

871TM 2-Wire AC/DC

Stainless Steel Face/Threaded Stainless Steel Barrel



871TM AC/DC Cable Style
12, 18, 30mm
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871TM AC/DC Mini Quick-Disconnect Style
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871TM AC/DC Micro Quick-Disconnect Style
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871TM AC/DC EAC Micro Quick-Disconnect Style
12mm
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Specifications

	12mm	18 & 30mm
Load Current	5-250mA	5-400mA
Inrush Current (1 cycle)	≤2A	≤4A
Leakage Current	≤1.7mA at 120V AC	
Operating Voltage	40-250V AC/DC	
Voltage Drop	≤5V at 250mA 10V at 10mA	≤5V at 400mA 10V at 10mA
Repeatability	≤10% at constant temperature	
Hysteresis	7% typical	
False Pulse Protection	Incorporated	
Transient Noise Protection	Incorporated	
Short Circuit Protection	Trigger at 5A typical	Trigger at 8A typical
Overload Protection	Trigger at 340mA typical	Trigger at 550mA typical
Approvals	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), 1200psi (8270kPa) washdown Stainless steel face and barrel	
Connections	Cable: 2m (6.5ft) 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	Orange: Output Energized Green: Power/Short circuit (flashing)	
Operating Temperature	-25°C to +70°C (-13°F to +158°F)	
Shock	30g, 11ms	
Vibration	55Hz, 1mm 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
- 40-250V 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

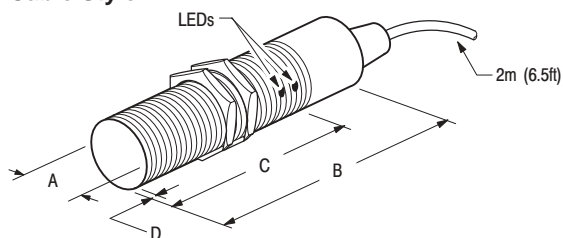
Barrel Dia.	Nominal Sensing Distance mm (in)	Shielded	Output Configuration	Switching Frequency (Hz)	Catalog Number				
					PVC Cable	ToughLink™ Cable	Mini QD Style	Micro QD Style	EAC Micro QD Style
12mm	2 (0.08)	Y	N.O.	35	871TM-B2N12-A2	871TM-B2N12-C2	871TM-B2N12-N3	871TM-B2N12-R3	—
			N.C.	30	871TM-B2C12-A2	871TM-B2C12-C2	871TM-B2C12-N3	871TM-B2C12-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	—
18mm	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	—
30mm	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 = 1.8m (6ft), -2 = 2m (6.5ft))							889N-F3AFC-6F	889R-F3ACA-2	889B-F3AC-2

QD Cordsets and Accessories

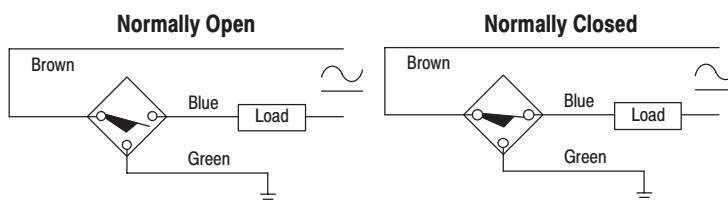
Description	Page Number
Other Cordsets Available	7-8, 7-68, 7-84
Terminal Chambers	7-20, 7-63, 7-81
Mounting Brackets	2-186 - 2-190
End Caps	2-195, 2-196
Mounting Nuts	2-197 - 2-198

Dimensions—mm (inches)

Cable Style



Wiring Diagrams



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

Note 2: Load can be switched to brown wire.

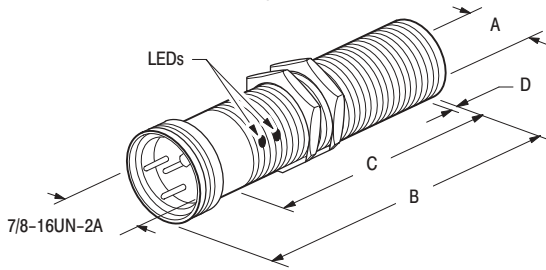
Thread Size	Shielded	mm (inches)			
		A	B	C	D
M12 x 1	Y	12.0 (0.47)	72.1 (2.84)	38.4 (1.51)	2.5 (0.10)
	N			31.5 (1.24)	9.4 (0.37)
M18 x 1	Y	18.0 (0.71)	74.7 (2.94)	60.0 (2.36)	2.5 (0.10)
	N			48.2 (1.90)	14.4 (0.56)
M30 x 1.5	Y	30.0 (1.18)	77.2 (3.04)	61.3 (2.41)	2.5 (0.10)
	N			41.6 (1.64)	17.9 (0.70)

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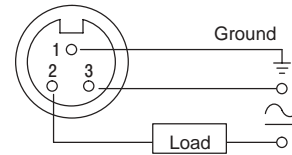
Dimensions—mm (inches) (continued)

Mini Quick-Disconnect Style



Wiring Diagrams

Normally Open or Normally Closed

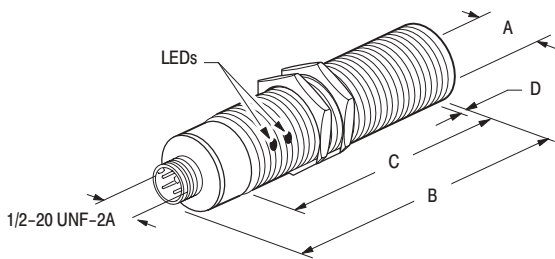


Note 1: No ground pin on 12mm. Attach housing to ground.

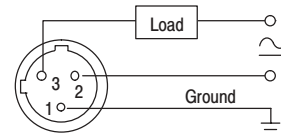
Note 2: Load can be switched to pin 3.

Thread Size	Shielded	mm (inches)			
		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

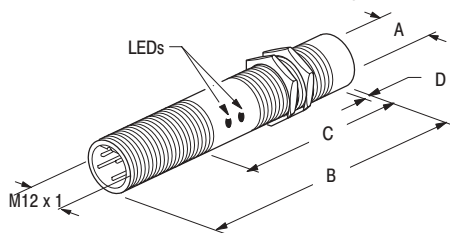


Note 1: No ground pin on 12mm. Attach housing to ground.

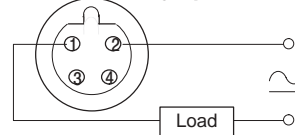
Note 2: Load can be switched to pin 2.

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