

Inductive Proximity Sensors
871TS Food & Beverage
 PPS Plastic Face/Stainless Steel 316L Barrel



871TS DC Micro
Quick-Disconnect Style
 12, 18 mm

Features

- 4-wire operation (complementary normally open and normally closed outputs)
- Gold-plated 4-pin micro quick-disconnect
- 10...30V DC
- Standard and extended sensing range
- IP67, IP68, and IP69K enclosure ratings
- Stainless steel 316L barrel
- FDA Certified, PPS sensing face
- Extended temperature rating (-40...+80 °C (-40...+176 °F))
- Short circuit, false pulse, reverse polarity, overload, and transient noise protection
- cULus Listed and CE Marked for all applicable directives
- ECOLAB Certified

Specifications

Load Current	≤200 mA
Leakage Current	≤15 mA
Operating Voltage	10...30V DC
Voltage Drop	≤2.0V
Repeatability	≤5%
Hysteresis	≤10% typical
Protection Type	False pulse, transient noise, reverse polarity, short circuit, and overload
Certifications	cULus Listed and CE Marked for all applicable directives
Enclosure Type Rating	NEMA 1, 2, 3, 3R, 4, 4X, 6, 6P, 12, 13; IP67, IP68, and IP69K
Housing Material	Stainless steel 316L, PPS (FDA Certified) plastic face
Connection Type	Quick Disconnect: 4-pin micro style
LED	Yellow: Output Energized
Operating Temperature [C (F)]	-40...+80 ° (-40...+176 °)
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...0.8
Brass	0.4...0.5
Aluminum	0.3...0.4
Copper	0.2...0.3



Product Selection

Barrel Diameter [mm]	Barrel Type	Nominal Sensing Distance [mm (in.)]	Shielded	Output Configuration		Switching Frequency [Hz]	Cat. No.				
							Micro QD Style				
12	Threaded	2 (0.08)	Yes	N.O. and N.C.	NPN	2000	871TS-D2BN12-D4				
					PNP		871TS-D2BP12-D4				
		4 (0.16)	Yes	N.O. and N.C.	NPN	2000	871TS-M4BN12-D4				
					PNP		871TS-M4BP12-D4				
			No		NPN		871TS-D4BN12-D4				
					PNP		871TS-D4BP12-D4				
		8 (0.31)	No	N.O. and N.C.	NPN	2000	871TS-N8BN12-D4				
					PNP		871TS-N8BP12-D4				
		18	Threaded	5 (0.20)	Yes	N.O. and N.C.	NPN	1500	871TS-D5BN18-D4		
							PNP		871TS-D5BP18-D4		
8 (0.31)	Yes			N.O. and N.C.	NPN	1500	871TS-M8BN18-D4				
					PNP		871TS-M8BP18-D4				
	No				NPN		871TS-D8BN18-D4				
					PNP		871TS-D8BP18-D4				
12 (0.47)	No			N.O. and N.C.	NPN	1500	871TS-N12BN18-D4				
					PNP		871TS-N12BP18-D4				
Smooth ★	8 (0.31)			Yes	N.O. and N.C.	PNP	1500	871TS-MM8BP18-D4			
								12 (0.47)	No	871TS-NM12BP18-D4	
	Recommended cordset: 2 m (6.5 ft) 4-pin DC micro (straight)							889D-F4AC-2			

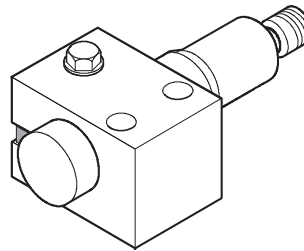
Recommended cordset: 2 m (6.5 ft) 4-pin DC micro (straight)

★ Use a stainless steel clamping bracket (Cat. No. 60-BCS-18B) with smooth barrels.

QD Cordsets and Accessories

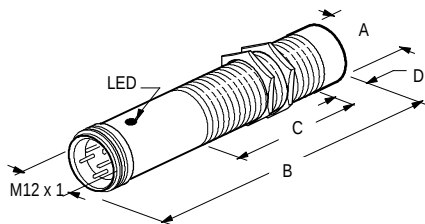
Description	Page No.
Other Cordsets Available	8-2
Terminal Chambers	8-2
Mounting Brackets	2-210...2-214
End Caps	2-220
Mounting Nuts	2-221...2-222

Smooth Barrel Clamping Bracket (Cat. No. 60-BCS-18B)



Approximate Dimensions [mm (in.)]

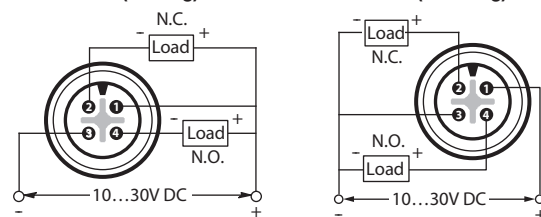
Micro QD Style



Wiring Diagrams

Micro QD Style

Complementary Normally Open and Normally Closed NPN (Sinking) PNP (Sourcing)



Barrel Type	Thread Size	Shielded	mm (in.)			
			A	B	C	D
Threaded	M12 X 1	Yes	12.0 (0.47)	65.0 (2.56)	38.1 (1.50)	—
		No			32.5 (1.28)	6.5 (0.26)
	M18 x 1	Yes	18.0 (0.71)	63.0 (2.48)	34.5 (1.36)	—
		No			26.5 (1.04)	8.0 (0.31)
Smooth	—	Yes	18.0 (0.71)	63.0 (2.48)	—	—
		No			—	8.0 (0.31)