



871P AC/DC General Purpose
Micro Quick-Disconnect Style

Features

- New rugged housing
- Burn and weld-slag resistant body on weld field immune models
- Convenient mounting base
- 2-wire operation
- 3-pin connection
- 20...250V AC/DC
- Normally open or normally closed output
- Weld-field immune models
- Short circuit, overload, false pulse, and transient noise protection
- UL Listed, cUL Certified and CE Marked for all applicable directives

Specifications

	General Purpose	Weld Field Immune
Load Current	2...100 mA	2...300 mA
Inrush Current (1 cycle)	≤ 2 A	≤ 2 A
Leakage Current	≤1.5 mA @ 20V ≤1.7 mA @ 120V ≤2.0 mA @ 250V	≤1.5 mA@20V ≤1.7 mA@120V ≤2.0 mA@250V
Operating Voltage	20...250V AC/DC	20-250V AC/DC
Voltage Drop	<10V	<10V
Repeatability	≤10% of effective operating distance	≤10% of effective operating distance
Hysteresis	12% typical	12% typical
False Pulse Protection	Incorporated	Incorporated
Transient Noise Protection	Incorporated	Incorporated
Short Circuit Protection	Incorporated	Incorporated
Overload Protection	Incorporated	Incorporated
Weld-Field Immunity	N/A	1000 Gauss ❶
Certifications	UL Listed, cUL Certified and CE Marked for all applicable directives	
Enclosure	NEMA 1, 2, 3, 4, 6, 6P, 12, 13; IP67 (IEC529), 1200 psi (8270 kPa) washdown; Plastic body, zinc base; micro connector versions also meet IP69K (IEC 529)	
Connections	Quick-Disconnect: 3-pin mini style 3-pin micro style	
LED	Red: Output Energized Green: Power (short circuit if flashing)	
Operating Temperature	-25...+70° (-13...+158°)	
Shock	30 g, 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

❶ Measured with field perpendicular to sensing face.

Product Selection

Head Size	Weld Field Immune	Nominal Sensing Distance [mm (in.)]	Shielded	Output Configuration	Switching Frequency [Hz]	Cat. No.	
						Mini QD Style	Micro QD Style
40 mm	N	20 (0.79)	Y	N.O.	30	871P-B20N40-N3	871P-B20N40-R3
				N.C.		871P-B20C40-N3	871P-B20C40-R3
		40 (1.57)	N	N.O.	20	871P-B40N40-N3 ❶	871P-B40N40-R3 ❶
				N.C.		871P-B40C40-N3 ❶	871P-B40C40-R3 ❶
	Y	15 (0.59)	Y	N.O.	30	871P-BW15N40-N3	871P-BW15N40-R3
				N.C.		871P-BW15C40-N3	871P-BW15C40-R3
		25 (0.98)	N	N.O.	20	871P-BW25N40-N3	871P-BW25N40-R3
				N.C.		871P-BW25C40-N3	871P-BW25C40-R3
Recommended Standard QD Cordset (-6F = 1.8 m (6 ft), -2 = 2 m (6.5 ft))						889N-F3AFC-6F	889R-F3ECA-2

❶ Assured operating distance for general purpose unshielded models is 0...33 mm (0...1.3 in.).

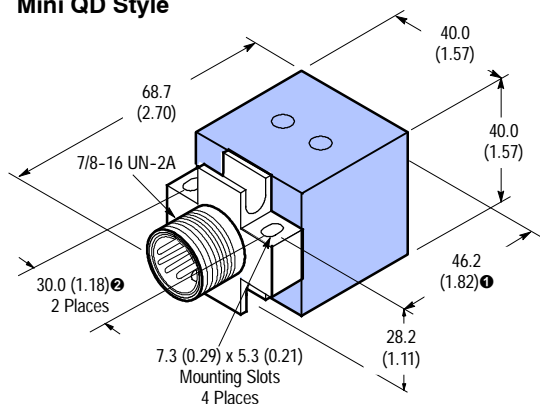
QD Cordsets and Accessories

Description	Page Number
Other Cordsets Available	8-2
Terminal Chambers	8-2
Mounting Kit ❷	2-216
Limit Switch Style Mounting Brackets	2-217
PTFE Covers	2-218

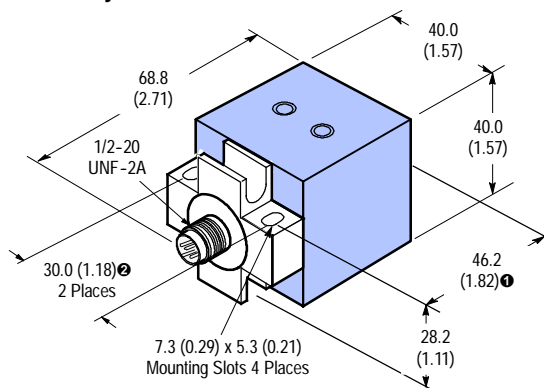
❷ Each mounting kit includes a ground lug, a ground screw, and an optional adaptor for competitive retrofits.

Approximate Dimensions [mm (in.)]

Mini QD Style



Micro QD Style

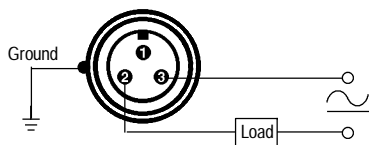


- ❶ With retrofit adaptor, distance from face to mounting holes becomes 60.0 (2.36).
- ❷ With retrofit adaptor, spacing between mounting holes becomes 20.0 (0.79).

Wiring Diagrams

Mini QD Style

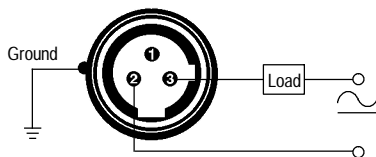
Normally Open or Normally Closed



Note: Load can be switched to pin 3.

Micro QD Style

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 available in Allen-Bradley mounting kit **871A-PKIT**. This kit is included with all weld field immune models.