

Inductive Proximity Sensors
871C 2-Wire NAMUR, Cable Style
Nickel-Plated Brass Barrel, Plastic Face

Product Selection

Barrel Diameter	Nominal Sensing Distance [mm (in.)]	Shielded	Output Configuration	Switching Frequency [Hz]	Cat. No.	
					Cable Style	Micro QD Style
8 mm	1 (0.03)	Y	NAMUR DIN 19 234	2000	871C-DH1M8-A2	871C-DH1M8-D4
	2 (0.06)	N		1000	871C-DH2M8-A2	871C-DH2M8-D4
12 mm	2 (0.08)	Y		2000	871C-DH2M12-A2	871C-DH2M12-D4
	4 (0.16)	N		1000	871C-DH4M12-A2	871C-DH4M12-D4
18 mm	5 (0.20)	Y		1000	871C-DH5M18-A2	871C-DH5M18-D4
	8 (0.31)	N		500	871C-DH8M18-A2	871C-DH8M18-D4
30 mm	10 (0.39)	Y		500	871C-DH10M30-A2	871C-DH10M30-D4
	15 (0.59)	N		300	871C-DH15M30-A2	871C-DH15M30-D4
Recommended standard QD cordset (-2 = 2 m (6.5 ft))						889D-F4AC-2 ①

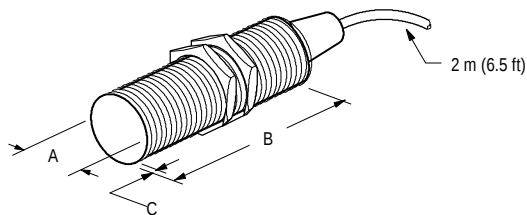
① Intrinsically Safe wiring labels 897H-L1 or 897H-L2 must be applied every 7.6 m (25 ft).

QD Cordsets and Accessories

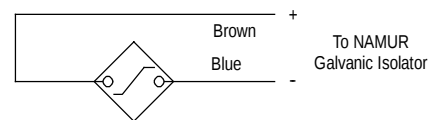
Description	Page Number
Other Cordsets Available	8-2
Terminal Chambers	8-2
Galvanic Isolators	12-5
Intrinsic Safety Wiring Labels	12-8
Mounting Brackets	2-210...2-214
End Caps	2-220
Mounting Nuts	2-221...2-222

Approximate Dimensions [mm (in.)]

Cable Style



Wiring Diagram



Thread Size	Shielded	[mm (in.)]		
		A	B	C
M8 x 1	Y	8.0 (0.31)	30.0 (1.18)	—
	N			5.0 (0.20)
M12 x 1	Y	12.0 (0.47)		—
	N			6.0 (0.24)
M18 x 1	Y	18.0 (0.71)		—
	N			8.0 (0.31)
M30 x 1.5	Y	30.0 (1.18)	40.0 (1.57)	—
	N			12.0 (0.47)

871C 2-Wire NAMUR

Nickel-Plated Brass Barrel, Plastic Face



871C NAMUR
Cable Style
8, 12, 18, 30 mm



871C NAMUR
Micro Quick-Disconnect Style
8, 12, 18, 30 mm

Description

For Allen-Bradley NAMUR style sensors, the sensor input and output conforms to NAMUR specifications (DIN 19 234) allowing these sensors to be used with any approved NAMUR style amplifier/ isolator. Allen-Bradley's NAMUR style sensors are Intrinsically Safe when used with an approved Intrinsically Safe NAMUR style isolator.

The 871C NAMUR style family of sensors can be used in Class I, II, III; Division 1 and 2; Groups A, B, C, D, E, F, and G as well as Zones 0, 1, 2; Groups IIA, IIB, IIC when used with Allen-Bradley's NAMUR style isolators/amplifiers. Installation must be in accordance with the National Electrical Code, ANSI/ISA RP12.6, or per other regulations by authority having jurisdiction over the installation site as appropriate.

Features

- 2-Wire NAMUR operation
- 8, 12, 18, and 30 mm sizes
- Short barrel length
- Shielded and unshielded models
- FM, CSA, and CE Marked for all applicable directives

Specifications

Outputs	NAMUR (conforms to DIN 19 234)
Load Current Target Present	<1 mA
Load Current Target Absent	>3 mA
Operating Voltage	5...15V DC (8.2V DC nom., Ri = 1 kohm, DIN 19 234)
Ripple Voltage	<5%
Repeatability	<10%
Hysteresis	10% typical
Reverse Polarity Protection	Incorporated
False Pulse Protection	Realized in amplifier
Transient Noise Protection	Realized in amplifier
Short Circuit Protection	Realized in amplifier
Overload Protection	Realized in amplifier
Enclosure	NEMA 4, IP67 (IEC529)
Certifications	FM Approved - Class I, II, III; Divisions 1, 2; Groups A, B, C, D, E, F, G CSA Approved - Class I, II, III; Divisions 1, 2; Groups A, B, C, D, E, F, G - Class I; Zone 0, 1, 2; Groups IIC, IIB, IIA CE Marked for all applicable directives
Connections	Cable: 2 m (6.5 ft) length 2 conductor #22 AWG PVC Quick-Disconnect: 4-pin micro style
LED	None
Operating Temperature [C (F)]	-25...60° (-13...140°)
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm amplitude, 3 planes
Housing Material	Nickel-plated brass barrel, plastic face

Correction Factors

Target Material	Correction Factor
Steel	1.0
Stainless Steel	0.7...0.8
Brass	0.4...0.5
Aluminum	0.3...0.4
Copper	0.2...0.3

Entity Parameters

Sensor			Barrier	
V_{max}	16V	$\geq$	V_t	
I_{max}	60 mA	$\geq$	I_t	
C_i	150 nF	$\leq$	C_a	
L_i	200 μ H	$\leq$	L_a	

ATTENTION

Operating parameters must be adhered to.