



871P AC/DC General Purpose
Micro Quick-Disconnect Style
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871P AC/DC WFI Mini
Quick-Disconnect Style
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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, c-UL certified, and CE marked for all applicable directives

Specifications

	General Purpose	Weld Field Immune
Load Current	2–100mA	2–300mA
Inrush Current (1 cycle)	≤ 2A	≤ 2A
Leakage Current	≤1.5mA@20V ≤1.7mA@120V ≤2.0mA@250V	≤1.5mA@20V ≤1.7mA@120V ≤2.0mA@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 ①
Approvals	UL listed, c-UL certified, and CE marked for all applicable directives	
Enclosure	NEMA 1, 2, 3, 4, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270kPa) washdown; Plastic body, zinc base	
Connections	Quick-Disconnect: 3-pin mini style 3-pin micro style	
LED	Red: Output Energized Green: Power (short circuit if flashing)	
Operating Temperature	–25°C to +70°C (–13°F to +158°F)	
Shock	30g, 11ms	
Vibration	55Hz, 1mm amplitude, 3 planes	

① Measured with field perpendicular to sensing face.

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

Product Selection

Head Size	Weld Field Immune	Nominal Sensing Distance mm (inches)	Shielded	Output Configuration	Switching Frequency (Hz)	Catalog Number		
						Mini QD Style	Micro QD Style	
40mm	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 ①	871P-B40N40-R3 ①	
				N.C.		871P-B40C40-N3 ①	871P-B40C40-R3 ①	
	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 = 1.8m (6ft), -2 = 2m (6.5ft))						889N-F3AFC-6F	889R-F3ACA-2

① Assured operating distance for general purpose unshielded models is 0 to 33mm.

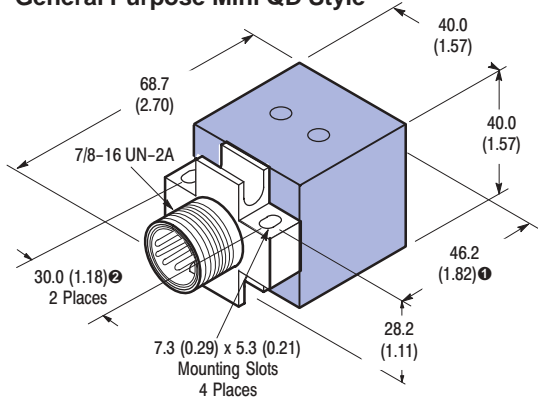
QD Cordsets and Accessories

Description	Page Number
Other Cordsets Available	7-8, 7-68
Terminal Chambers	7-20
Mounting Kit ②	2-192
Limit Switch Style Mounting Brackets	2-193
PTFE Covers	2-194

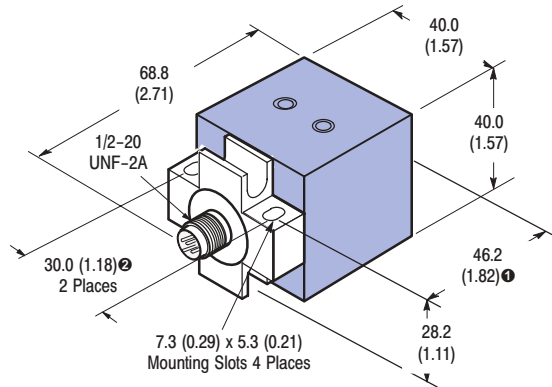
② Each Weld Field Immune unit is supplied with mounting hardware, a ground lug, a ground screw, and an optional adaptor for competitive retrofits. Additional sets of hardware are available under catalog number 871A-PKIT.

Dimensions—mm (inches)

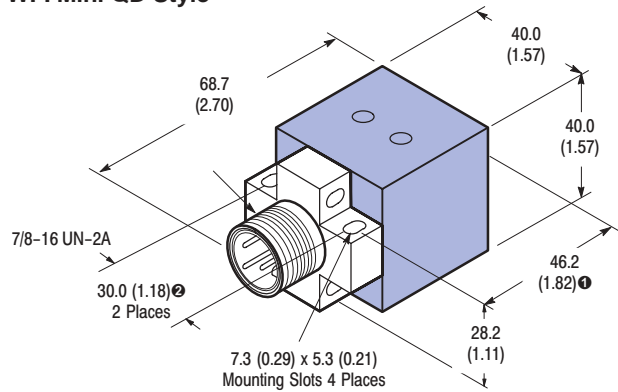
General Purpose Mini QD Style



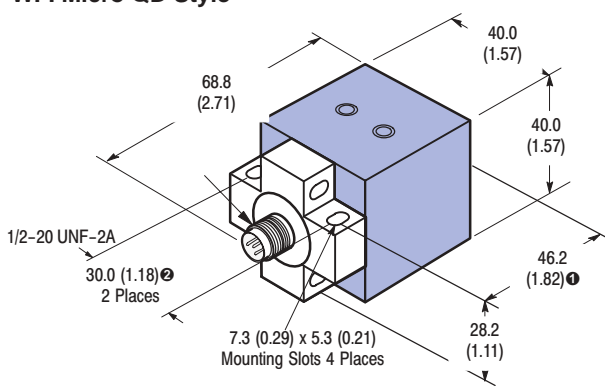
General Purpose Micro QD Style



WFI Mini QD Style



WFI Micro QD Style

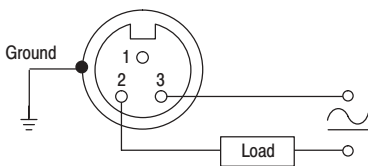


- ❶ With retrofit adaptor, distance from face to mounting holes becomes 60.0 (2.36).
- ❷ With retrofit adaptor, spacing between mounting holes becomes 20.0 (0.79).

Wiring Diagrams

Mini QD Style

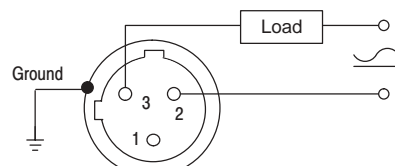
Normally Open or Normally Closed



Note: Load can be switched to pin 3.

Micro QD Style

Normally Open or Normally Closed



Note: Load can be switched to pin 2.

Note: 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.