



871TM AC/DC Cable Style
12, 18, 30 mm



871TM AC/DC Mini
Quick-Disconnect Style
12, 18, 30 mm



871TM AC/DC Micro
Quick-Disconnect Style
12, 18, 30 mm



871TM AC/DC EAC Micro
Quick-Disconnect Style
12 mm

Specifications

	12 mm	18 & 30 mm
Load Current	5...200 mA	5...250 mA
Inrush Current (1 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	
False Pulse Protection	Incorporated	
Transient Noise Protection	Incorporated	
Short-Circuit Protection	Trigger @ 5 A typical	Trigger @ 8 A typical
Overload Protection	Trigger @ 260 mA typical	Trigger @ 320 mA typical
Certifications	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) all models; 1200 psi (8270 kPa) washdown; stainless steel face and barrel; ToughLink™ and micro connector versions are also rated IP69K (IEC 529)	
Connections	Cable: 2 m (6.5 ft) length A2—2-conductor #22 AWG PVC C2—2-conductor #22 AWG ToughLink H2—3-conductor #18 AWG ToughLink Quick-Disconnect: 3-pin mini style 3-pin micro style 4-pin EAC micro style	
LEDs	Red: Output energized Green: Power Short circuit: Red and green flashing	
Operating Temperature [C (F)]	-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	0.9...1.0
Brass	0.3...0.5
Aluminum	0.1...0.4
Aluminum ≤0.020 Thick	0.9...1.1
Copper	0.4...0.6

Features

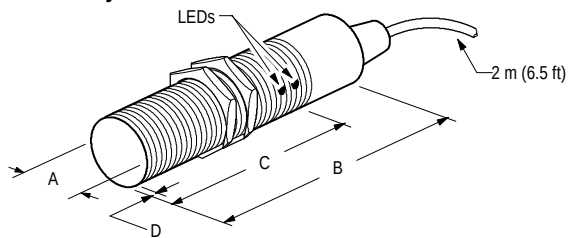
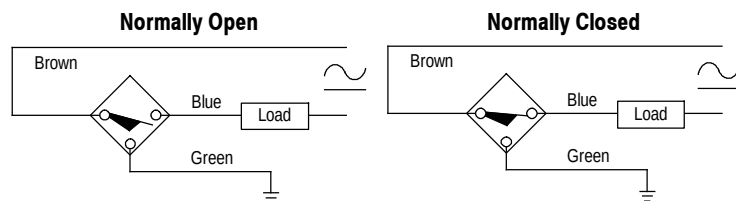
- 2-wire operation
- 2-conductor, 3-conductor, 3-pin or 4-pin connection
- 20...250V AC/DC
- Normally open or normally closed output
- Short-circuit, false pulse, overload, and transient noise protection
- UL Listed, CSA Certified and CE Marked for all applicable directives

Product Selection

Barrel Dia.	Nominal Sensing Distance [mm (in.)]	Shielded	Output Configuration	Switching Frequency [Hz]	Cat. No.				
					PVC Cable	ToughLink™ Cable	Mini QD Style	Micro QD Style	EAC Micro QD Style
12 mm	3 (0.12)	Y	N.O.	35	871TM-B3N12-A2	871TM-B3N12-C2	871TM-B3N12-N3	871TM-B3N12-R3	—
			N.C.	30	871TM-B3C12-A2	871TM-B3C12-C2	871TM-B3C12-N3	871TM-B3C12-R3	—
	4 (0.16)	N	N.O.	20	871TM-B4N12-A2	871TM-B4N12-C2	871TM-B4N12-N3	871TM-B4N12-R3	871TM-B4N12-B4
			N.C.	15	871TM-B4C12-A2	871TM-B4C12-C2	871TM-B4C12-N3	871TM-B4C12-R3	—
18 mm	5 (0.20)	Y	N.O.	20	871TM-B5N18-A2	871TM-B5N18-H2	871TM-B5N18-N3	871TM-B5N18-R3	—
			N.C.	15	871TM-B5C18-A2	871TM-B5C18-H2	871TM-B5C18-N3	871TM-B5C18-R3	—
	8 (0.31)	N	N.O.	15	871TM-B8N18-A2	871TM-B8N18-H2	871TM-B8N18-N3	871TM-B8N18-R3	—
			N.C.	12	871TM-B8C18-A2	871TM-B8C18-H2	871TM-B8C18-N3	871TM-B8C18-R3	—
30 mm	10 (0.39)	Y	N.O.	15	871TM-B10N30-A2	871TM-B10N30-H2	871TM-B10N30-N3	871TM-B10N30-R3	—
			N.C.	12	871TM-B10C30-A2	871TM-B10C30-H2	871TM-B10C30-N3	871TM-B10C30-R3	—
	15 (0.59)	N	N.O.	12	871TM-B15N30-A2	871TM-B15N30-H2	871TM-B15N30-N3	871TM-B15N30-R3	—
			N.C.	10	871TM-B15C30-A2	871TM-B15C30-H2	871TM-B15C30-N3	871TM-B15C30-R3	—
Recommended Standard QD Cordset (-6F = 1.8 m (6 ft), -2 = 2 m (6.5 ft))							889N-F3AFC-6F	889R-F3ECA-2	889B-F3AC-2

QD Cordsets and Accessories

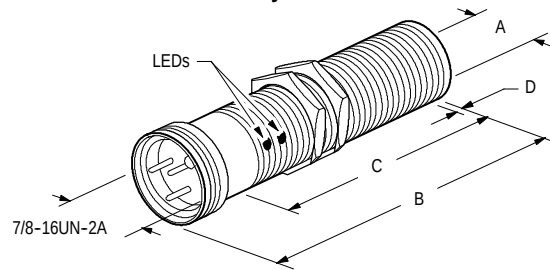
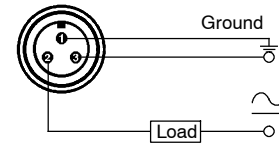
Description	Page Number
Other Cordsets Available	8-2
Terminal Chambers	8-2
Mounting Brackets	2-210...2-214
End Caps	2-219, 2-220
Mounting Nuts	2-221...2-222

Approximate Dimensions [mm (in.)]**Cable Style****Wiring Diagrams**

Note 1: No green wire on 12 mm and on sensors with PVC cable (-A2). Attach housing to ground.

Note 2: Load can be switched to brown wire.

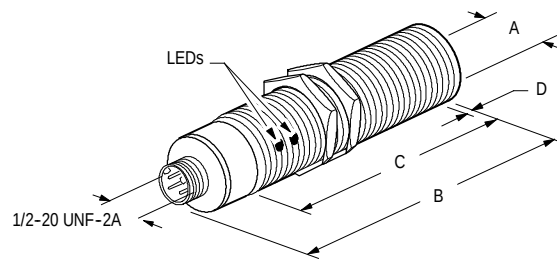
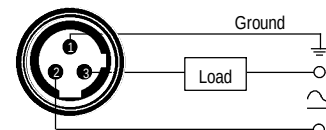
Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
M12 x 1	Y	12.0 (0.47)	72.1 (2.84)	38.4 (1.51)	2.5 (0.10)
	N			31.5 (1.24)	9.4 (0.37)
M18 x 1	Y	18.0 (0.71)	74.7 (2.94)	60.0 (2.36)	2.5 (0.10)
	N			48.2 (1.90)	14.4 (0.56)
M30 x 1.5	Y	30.0 (1.18)	77.2 (3.04)	61.3 (2.41)	2.5 (0.10)
	N			41.6 (1.64)	17.9 (0.70)

Approximate Dimensions [mm (in.)] (continued)**Mini Quick-Disconnect Style****Wiring Diagrams****Normally Open or Normally Closed**

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

Note 2: Load can be switched to pin 3.

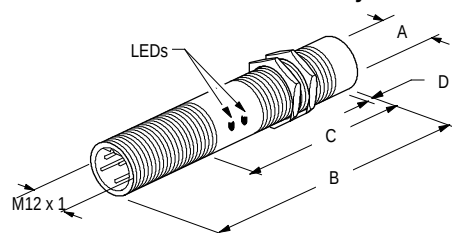
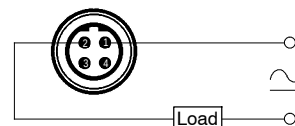
Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
M12 X 1	Y	12.0 (0.47)	85.6 (3.37)	37.8 (1.49)	2.5 (0.10)
	N			31.7 (1.25)	9.4 (0.37)
M18 X 1	Y	18.0 (0.71)	76.6 (3.02)	54.9 (2.16)	2.5 (0.10)
	N			43.1 (1.70)	14.4 (0.56)
M30 X 1.5	Y	30.0 (1.18)	86.4 (3.40)	61.3 (2.41)	2.5 (0.10)
	N			41.6 (1.64)	17.9 (0.70)

Micro Quick-Disconnect Style**Normally Open or Normally Closed**

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

Note 2: Load can be switched to pin 2.

Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
M12 X 1	Y	12.0 (0.47)	87.3 (3.44)	38.4 (1.51)	2.5 (0.10)
	N	12.0 (0.47)	87.3 (3.44)	31.5 (1.24)	9.4 (0.37)
M18 X 1	Y	18.0 (0.71)	84.3 (3.32)	60.0 (2.36)	2.5 (0.10)
	N	18.0 (0.71)	84.3 (3.32)	48.2 (1.90)	14.4 (0.56)
M30 X 1.5	Y	30.0 (1.18)	85.7 (3.37)	61.3 (2.41)	2.5 (0.10)
	N	30.0 (1.18)	85.7 (3.37)	46.1 (1.81)	17.9 (0.70)

EAC Micro Quick-Disconnect Style**Normally Open**

Note 1: No ground pin. Attach housing to ground.

Note 2: Load can be switched to pin 2.

Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
M12 X 1	N	12.0 (0.47)	83.0 (3.27)	31.7 (1.25)	9.4 (0.37)