

Inductive Proximity Sensors  
**871C Analog Output, 3-Wire DC**  
 Plastic Face/Nickel-Plated Brass Barrel



871C Cable Style  
 12, 18, 30mm

### Description

Bulletin 871C inductive proximity sensors are self-contained, solid-state devices designed to sense the presence of metal objects without touching them. This special version provides a 0–10V sourcing analog output proportional to the sensing distance.

This device is enclosed by a plastic face and a nickel-plated brass housing which meets NEMA 1, 2, 3, 4, 12, 13 and IP67 (IEC 529) enclosure standards. The electronic circuitry is potted for protection against shock, vibration and contamination.

This sensor is available in 12, 18 and 30mm diameters with a 2m (6.5ft.) PVC cable connection.

### Features

- 3-wire operation
- 18–30V DC
- Short circuit, overload, reverse polarity, and transient noise protection
- 0–10V sourcing analog output
- CE marked for all applicable directives

### Specifications

	12mm	18mm	30mm
<b>Analog Output</b>	0–10V Sourcing		
<b>Load Current</b>	5mA		
<b>Operating Voltage</b>	18–30V DC		
<b>Repeatability</b>	≤ 1%		
<b>Ripple</b>	10%		
<b>Slew Rate</b>	1.0V/ms	0.7V/ms	0.1V/ms
<b>Δ Output / Δ Distance</b>	0.25mm/V	03.75mm/V	0.875mm/V
<b>Linearity Tolerance</b>	6.25%		
<b>Temperature Tolerance</b>	± 0.3V		
<b>Transient Noise Protection</b>	Incorporated		
<b>Reverse Polarity Protection</b>	Incorporated		
<b>Short Circuit Protection</b>	Incorporated		
<b>Overload Protection</b>	Incorporated		
<b>Enclosure</b>	NEMA 1, 2, 3, 4, 12, 13; IP67 (IEC 529), Nickel-plated brass barrel, plastic face (PBT)		
<b>Connections</b>	Cable: 2m (6.5ft) length 3 conductor PVC		
<b>LED</b>	None		
<b>Operating Temperature</b>	–25°C to +70°C (–13°F to +158°F)		
<b>Shock</b>	30g, 11ms		
<b>Vibration</b>	55Hz, 1mm amplitude, 3 planes		

### 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

# 871C Analog Output, 3-Wire DC

Plastic Face/Nickel-Plated Brass Barrel

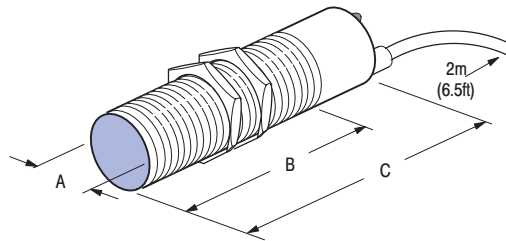
## Product Selection

Barrel Diameter	Linear Sensing Distance mm (inches)	Shielded	Output Configuration		Switching Frequency (Hz)	Catalog Number
			Analog Voltage	Sourcing		
12mm	0.5–2.5 (0.02–0.10)	Y	Analog Voltage	Sourcing	100	871C-D3AP12-E2
18mm	1–4 (0.04–0.16)	Y	Analog Voltage	Sourcing	100	871C-D4AP18-E2
30mm	7–14 (0.27–0.55)	N	Analog Voltage	Sourcing	30	871C-D14AP30-E2

## QD Cordsets and Accessories

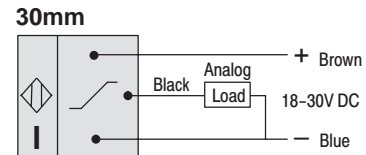
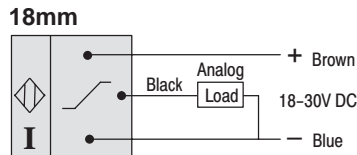
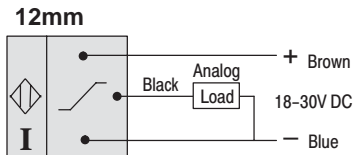
Description	Page Number
Terminal Chambers	R8-2
Mounting Brackets	R2-196 - R2-200
End Caps	R2-206
Mounting Nuts	R2-207 - R2-208

## Dimensions—mm (inches)



Thread Size	mm (inches)		
	A	B	C
12mm	12 (0.47)	70 (2.75)	80 (3.15)
18mm	18 (0.71)		
30mm	30 (1.18)	58 (2.28)	

## Wiring Diagrams



## Nominal Output

