



871P DC General Purpose  
 Micro Quick-Disconnect Style  
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871P DC Mini  
 Quick-Disconnect Style  
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871P DC WFI Micro  
 Quick-Disconnect Style  
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### Features

- New rugged housing
- Weld field immune models
- Burn and weld-slag resistant body on weld field immune models
- Convenient mounting base
- 3-wire operation
- 4-pin connection
- 10–60V DC
- Normally open or normally closed output
- Short circuit, overload, false pulse, transient noise, and reverse polarity protection
- UL listed, c-UL certified, and CE marked for all applicable directives

### Specifications

	General Purpose	Weld Field Immune
<b>Load Current</b>	≤200mA	≤200mA
<b>Leakage Current</b>	≤10μA	≤10μA
<b>Operating Voltage</b>	10–60V DC	10–60V DC
<b>Voltage Drop</b>	<2.5V @ 200mA	<2.5V @ 200mA
<b>Repeatability</b>	≤5%	≤10% of effective operating distance
<b>Hysteresis</b>	5% typical	12% typical
<b>False Pulse Protection</b>	Incorporated	Incorporated
<b>Transient Noise Protection</b>	Incorporated	Incorporated
<b>Short Circuit Protection</b>	Incorporated	Incorporated
<b>Overload Protection</b>	Incorporated	Incorporated
<b>Reverse Polarity Protection</b>	Incorporated	Incorporated
<b>Weld Field Immunity</b>	N/A	1000 Gauss ❶
<b>Connections</b>	Quick-Disconnect: 4-pin mini style 4-pin micro style	Quick-Disconnect: 4-pin mini style 4-pin micro style
<b>Approvals</b>	UL listed, c-UL certified and CE marked for all applicable directives	
<b>Enclosure</b>	NEMA 1, 2, 3, 4, 6, 6P, 12, 13; IP67 (IEC 529), 1200 psi (8270kPa) washdown; Plastic body, zinc base	
<b>LED</b>	Orange: Output Energized Green: Power	
<b>Operating Temperature</b>	–25°C to +70°C (–13°F to +158°F)	
<b>Shock</b>	30g, 11ms	
<b>Vibration</b>	55Hz, 1mm amplitude, 3 planes	

❶ Measured with field perpendicular to 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.	PNP	100	871P-D20NP40-N4	871P-D20NP40-D4	
					NPN		871P-D20NN40-N4	871P-D20NN40-D4	
				N.C.	PNP		871P-D20CP40-N4	871P-D20CP40-D4	
		NPN	871P-D20CN40-N4		871P-D20CN40-D4				
		40 (1.57)	N	N.O.	PNP		871P-D40NP40-N4 ①	871P-D40NP40-D4 ①	
					NPN		871P-D40NN40-N4 ①	871P-D40NN40-D4 ①	
	N.C.			PNP	871P-D40CP40-N4 ①	871P-D40CP40-D4 ①			
		NPN	871P-D40CN40-N4 ①	871P-D40CN40-D4 ①					
	Y	15 (0.59)	Y	N.O.	PNP	50	871P-DW15NP40-N4	871P-DW15NP40-D4	
					NPN		871P-DW15NN40-N4	871P-DW15NN40-D4	
				N.C.	PNP		871P-DW15CP40-N4	871P-DW15CP40-D4	
		NPN	871P-DW15CN40-N4		871P-DW15CN40-D4				
		25 (0.98)	N	N.O.	PNP		871P-DW25NP40-N4	871P-DW25NP40-D4	
					NPN		871P-DW25NN40-N4	871P-DW25NN40-D4	
	N.C.			PNP	871P-DW25CP40-N4	871P-DW25CP40-D4			
		NPN	871P-DW25CN40-N4	871P-DW25CN40-D4					
	Recommended Standard QD Cordset (-6F = 1.8m (6ft), -2 = 2m (6.5ft))							889N-F4AFC-6F	889D-F4AC-2

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

**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.

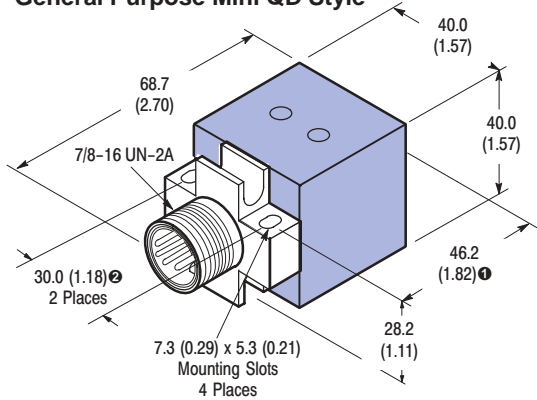
QD Cordsets and Accessories

Description	Page Number
Other Cordsets Available	7-8, 7-41
Terminal Chambers	7-20
Mounting Kit ②	2-192
Limit Switch Style Mounting Brackets	2-193
PTFE Covers	2-194

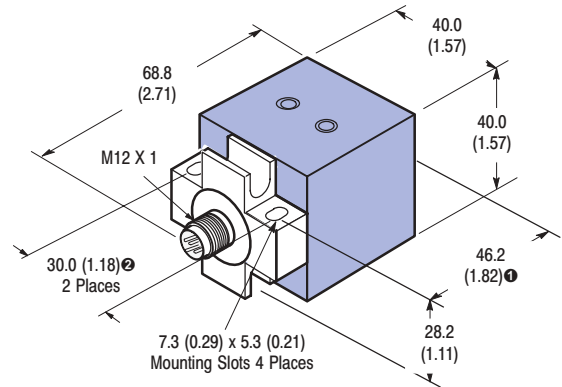
② Each Weld Field Immune unit is supplied with mounting hardware, a ground lug, a ground screw, and an optional adaptor for competitive retrofits. Additional sets of hardware are available under catalog number 871A-PKIT.

**Dimensions—mm (inches)**

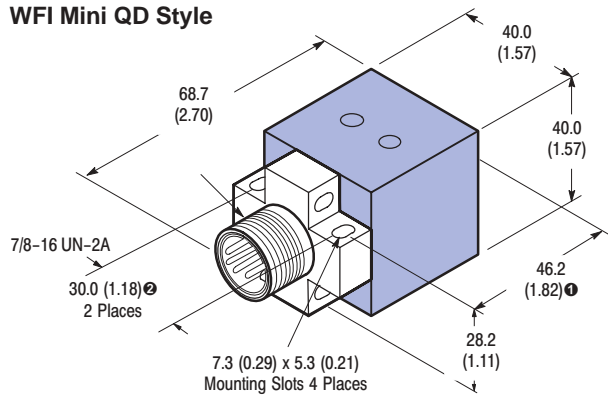
**General Purpose Mini QD Style**



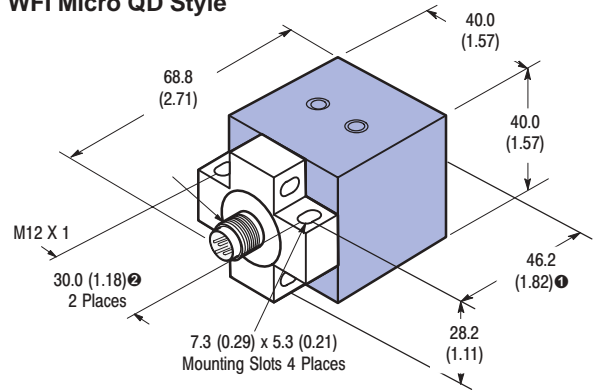
**General Purpose Micro QD Style**



**WFI Mini QD Style**



**WFI Micro QD Style**



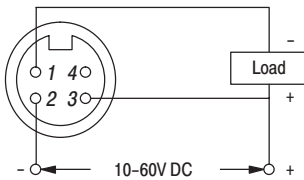
- ① With retrofit adaptor, distance from face to mounting holes becomes 60.0 (2.36).
- ② With retrofit adaptor, spacing between mounting holes becomes 20.0 (0.79).

**Wiring Diagrams**

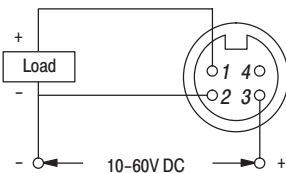
**Mini QD Style**

**Normally Open or Normally Closed**

**NPN (Sinking)**



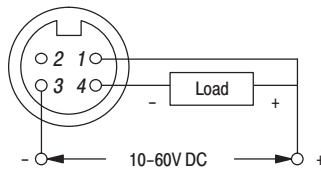
**PNP (Sourcing)**



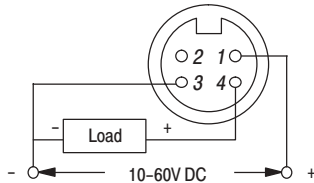
**Micro QD Style**

**Normally Open or Normally Closed**

**NPN (Sinking)**



**PNP (Sourcing)**



**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.