C.	20	871ZC-BW5C18-N3	871ZC-BW5C18-R3
30mm	10 (0.39)	Y	N.O.	30	871ZC-BW10N30-N3	871ZC-BW10N30-R3
			N.C.	20	871ZC-BW10C30-N3	871ZC-BW10C30-R3
Recommended Standard QD Cordset (-6F = 1.8m (6ft), -2 = 2m (6.5ft))					889N-F3AFC-6F	889R-F3WEA-2

Note: This Allen-Bradley Weld Field Immune proximity sensor is also available with additional weld slag resistant material on the sensing face. Consult factory for details.

QD Cordsets and Accessories

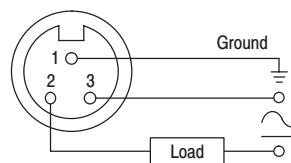
Description	Page Number
Other Cordsets Available	7-8, 7-68
Terminal Chambers	7-20
Mounting Brackets	2-186 - 2-190
PTFE [®] End Caps	2-195
Mounting Nuts	2-197 - 2-198

Dimensions—mm (inches)
 Mini QD Style



Wiring Diagram

Normally Open or Normally Closed



Note 1: No ground pin on 12mm. Attach housing to ground.
Note 2: Load can be switched to pin 2.

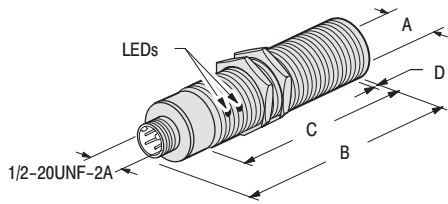
Thread Size	Shielded	mm (inches)			
		A	B	C	D
M12 X 1	Y	12.0 (0.47)	83.3 (3.28)	38.2 (1.50)	0.8 (0.03)
M18 X 1	Y	18.0 (0.71)	72.5 (2.85)	53.1 (2.09)	
M30 X 1.5	Y	30.0 (1.18)	86.5 (3.41)	63.4 (2.50)	

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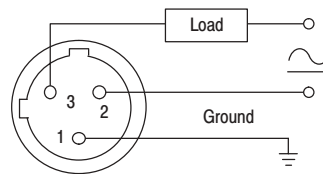
Dimensions—mm (inches)

Micro QD Style



Wiring Diagram

Normally Open or Normally Closed



Note 1: No ground pin on 12mm. Attach housing to ground.

Note 2: Load can be switched to pin 2.

Thread Size	Shielded	mm (inches)			
		A	B	C	D
M12 X 1	Y	12.0 (0.47)	85.3 (3.36)	38.9 (1.53)	0.8 (0.03)
M18 X 1	Y	18.0 (0.71)	80.3 (3.16)	57.5 (2.26)	
M30 X 1.5	Y	30.0 (1.18)	85.7 (3.37)	63.4 (2.50)	