

## 875C 3-Wire DC

Plastic Face/Threaded Nickel-Plated Brass Barrel



875C DC Cable Style  
12, 18, 30mm  
page 4-11



875C DC Micro  
Quick-Disconnect Style  
18 and 30mm  
page 4-12



875C DC Pico  
Quick-Disconnect Style  
18mm  
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### Specifications

	12mm	18mm	30mm
<b>Load Current</b>	300mA	300mA	300mA
<b>Leakage Current</b>	0.3mA	0.1mA	0.1mA
<b>Operating Voltage</b>	10-48V DC	10-48V DC	10-48V DC
<b>Voltage Drop</b>	≤ 2V	≤ 2V	≤ 2V
<b>Current Consumption</b>	≤ 10mA		
<b>Repeatability</b>	≤ 10%		
<b>Hysteresis</b>	≤ 20%		
<b>Transient Noise Protection</b>	Incorporated		
<b>Reverse Polarity Protection</b>	Incorporated		
<b>Short Circuit Protection</b>	Incorporated		
<b>Overload Protection</b>	Incorporated		
<b>Approval</b>	CE marked for all applicable directives		
<b>Enclosure</b>	NEMA 1, 3, 4, 6, 13 and IP67; Nickel-plated brass barrel		
<b>Connections</b>	Cable: 2-meter length 3-conductor PVC Quick-Disconnect: 4-pin micro 3-pin pico		
<b>LEDs</b>	Green: Power Yellow: Output		
<b>Operating Temperature</b>	-25°C to +75°C (-13°F to +167°F)		

#### Correction Factors

Target Material	Correction Factor
Acetone	0.75
Acrylic Resin	0.10 - 0.25
Air	0.0
Alcohol	0.85
Ammonia	0.70 - 0.85
Aniline	0.40
Aqueous Solutions	0.98 - 1.0
Bakelite	0.20
Benzene	0.10
Carbon Dioxide	0.0
Carbon Tetrachloride	0.10
Celluloid	0.15
Cement Powder	0.25
Cereal	0.15 - 0.30
Chlorine Liquid	0.10
Ebonite	0.15
Epoxy Resin	0.15 - 0.35
Ethanol	0.85
Ethylene Glycol	0.93
Fired Ash	0.05
Flour	0.05
Freon R22 & 502 (liquid)	0.35
Gasoline	0.10
Glass	0.20 - 0.55
Glycerine	0.98
Marble	0.50
Melamine Resin	0.25 - 0.55
Mica	0.35
Nitrobenzine	0.93
Nylon	0.20 - 0.30
Oil Saturated Paper	0.25
Paraffin	0.10
Paper	0.10

#### Correction Factors

Target Material	Correction Factor
Perspex	0.15
Petroleum	0.05
Phenol Resin	0.20 - 0.60
Polyacetal	0.20
Polyamide	0.30
Polyester Resin	0.15 - 0.50
Polyethylene	0.10
Polypropylene	0.10
Polystyrene	0.15
Polyvinyl Chloride Resin	0.15
Porcelain	0.25 - 0.40
Powdered Milk	0.20
Press Board	0.10 - 0.30
Quartz Glass	0.20
Rubber	0.15 - 0.90
Salt	0.35
Sand	0.15 - 0.30
Shellac	0.15 - 0.25
Shell Lime	<0.05
Silicon Varnish	0.15
Soybean Oil	0.15
Styrene Resin	0.15
Sugar	0.15
Sulphur	0.15
PTFE	0.10
Toluene	0.10
Transformer Oil	0.10
Turpentine Oil	0.10
Urea Resin	0.30 - 0.45
Vaseline	0.10
Water	1.0
Wood, Dry	0.10 - 0.40
Wood, Wet	0.60 - 0.85

### Features

- Metal, nonmetal solid and liquid sensing capability
- Adjustable sensing distance for 18mm and 30mm models
- 3-wire operation
- 3-conductor, 3-pin or 4-pin connection
- Normally open or normally closed output
- Short circuit, overload, reverse polarity, and transient noise protection
- CE marked for all applicable directives

Allen-Bradley Motors

**Product Selection**

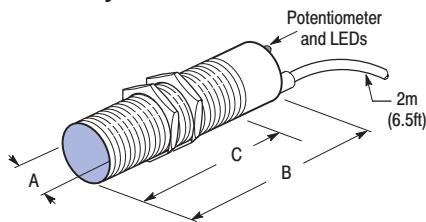
Barrel Dia. & Type	Nominal Sensing Distance mm (in)	Shielded	Output Configuration		Switching Frequency (Hz)	Catalog Number		
						Cable Style	Micro QD Style	Pico QD Style
12mm Threaded	2.5 (0.09)	Y	N.O.	PNP	100	875C-M2NP12-A2	—	—
18mm Threaded	1 (0.04) to 5 (0.20)			NPN		875C-M5NP18-A2	—	875C-M5NP18-P3
			N.C.	PNP		875C-M5NN18-A2	—	875C-M5NN18-P3
				NPN		875C-M5CP18-A2	—	875C-M5CP18-P3
			30mm Threaded	2 (0.08) to 10 (0.39)		N.O.	PNP	875C-M5CN18-A2
NPN	875C-M10NP30-A2						875C-M10NP30-D4	—
N.C.	PNP				875C-M10NN30-A2	875C-M10NN30-D4	—	
	NPN				875C-M10CP30-A2	875C-M10CP30-D4	—	
						875C-M10CN30-A2	875C-M10CN30-D4	—
Recommended Standard QD Cordset (-2 = 2m (6.5ft))						889D-F4AC-2	889P-F3AB-2	

**QD Cordsets and Accessories**

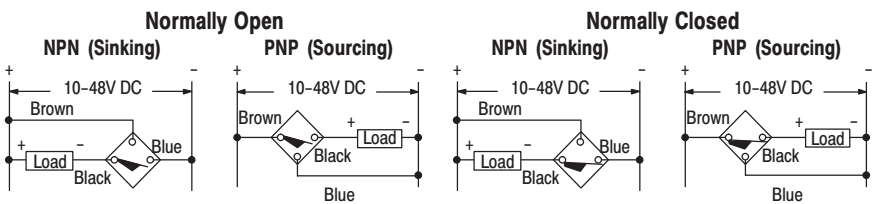
Description	Page Number
Mounting Brackets	2-186 - 2-190
Mounting Nuts	2-197 - 2-198
Terminal Chambers	7-63
Other Cordsets Available	7-35, 7-88

**Dimensions—mm (inches)**

**Cable Style**



**Wiring Diagram**



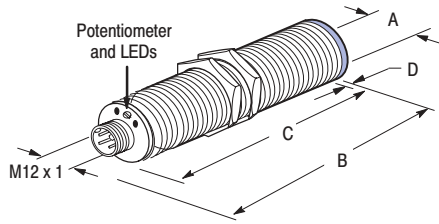
Thread Size	mm (inches)		
	A	B	C
M12 x 1	12.0 (0.47)	50.0 (1.96)	42.0 (1.65)
M18 x 1	18.0 (0.71)	52.0 (2.04)	47.4 (1.87)
M30 x 1.5	30.0 (1.18)	53.0 (2.08)	53.0 (2.08)

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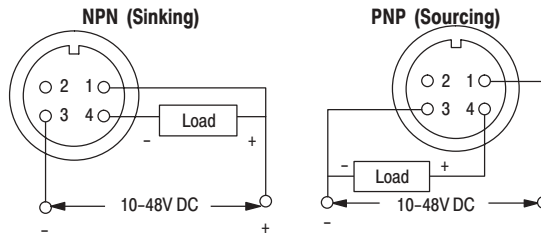
## Dimensions—mm (inches)

Micro QD Style



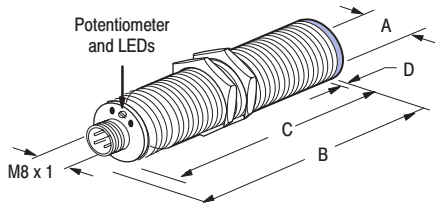
## Wiring Diagram

Normally Open or Normally Closed

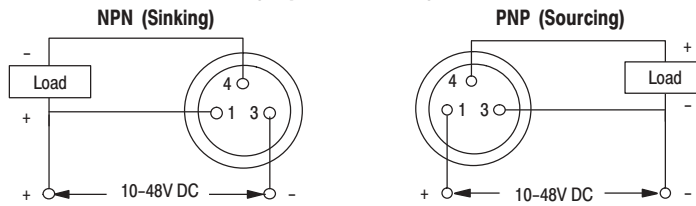


Thread Size	mm (inches)			
	A	B	C	D
M30 x 1.5	30.0 (1.18)	66.0 (2.60)	53.0 (2.08)	1.0 (0.04)

Pico QD Style



Normally Open or Normally Closed



Thread Size	mm (inches)			
	A	B	C	D
M18 x 1	18.0 (0.71)	61.5 (2.42)	52.0 (2.04)	1.0 (0.04)