

871T 3-Wire DC**Plastic Face/Threaded Stainless Steel Barrel**

871T DC Cable Style
12, 18 mm



871T DC Mini
Quick-Disconnect Style
18 mm

Features

- 3-wire operation
- 3-conductor or 4-pin connection
- 10...30V DC
- Normally open output
- Short circuit, overload, false pulse, reverse polarity and transient noise protection
- UL Listed, CSA Certified and CE Marked for all applicable directives

Specifications

	12 mm	18 mm
Load Current	≤300 mA	≤400 mA
Leakage Current	≤10 mA	
Operating Voltage	10...30V DC	
Voltage Drop	≤1V	
Repeatability	≤10%	
Hysteresis	≤10% typical	
False Pulse Protection	Incorporated	
Transient Noise Protection	Incorporated	
Reverse Polarity Protection	Incorporated	
Short Circuit Protection	Incorporated	
Overload Protection	Incorporated	
Certifications	UL Listed, CSA Certified and CE Marked for all applicable directives	
Enclosure	NEMA 1, 2, 3, 4, 12 and 13 IP67 (IEC529) 303 Stainless steel barrel	
Connections	Cable: 3 m (10 ft) length 3-conductor PVC Quick-Disconnect: 4-pin mini style	
LED	Red: Output Energized	
Operating Temperature [C (F)]	-40...+70° (-40...+158°)	

Correction Factors

Target Material	Correction Factors
Steel	1.0
Stainless Steel	0.7...0.9
Brass	0.3...0.5
Aluminum	0.3...0.4
Copper	0.3...0.4

Product Selection

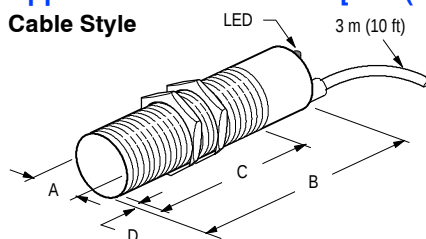
Barrel Diameter	Nominal Sensing Distance [mm (in.)]	Shielded	Output Configuration		Switching Frequency [Hz]	Cat. No.		
						Cable Style	Mini QD Style	
12 mm	2 (0.08)	Y	N.O.	NPN	2000	871T-R2A12	—	
		PNP		871T-L2A12		—		
	4 (0.16)	N		NPN	1000	871T-R4B12	—	
				PNP		871T-L4B12	—	
18 mm	5 (0.20)	Y	N.O.	NPN	1000	871T-R5 A18	871T-R5J18	
		PNP		871T-L5 A18		871T-L5J18		
	8 (0.31)	N		NPN	500	871T-R8B18	871T-R8K18	
				PNP		871T-L8B18	871T-L8K18	
Recommended Standard QD Cordset (-6F = 1.8 m (6 ft))								889N-F4AFC-6F

QD Cordsets and Accessories

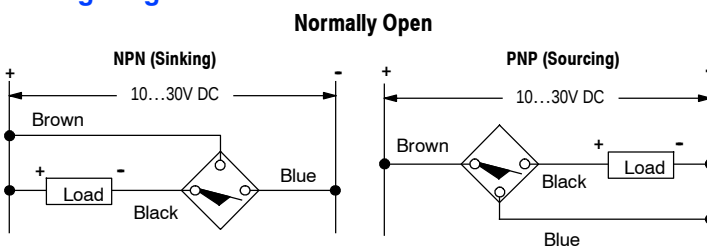
Description	Page Number	Description	Page Number
Other Cordsets Available	8-2	End Caps	2-220
Terminal Chambers	8-2	Mounting Nuts	2-221...2-222
Mounting Brackets	2-210...2-214	—	—

Approximate Dimensions [mm (in.)]

Cable Style

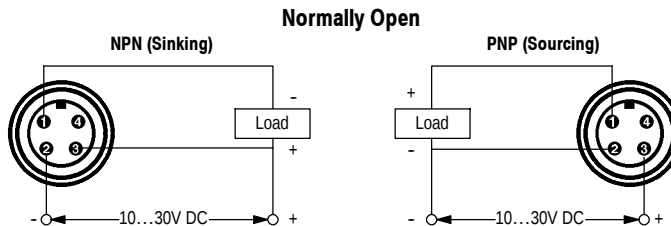
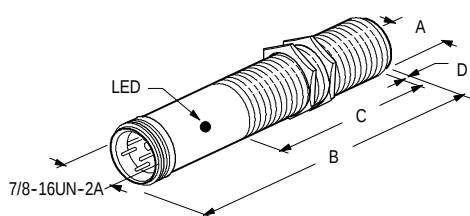


Wiring Diagrams



Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
M12 X 1	Y	12.0 (0.47)	80.0 (3.15)	53.8 (2.12)	0.8 (0.03)
	N			46.5 (1.83)	8.1 (0.32)
M18 X 1	Y	18.0 (0.71)	81.5 (3.21)	55.6 (2.19)	0.8 (0.03)
	N		81.3 (3.20)	43.7 (1.72)	12.3 (0.48)

Mini Quick-Disconnect Style



Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
M18 X 1	Y	18.0 (0.71)	96.9 (3.81)	51.9 (2.04)	0.8 (0.03)
	N		96.9 (3.81)	40.4 (1.59)	12.3 (0.48)

871T 2-Wire AC**Plastic Face/Threaded Stainless Steel Barrel**

871T AC Cable Style
12, 18 mm



871T AC Mini
Quick-Disconnect Style
18 mm

Features

- 2-wire operation
- 2-conductor, 3-conductor, or 3-pin connection
- 20...132V AC
- False pulse and transient noise protection
- Normally open or normally closed output
- UL Listed, CSA Certified and CE Marked for all applicable directives

Specifications

	12 mm	18 mm
Load Current	≤300 mA	≤500 mA
Inrush Current (1 cycle)	≤3 A	≤5 A
Leakage Current	≤1.5 mA	
Supply Current (minimum)	5 mA	
Operating Voltage	20...132V AC	
Voltage Drop	6.5V AC at 500 mA, 10V AC at 20 mA (RMS)	
Repeatability	≤10%	
Hysteresis	≤10% typical	
False Pulse Protection	Incorporated	
Transient Noise Protection	Incorporated	
Certifications	UL Listed, CSA Certified and CE Marked for all applicable directives	
Enclosure	NEMA 1, 2, 3, 4, 12 and 13 IP67 (IEC529) 303 Stainless steel barrel	
Connections	Cable: 3 m (10 ft) length 12 mm—2 conductor PVC 18 mm—3 conductor PVC Quick-Disconnect: 3-pin mini style	
LED	Red: Output Energized (none on 871T-G5Q18FT)	
Operating Temperature [C (F)]	-40...+70° (-40...+158°)	
Shock	30 g, 11 ms	
Vibration	55 Hz, 1 mm amplitude, 3 planes	

Correction Factors

Target Material	Correction Factors
Steel	1.0
Stainless Steel	0.7...0.9
Brass	0.3...0.5
Aluminum	0.3...0.4
Copper	0.3...0.4

Product Selection

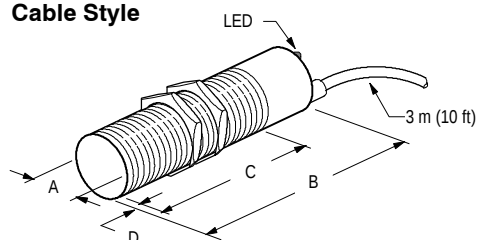
Barrel Diameter	Nominal Sensing Distance [mm (in.)]	Shielded	Output Configuration	Switching Frequency [Hz]	Cat. No.	
					Cable Style	Mini QD Style
12 mm	2 (0.08)	Y	N.O.	50	871T-G2A12	—
	4 (0.16)	N			871T-G4B12	—
	2 (0.08)	Y	N.C.		871T-H2A12	—
	4 (0.16)	N			871T-H4B12	—
18 mm	5 (0.20)	Y	N.O.		871T-G5 A18	871T-G5J18
	8 (0.31)	N			—	871T-G5Q18FT
	5 (0.20)	Y	N.C.		871T-G8B18	871T-G8K18
	8 (0.31)	N			871T-H5 A18	871T-H5J18
					871T-H8B18	871T-H8K18
Recommended Standard QD Cordset (-6F = 1.8 m (6 ft))						889N-F3AFC-6F

QD Cordsets and Accessories

Description	Page Number	Description	Page Number
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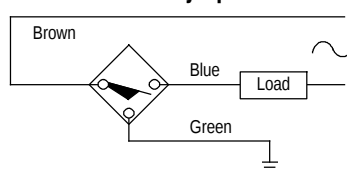
Approximate Dimensions [mm (in.)]

Cable Style

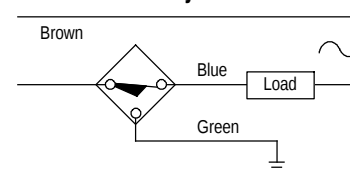


Wiring Diagrams

Normally Open



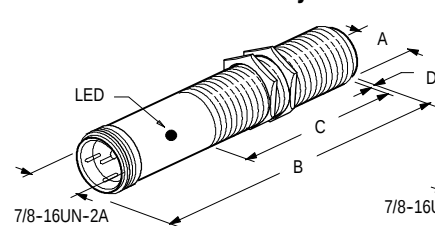
Normally Closed



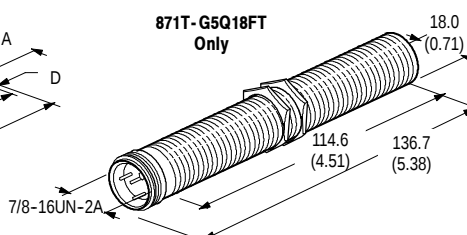
Note 1: No green wire on 12 mm. Attach housing to ground.
Note 2: Load can be switched to brown wire.

Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
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	N			46.5 (1.83)	8.1 (0.32)
M18 X 1	Y	18.0 (0.71)	81.5 (3.21)	55.6 (2.19)	0.8 (0.03)
	N		81.3 (3.20)	43.7 (1.72)	12.3 (0.48)

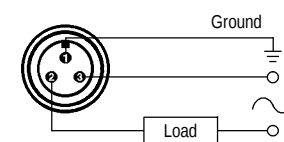
Mini Quick-Disconnect Style



871T-G5Q18FT Only



Normally Open or Normally Closed



Note: Load can be switched to pin 3.

Thread Size	Shielded	[mm (in.)]			
		A	B	C	D
M18 X 1	Y	18.0 (0.71)	96.9 (3.81)	51.9 (2.04)	0.8 (0.03)
	N			40.4 (1.59)	12.3 (0.48)