

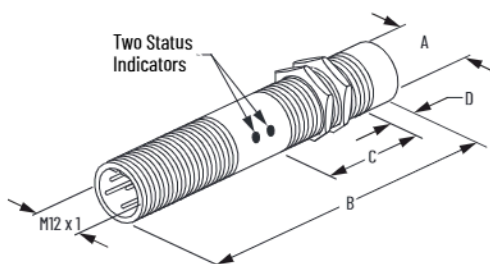
Product Selection

Barrel Diameter [mm (in.)]	Nominal Sensing Distance [mm (in.)]	Shielded	Output Config.	Switching Frequency [Hz]	Cat. No.				
					PVC Cable	ToughLink Cable	Mini QD	Micro QD	EAC Micro
12 (0.47)	3 (0.12)	Yes	N.O.	35	871TM-B3N12-A2 ⁽¹⁾	871TM-B3N12-C2	871TM-B3N12-N3	871TM-B3N12-R3	—
			N.C.	30	871TM-B3C12-A2 ⁽¹⁾	871TM-B3C12-C2	871TM-B3C12-N3	871TM-B3C12-R3	—
	4 (0.16)	No	N.O.	20	871TM-B4N12-A2 ⁽¹⁾	871TM-B4N12-C2	871TM-B4N12-N3	871TM-B4N12-R3	871TM-B4N12-B4 ⁽¹⁾
			N.C.	15	871TM-B4C12-A2	871TM-B4C12-C2	871TM-B4C12-N3	871TM-B4C12-R3	—
18 (0.71)	5 (0.2)	Yes	N.O.	20	871TM-B5N18-A2 ⁽¹⁾	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)	No	N.O.	15	871TM-B8N18-A2 ⁽¹⁾	871TM-B8N18-H2 ⁽¹⁾	871TM-B8N18-N3	871TM-B8N18-R3	—
			N.C.	12	871TM-B8C18-A2 ⁽¹⁾	871TM-B8C18-H2	871TM-B8C18-N3	871TM-B8C18-R3	—
30 (1.18)	10 (0.39)	Yes	N.O.	15	871TM-B10N30-A2 ⁽¹⁾	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)	No	N.O.	12	871TM-B15N30-A2 ⁽¹⁾	871TM-B15N30-H2 ⁽¹⁾	871TM-B15N30-N3 ⁽¹⁾	871TM-B15N30-R3 ⁽¹⁾	—
			N.C.	10	871TM-B15C30-A2 ⁽¹⁾	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

(1) CCC Certified

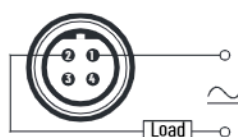
Approximate Dimensions

EAC M12 Micro QD Style



Wiring Diagrams

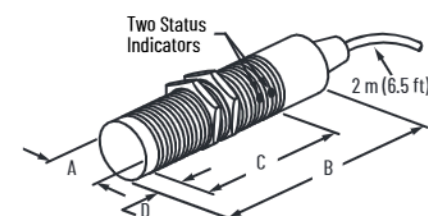
Normally Open



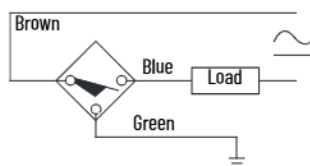
- IMPORTANT**
- No ground pin. Attach housing to ground.
 - Load can be switched to pin 2.

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	No	12 (0.47)	83 (3.27)	31.7 (1.25)	9.4 (0.37)

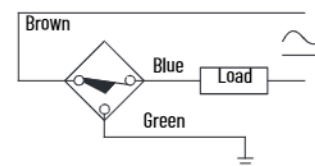
Cable Style



Normally Open



Normally Closed

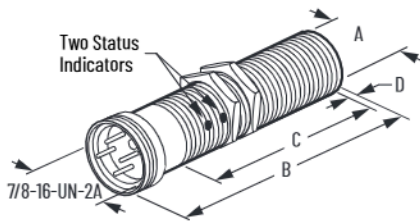


- IMPORTANT**
- No green wire on 12 mm and on sensors with PVC cable (-A2). Attach housing to ground.
 - Load can be switched to brown wire.

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	Yes	12 (0.47)	72.1 (2.84)	38.4 (1.51)	2.5 (0.1)
	No			31.5 (1.24)	9.4 (0.37)
M18 x 1	Yes	18 (0.71)	74.7 (2.94)	60 (2.35)	2.5 (0.1)
	No			48.2 (1.9)	14.4 (0.56)
M30 x 1.5	Yes	30 (1.18)	77.2 (3.04)	61.3 (2.41)	2.5 (0.1)
	No			46.1 (1.81)	17.9 (0.7)

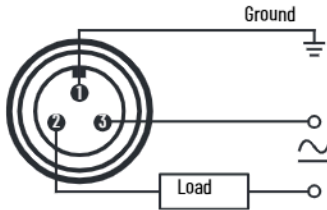
Approximate Dimensions

Mini QD Style



Wiring Diagrams

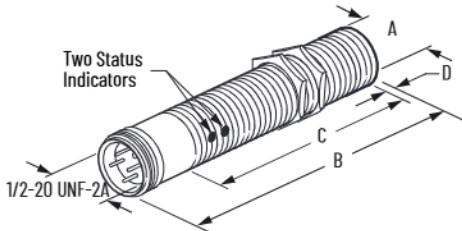
Normally Open or Normally Closed



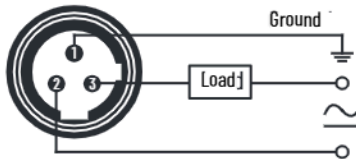
- IMPORTANT**
- No ground pin on 12 mm. Attach housing to ground.
 - Load can be switched to pin3

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	Yes	12 (0.47)	85.6 (3.37)	37.8 (1.49)	2.5 (0.1)
	No			31.7 (1.25)	9.4 (0.37)
M18 x 1	Yes	18 (0.71)	56.1 (2.21)	54.9 (2.16)	2.5 (0.1)
	No			43.1 (1.7)	14.4 (0.56)
M30 x 1.5	Yes	30 (1.18)	68.1 (2.68)	61.3 (2.41)	2.5 (0.1)
	No			46.1 (1.81)	17.9 (0.7)

AC Micro QD Style



Normally Open or Normally Closed



- IMPORTANT**
- No ground pin on 12 mm. Attach housing to ground.
 - Load can be switched to pin 2

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	Yes	12 (0.47)	83.4 (3.28)	38.4 (1.51)	2.5 (0.1)
	No			31.5 (1.24)	9.4 (0.37)
M18 x 1	Yes	18 (0.71)	84.3 (3.32)	60 (2.36)	2.5 (0.1)
	No			48.2 (1.9)	14.4 (0.56)
M30 x 1.5	Yes	30 (1.18)	85.7 (3.37)	61.3 (2.41)	2.5 (0.1)
	No			46.1 (1.81)	17.9 (0.7)

871TM 2-wire AC/DC PLC Interfacer



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



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



871TM AC Micro Quick Disconnect Style
12 mm, 18 mm, and 30 mm Diameter



871TM AC/DC EAC M12 Micro Quick Disconnect Style
12 mm Diameter



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

Specifications

Attribute	12 mm, 18 mm, and 30 mm Diameter
Load current	2...25 mA
Leakage current	≤ 0.9 mA at 24V DC ≤ 1.7 mA at 20...120V AC/DC ≤ 2.5 mA at 121...250V AC/DC
Operating voltage	20...250V AC/DC (standard models) 20...132V AC/DC (high temperature models)
Voltage drop	≤ 8V at 25 mA DC ≤ 10V at 25 mA AC
Repeatability	10% typical
Hysteresis	10% typical
Protection type	False pulse, transient noise, radio frequency (10V per meter, frequency range 20...1000 MHz) ⁽¹⁾
Certifications	UL Listed, CSA Certified, CE Marked for all applicable directives, UKCA Marked for all applicable regulations, and CCC Certified (select models)
Enclosure type rating	NEMA 1, 2, 3, 3R, 4, 4X, 6, 6P, 12, 13; IP67 (IEC 529) all models; 1200 psi (8270 kPa) washdown; ToughLink and micro connector versions are also rated IP69K (IEC 529)
Housing material	Stainless steel face and threaded short barrel
Connection type	- Cable: 2 m (6.5 ft) length, A2 - 2-conductor 22 AWG PVC, C2 - 2-conductor 22 AWG ToughLink, H2 - 2-conductor 18 AWG ToughLink - Quick disconnect: 3-pin mini style, 3-pin micro style, 4-pin EAC M12 micro style
Status indicators	Red: Output energized
Operating temperature	-25...+70 °C (-13...+158 °F) (standard models) 0...100 °C (32...212 °F) (high temperature models)
Shock	30 g (1.06 oz), 11 ms (standard models) 5 g (0.18 oz), 11 ms (high temperature models)
Vibration	55 Hz, 1 mm amplitude, 3 planes (standard models) 30...120 Hz, 1 mm amplitude, 3 planes (high temperature models)

Correction Factors

Target Material	Correction Factors
Steel	1.0
Stainless steel	0.8...1.0
Brass	0.4...0.7
Aluminum	0.4...0.7
Copper	0.1...0.2

(1) Radio frequency protection is not available on high temperature models.

Product Selection

Barrel Diameter [mm (in.)]	Nominal Sensing Distance [mm (in.)]	Shielded	Output Config.	Switching Frequency [Hz]	Cat. No.				
					PVC Cable	ToughLink Cable	Mini QD	Micro QD	EAC Micro
12 (0.47)	2 (0.08)	Yes	N.O.	75	871TM-BH2N12-A2 ⁽¹⁾	871TM-BH2N12-C2 ⁽¹⁾	871TM-BH2N12-N3 ⁽¹⁾	871TM-BH2N12-R3 ⁽¹⁾	871TM-BH2N12-B4 ⁽¹⁾
	4 (0.16)	No		35	871TM-BH4N12-A2 ⁽¹⁾	871TM-BH4N12-C2	871TM-BH4N12-N3	871TM-BH4N12-R3	—
	2 (0.08)	Yes	N.C.	75	—	—	—	871TM-BH2C12-R3	—
	4 (0.16)	No		35	—	—	—	871TM-BH4C12-R3	—
18 (0.71)	5 (0.2)	Yes	N.O.	65	871TM-BH5N18-A2 ⁽¹⁾	871TM-BH5N18-H2	871TM-BH5N18-N3 ⁽²⁾	871TM-BH5N18-R3	—
	8 (0.31)	No		30	871TM-BH8N18-A2 ⁽¹⁾	871TM-BH8N18-H2 ⁽³⁾	871TM-BH8N18-N3 ⁽⁴⁾	871TM-BH8N18-R3	—
	5 (0.2)	Yes	N.C.	65	—	—	—	871TM-BH5C18-R3	—
	8 (0.31)	No		30	—	—	—	871TM-BH8C18-R3	—
30 (1.18)	10 (0.39)	Yes	N.O.	45	871TM-BH10N30-A2 ⁽¹⁾	871TM-BH10N30-H2	871TM-BH10N30-N3 ⁽⁵⁾	871TM-BH10N30-R3 ⁽¹⁾	—
	15 (0.59)	No		20	871TM-BH15N30-A2 ⁽¹⁾	871TM-BH15N30-H2	871TM-BH15N30-N3	871TM-BH15N30-R3	—
	10 (0.39)	Yes	N.C.	45	871TM-BH10C30-A2	871TM-BH10C30-H2	871TM-BH10C30-N3	871TM-BH10C30-R3	—
	15 (0.59)	No		20	871TM-BH15C30-A2	871TM-BH15C30-H2	871TM-BH15C30-N3	871TM-BH15C30-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

(1) CCC Certified

(2) For a high temperature model, order Cat. No. 871TM-BX21-N3

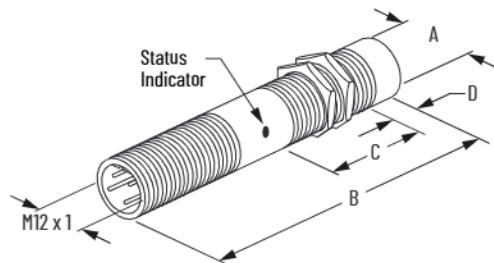
(3) For a high temperature model, order Cat. No. 871TM-BX22-H2

(4) For a high temperature model, order Cat. No. 871TM-BX22-N3

(5) For a high temperature model, order Cat. No. 871TM-BX23-N3

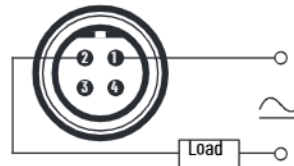
Approximate Dimensions

EAC M12 Micro QD Style



Wiring Diagrams

Normally Open



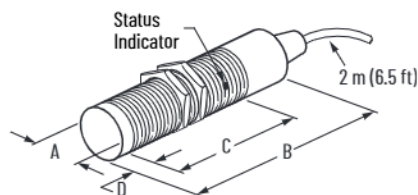
IMPORTANT

- No ground pin. Attach housing to ground.
- Load can be switched to pin 2.

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	No	12 (0.47)	61 (2.4)	26.4 (1.04)	2.5 (0.1)

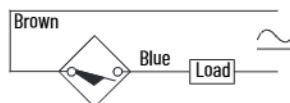
Approximate Dimensions

Cable Style



Wiring Diagrams

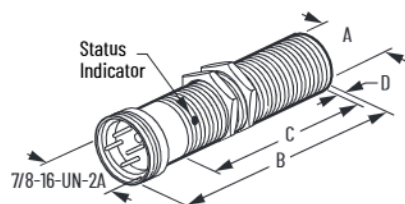
Normally Open



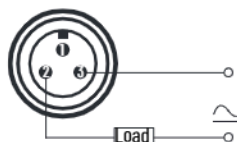
- IMPORTANT**
- Attach housing to ground.
 - Load can be switched to brown wire.

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	Yes	12 (0.47)	49.8 (1.96)	26.4 (1.04)	2.5 (0.1)
	No			19.5 (0.77)	9.4 (0.37)
M18 x 1	Yes	18 (0.71)	55.4 (2.18)	41.7 (1.64)	2.5 (0.1)
	No				14.5 (0.57)
M30 x 1.5	Yes	30 (1.18)	57.9 (2.28)	41.9 (1.65)	2.5 (0.1)
	No			39.4 (1.55)	18 (0.71)

Mini QD Style



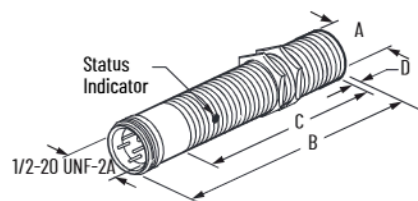
Normally Open



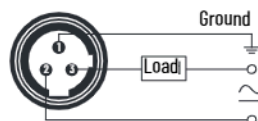
- IMPORTANT**
- Attach housing to ground.
 - Load can be switched to pin3.

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	Yes	12 (0.47)	63.5 (2.5)	25.4 (1)	2.5 (0.1)
	No			18.5 (0.73)	9.4 (0.37)
M18 x 1	Yes	18 (0.71)	56.1 (2.21)	35.1 (1.38)	2.5 (0.1)
	No			29.2 (1.15)	14.5 (0.57)
M30 x 1.5	Yes	30 (1.18)	68.1 (2.68)	49.1 (1.65)	2.5 (0.1)
	No			39.4 (1.55)	18 (0.71)

Micro QD Style



Normally Open or Normally Closed



- IMPORTANT**
- No ground pin on 12 mm. Attach housing to ground.
 - Load can be switched to pin 3.

Thread Size	Shielded	Dimensions [mm (in.)]			
		A	B	C	D
M12 x 1	Yes	12 (0.47)	83.4 (3.28)	26.4 (1.04)	2.5 (0.1)
	No			19.6 (0.77)	9.4 (0.37)
M18 x 1	Yes	18 (0.71)	84.3 (3.32)	41.7 (1.64)	2.5 (0.1)
	No				14.5 (0.57)
M30 x 1.5	Yes	30 (1.18)	85.7 (3.37)	41.9 (1.65)	2.5 (0.1)
	No			39.4 (1.55)	18 (0.71)