

871Z 3-wire DC Weld Field Immune

PTFE Face/Threaded PTFE-Coated Brass Barrel



871Z DC Mini Quick-disconnect Style
18 mm and 30 mm



871Z DC Micro Quick-disconnect Style
12 mm, 18 mm, and 30 mm

Specifications

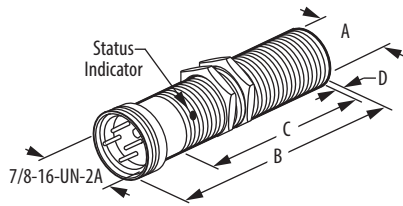
Attribute	12 mm, 18 mm, and 30 mm
Load Current	≤200 mA
Load Current, Min.	1 mA
Leakage Current	≤10 μA
Operating Voltage	10...30V DC
Voltage Drop	≤2.4V
Repeatability	≤10%
Hysteresis	≤15% typical
Protection Type	False pulse, transient noise, reverse polarity, short circuit, and overload
Weld Field Immunity	20,000 A at 1 inch
Certifications	CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 2, 3, 4, 12 and 13; IP67 (IEC529)
Housing Material	PTFE coated brass barrel
Connection Type	Quick-disconnect: 4-pin mini style, 4-pin micro style
Status Indicator	Red: Output Energized
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 Factors
Steel	1.0
Stainless Steel	0.7...0.8
Brass	0.4...0.5
Aluminum	0.3...0.4
Copper	0.3...0.4

Approximate Dimensions [mm (in.)]

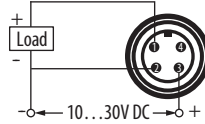
Mini QD Style



Wiring Diagrams

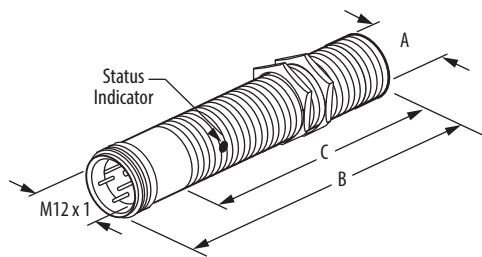
Normally Open

PNP (Sourcing)



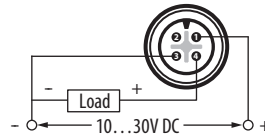
Thread Size	Shielded	mm (in.)		
		A	B	C
M18 x 1	Yes	18.0 (0.71)	90.0 (3.54)	53.0 (2.09)
M30 x 1		30.0 (1.18)	90.0 (3.54)	56.0 (2.20)

Micro QD Style



Normally Open

PNP (Sourcing)



Thread Size	Shielded	mm (in.)		
		A	B	C
M12 x 1	Yes	12.0 (0.47)	70.0 (2.76)	50.0 (1.97)
M18 x 1		18.0 (0.71)	80.0 (3.15)	60.0 (2.36)
M30 x 1		30.0 (1.18)	80.0 (3.15)	60.0 (2.36)

871Z 2-wire AC/DC Weld Field Immune

Thermoset Plastic Face/Threaded PTFE-Coated Brass Barrel



871Z AC/DC Cable Style
18 mm and 30 mm



871Z AC/DC Mini Quick-disconnect Style
12 mm, 18 mm, and 30 mm



871Z AC/DC Micro Quick-disconnect Style
12 mm, 18 mm, and 30 mm

Specifications

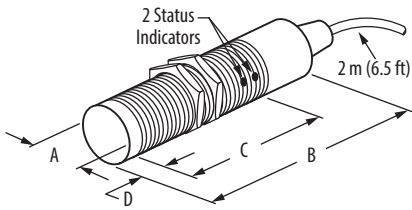
Attribute	12 mm	18 mm and 30 mm
Load Current	5...200 mA	5...250 mA
Inrush Current (one cycle)	≤2 A	≤4 A
Leakage Current	≤1.9 mA @ 120V AC	
Operating Voltage	20...250V AC/DC	
Voltage Drop	≤10V @ 5...200 mA	≤10V @ 5...250 mA
Repeatability	≤10% at constant temperature	
Hysteresis	7% typical	
Protection Type	Short circuit (trigger @ 5 A typical), false pulse, reverse polarity (DC output), overload (trigger @ 260 mA typical), and transient noise	Short circuit (trigger @ 8 A typical), false pulse, reverse polarity (DC output), overload (trigger @ 320 mA typical), and transient noise
Weld Field Immunity	20,000 A at 1 inch	
Certifications	UL Listed, CSA Certified, and CE Marked for all applicable directives	
Enclosure Type Rating	NEMA 1, 2, 3, 3R, 4, 4X, 6, 6P, 12, 13; IP67 (IECS29)	
Housing Material	PTFE coated housing	
Connection Type	<ul style="list-style-type: none"> Cable: 2 m (6.5 ft) length HZ - 3 conductor #18 AWG ToughLink Quick-disconnect: 3-pin micro style, 3-pin mini style 	
Status Indicator	<ul style="list-style-type: none"> Red: Output energized Red Flashing: Short circuit/overload 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 Factors
Steel	1.0
Stainless Steel	0.7...0.8
Brass	0.4...0.5
Aluminum	0.3...0.4
Copper	0.3...0.4

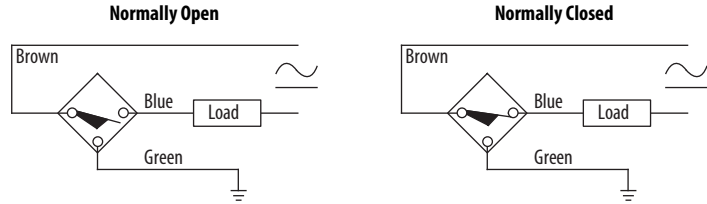
Approximate Dimensions [mm (in.)]

Cable Style



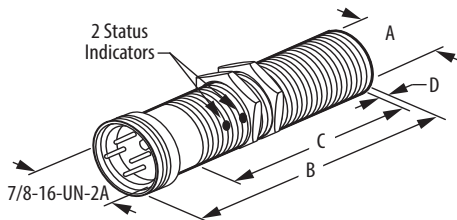
Note: Rear portion of barrel left uncoated for ground contact on 12 mm models

Wiring Diagrams



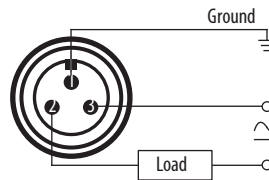
Thread Size	Shielded	mm (in.)			
		A	B	C	D
M18 X 1	Yes	18.0 (0.71)	74.68 (2.94)	61.6 (2.43)	0.8 (0.03)
M30 X 1	No	30.0 (1.18)	77.52 (3.05)	64.3 (2.53)	

Mini QD Style



Note: Rear portion of barrel left uncoated for ground contact on 12 mm models.

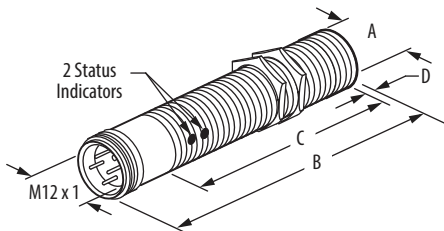
Normally Open and Normally Closed



Note: Load can be switched to pin 3.
Note: No ground pin on 12 mm. Attach housing to ground.

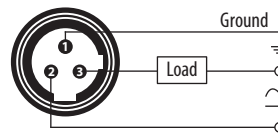
Thread Size	Shielded	mm (in.)			
		A	B	C	D
M12 X 1	Yes	12.0 (0.47)	93.45 (3.68)	46.2 (1.82)	0.8 (0.03)
	No			40.7 (1.52)	8.1 (0.32)
M18 X 1	Yes	18.0 (0.71)	75.82 (2.99)	57.28 (2.26)	0.8 (0.03)
M30 X 1	No	30.0 (1.18)	86.66 (3.41)	64.3 (2.53)	0.8 (0.03)

Micro QD Style



Note: Rear portion of barrel left uncoated for ground contact on 12 mm models.

Normally Open and Normally Closed



Note: No ground pin on 12 mm. Attach housing to ground.
Note: Load can be switched to pin 3.

Thread Size	Shielded	mm (in.)			
		A	B	C	D
M12 X 1	Yes	12.0 (0.47)	90.1 (3.55)	46.7 (1.85)	0.8 (0.03)
	No			39.7 (1.56)	8.1 (0.32)
M18 X 1	Yes	18.0 (0.71)	83.5 (3.29)	61.6 (2.43)	0.8 (0.03)
M30 X 1	No	30.0 (1.18)	86.0 (3.38)	64.3 (2.53)	0.8 (0.03)