

871T 3-wire DC Stainless Steel Barrel Tubular Sensors

Plastic Face/Threaded



871C DC Cable Style
12 mm and 18 mm



871C DC Mini Quick-disconnect Style
18 mm

Specifications

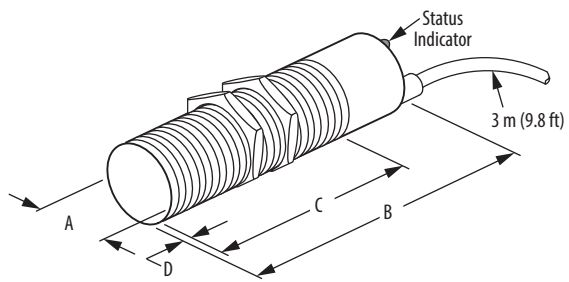
Attribute	12 mm	18 mm
Load Current	≤300 mA	≤400 mA
Leakage Current	≤10 µA	
Operating Voltage	10...30V DC	
Voltage Drop	≤1V	
Repeatability	≤10%	
Hysteresis	≤10% typical	
Protection Type	False pulse, transient noise, reverse polarity, short circuit, and overload	
Certifications	UL Listed, CSA Certified, and CE Marked for all applicable directives	
Enclosure Type Rating	NEMA 1, 2, 3, 4, 12 and 13; IP67 (IEC529)	
Housing Material	Stainless Steel 303 barrel	
Connections	<ul style="list-style-type: none"> Cable: 3 m (10 ft) length, 3-conductor PVC Quick-disconnect: 4-pin mini style 	
Status Indicator	Red: output energized	
Operating Temperature	-40...+70 °C (-40...+158 °F)	

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

Approximate Dimensions [mm (in.)]

Cable Style



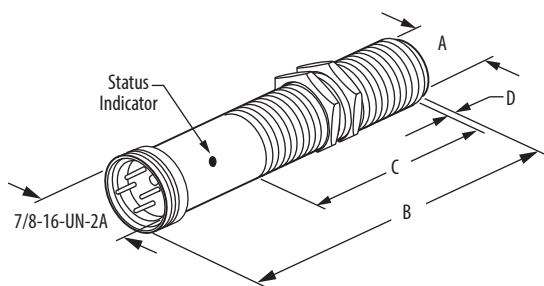
Wiring Diagrams

Normally Open

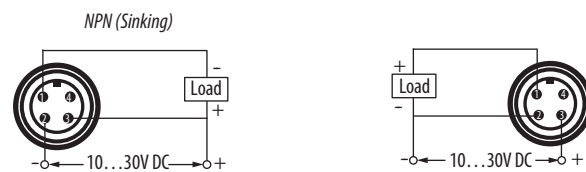


Thread Size	Shielded	mm (in.)			
		A	B (Max)	C (Min)	D (Max)
M12 X 1	Yes	12.0 (0.47)	80.0 (23.15)	53.8 (2.12)	0.8 (0.03)
	No			46.5 (1.83)	8.1 (0.32)
M18 X 1	Yes	18.0 (0.71)	81.5 (3.21)	55.6 (2.19)	0.8 (0.03)
	No			43.7 (1.72)	12.3 (0.48)

Mini QD Style



Normally Open



Thread Size	Shielded	mm (in.)			
		A	B (Max)	C (Min)	D (Max)
M18 X 1	Yes	18.0 (0.71)	96.9 (3.81)	51.9 (2.04)	0.8 (0.03)
	No			40.4 (1.59)	12.3 (0.48)

871T 2-wire AC Stainless Steel Barrel Tubular Sensors

Plastic Face/Threaded



871T AC Cable Style
12 mm and 18 mm



871T AC Mini Quick Disconnect Style
18 mm

Specifications

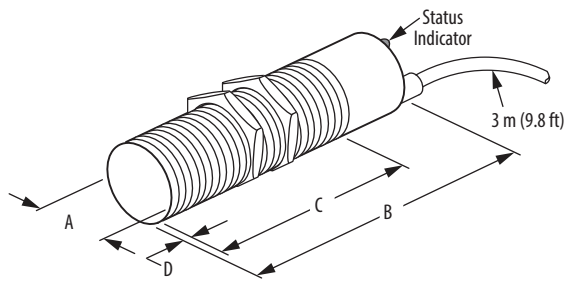
Attribute	12 mm	18 mm
Load Current	≤300 mA	≤500 mA
Inrush Current (one cycle)	≤3 A	≤5 A
Leakage Current	≤1.5 mA	
Operating Voltage	20...132V AC	
Voltage Drop	6.5V AC at 500 mA, 10V AC at 20 mA (RMS)	
Repeatability	≤10%	
Hysteresis	≤10% typical	
Protection Type	False pulse, transient noise	
Certifications	UL Listed, CSA Certified, and CE Marked for all applicable directives	
Enclosure Type Rating	NEMA 1, 2, 3, 4, 12 and 13; IP67 (IEC529)	
Housing Material	Stainless steel 303 barrel	
Connection Type	<ul style="list-style-type: none"> • Cable: 3 m (10 ft) length, 12 mm 2 conductor PVC, 18 mm 3 conductor PVC • Quick-disconnect: 3-pin mini style 	
Status Indicator	Red: Output Energized	
Operating Temperature	-40...+70 °C (-40...+158 °F)	
Shock	30 g (1.06 oz), 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

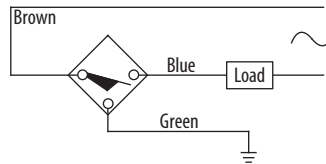
Approximate Dimensions [mm (in.)]

Cable Style

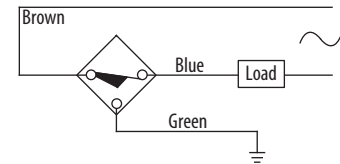


Wiring Diagrams

Normally Open



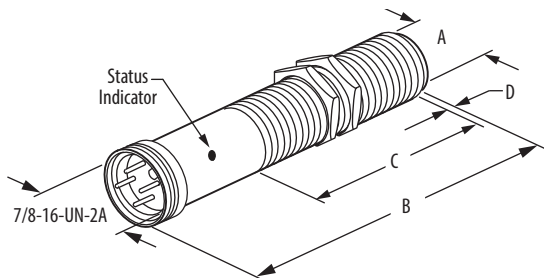
Normally Closed



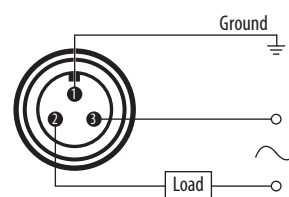
Note: No green wire on 12 mm.
Attach housing to ground.

Thread Size	Shielded	mm (in.)			
		A	B (Max)	C (Min)	D (Max)
M12 X 1	Yes	12.0 (0.47)	80.0 (23.15)	53.8 (2.12)	0.8 (0.03)
	No			46.5 (1.83)	8.1 (0.32)
M18 X 1	Yes	18.0 (0.71)	81.5 (3.21)	55.6 (2.19)	0.8 (0.03)
	No			43.7 (1.72)	12.3 (0.48)

Mini QD Style



Normally Open or Normally Closed



Note: Load can be switched to pin 3.

Thread Size	Shielded	mm (in.)			
		A	B (Max)	C (Min)	D (Max)
M18 X 1	Yes	18.0 (0.71)	96.9 (3.81)	51.9 (2.04)	0.8 (0.03)
	No			40.4 (1.59)	12.3 (0.48)

871T 4-wire AC Ferrous Selective

Stainless Steel Face/Threaded Stainless Steel Barrel



871T AC Cable Style
18 mm



871T AC Mini Quick-disconnect Style
18 mm

Specifications

Attribute	18 mm
Load Current	≤500 mA
Inrush Current (one Cycle)	≤5 A
Supply Current (minimum)	5 mA
Leakage Current	≤1.7 mA
Operating Voltage	20...132V AC
Voltage Drop	<ul style="list-style-type: none"> N.O. output: 6.5V AC at 500 mA, 10V AC at 20 mA (RMS) N.C. output: 1.7V AC at 500 mA (RMS)
Isolation Voltage	800V AC (output to output); 1500V AC (output to housing)
Repeatability	≤10%
Hysteresis	≤10% typical
Protection Type	False pulse, transient noise
Certifications	CE Marked for all applicable directives
Enclosure Type Rating	NEMA 3, 4, 12 and 13; IP67 (IECS29)
Housing Material	Stainless steel face and barrel
Connections	<ul style="list-style-type: none"> Cable: 3.6 m (12 ft) length, 5-conductor PVC Quick-disconnect: 5-pin mini style
Status Indicator	<ul style="list-style-type: none"> Red: Output energized Green: Power
Operating Temperature	0...70 °C (32...158 °F)

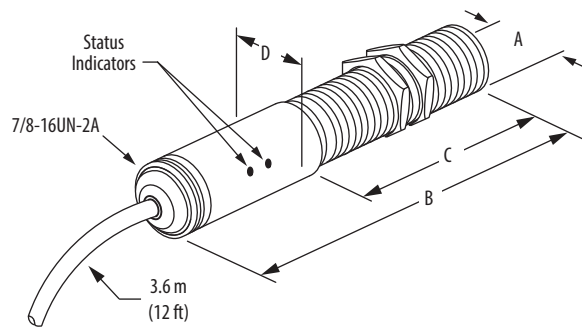
Correction Factors

Target Material	Correction Factors
Steel	1.0
Stainless Steel ⁽¹⁾	0.8...1.1
Brass	0.0
Aluminum	0.0
Copper	0.0

(1) Stainless steel 10% contains carbon.

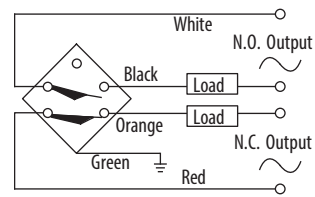
Approximate Dimensions [mm (in.)]

Cable Style



Wiring Diagrams

Complementary Normally Open or Normally Closed

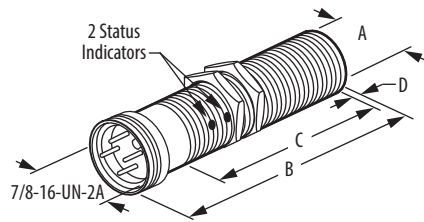


Note:

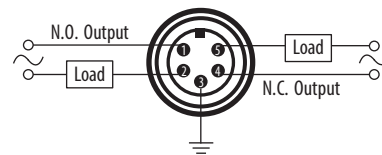
1. N.O. output must be wired for operation. N.C. output is optional.
2. N.O. load can be switched to white wire.
3. N.C. load can be switched to red wire.

Thread Size	mm (in.)			
	A	B (Max)	C (Min)	D (Max)
M18 X 1	18.0 (0.71)	101.6 (4.00)	50.8 (2.00)	20.3 (0.80)

Mini QD Style



Normally Open or Normally Closed



Note:

1. N.O. output must be wired for operation. N.C. output is optional.
2. N.O. load can be switched to pin 1.
3. N.C. load can be switched to pin 4.

Thread Size	mm (in.)			
	A	B (Max)	C (Min)	D (Max)
M18 X 1	18.0 (0.71)	101.6 (4.00)	50.8 (2.00)	20.3 (0.80)