

## Bulletin 873P Analog or Discrete Output

Plastic Barrel



873P Analog Output  
18mm



873P Discrete Output  
30mm



### Specifications

	Discrete	Analog Current	Analog Voltage
<b>Output Configuration</b>	Normally Open, PNP	4 to 20mA	0 to 10V DC
<b>Load Current</b>	<500mA	—	—
<b>Leakage Current</b>	<0.5mA	—	—
<b>Current Consumption</b>	< 35mA		
<b>Operating Voltage</b>	18 to 30V DC		
<b>Voltage Drop</b>	< 3.5V DC	—	—
<b>Repeatability</b>	0.2%		
<b>Hysteresis</b>	2.5% typical	—	—
<b>Linearity</b>	—	± 0.3%	
<b>Ultrasonic Frequency</b>	130, 180, 300kHz		
<b>Ultrasonic Beam Angle</b>	8°		
<b>Short Circuit Protection</b>	Incorporated		
<b>Overload Protection</b>	Incorporated		
<b>False Pulse Protection</b>	Incorporated		
<b>Transient Noise Protection</b>	Incorporated		
<b>Reverse Polarity Protection</b>	Incorporated		
<b>Approvals</b>	cULus listed and CE marked for all applicable directives		
<b>Housing Material</b>	Plastic - PBT		
<b>Enclosure Rating</b>	IP67		
<b>Connection</b>	Micro quick-disconnect (18mm discrete models have 12 inch pigtail)		
<b>Output LED</b>	Yellow	—	—
<b>Adjustment</b>	Potentiometer	—	—
<b>Operating Temperature</b>	-15 to 70° C (5 to 158° F)		
<b>Shock</b>	30g, 11ms		
<b>Vibration</b>	55Hz, 1mm amplitude, 3 planes		

### Description

Bulletin 873P Ultrasonic Sensors are self-contained solid-state devices designed for noncontact sensing of solid and liquid objects. They are available in 18mm and 30mm barrel diameters that are constructed from PBT plastic and meet IP67 enclosure standards. The electronic circuitry is potted to protect against shock, vibration, and contamination.

These sensors are available with either analog or discrete output types and three different sensing ranges. Analog model selection includes 4–20 mA or 0–10V DC outputs. Discrete models have a normally open PNP output and a potentiometer for adjusting the sensing range to ignore background targets. Bulletin 873P ultrasonic sensors have full electrical protections including short circuit, overload, false pulse, transient noise and reverse polarity.

### Features

- Sensing ranges from 100mm to 2500mm
- Analog output models (4–20mA, 0–10V DC)
- Discrete output models (normally open, PNP)
- Plastic barrel housing
- Adjustable sensing distance (discrete models)
- Short circuit, overload, false pulse, transient noise and reverse polarity protection
- Hold/Synchronize function to reduce crosstalk
- cULus listed and CE marked for all applicable directives

### QD Cordsets and Accessories

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# 873P Analog or Discrete Output, Micro QD

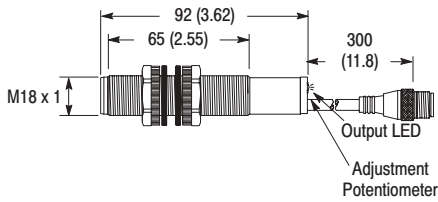
Plastic Barrel

## Selection Guide

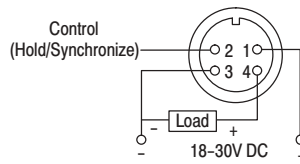
Barrel Diameter	Sensing Range—mm (inches)	Output Configuration	Switching Frequency (Hz)	Connection	Catalog Number
18	100 (3.94) to 600 (23.62)	Normally Open PNP	20	Micro QD Pigtail	873P-DBNP1-F4
	200 (7.87) to 1500 (59.06)		10		873P-DBNP2-F4
30	300 (11.81) to 2500 (98.43)		5		873P-DCNP1-D5
18	100 (3.94) to 600 (23.62)	4 to 20mA	—	Micro QD	873P-DBAC1-D4
	200 (7.87) to 1500 (59.06)				873P-DBAC2-D4
30	300 (11.81) to 2500 (98.43)				873P-DCAC1-D5
18	100 (3.94) to 600 (23.62)	0 to 10V DC	—	Micro QD	873P-DBAV1-D4
	200 (7.87) to 1500 (59.06)				873P-DBAV2-D4
30	300 (11.81) to 2500 (98.43)				873P-DCAV1-D5
Recommended standard QD cordset (-2 = 2m (6.5ft))					889D-F4AC-2

## Dimensions—mm (inches)

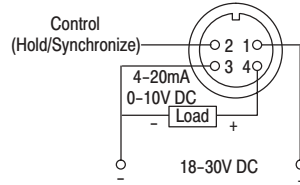
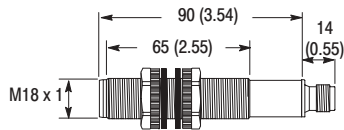
### 18mm Discrete



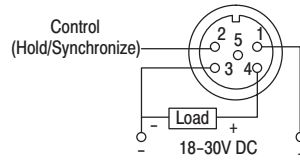
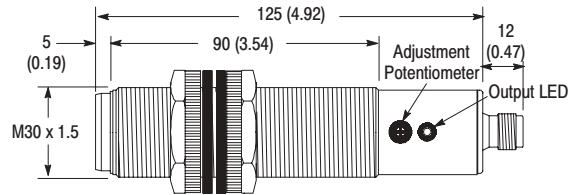
## Wiring Diagrams



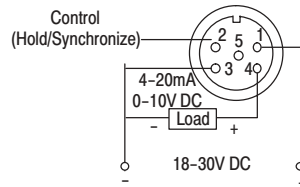
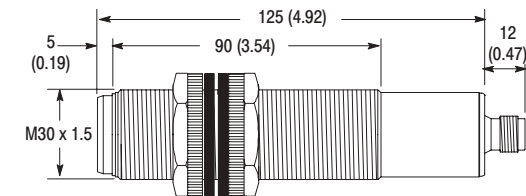
### 18mm Analog



### 30mm Discrete



### 30mm Analog



# Bulletin 873P Analog or Discrete Output, Micro QD

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## Control Pin

### Normal Operation

For normal operation do not connect the control pin. Hold and synchronize features can be used for special applications.

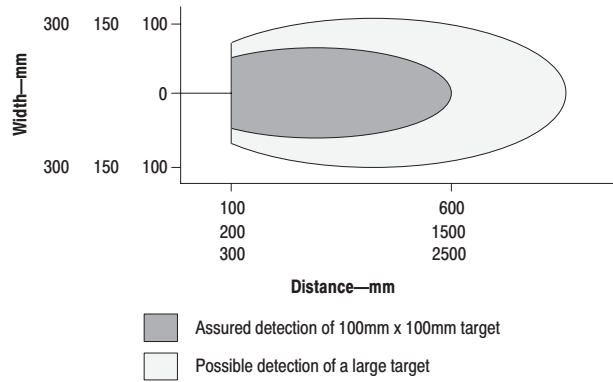
### Hold

To inhibit sensor operation and hold the output to its present state connect the control pin (2) to 0V DC. The sensor will not transmit or receive ultrasonic pulses until this voltage is removed from the control pin. Switching output models will be latched and analog output models will hold their value during this period.

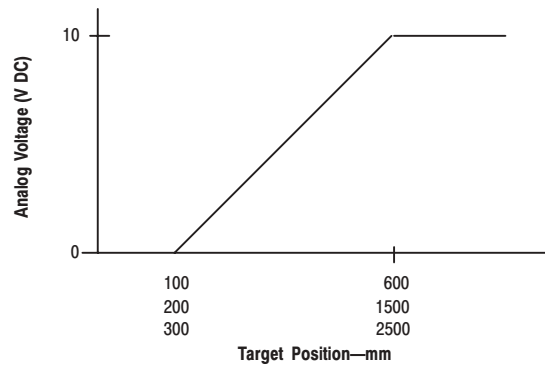
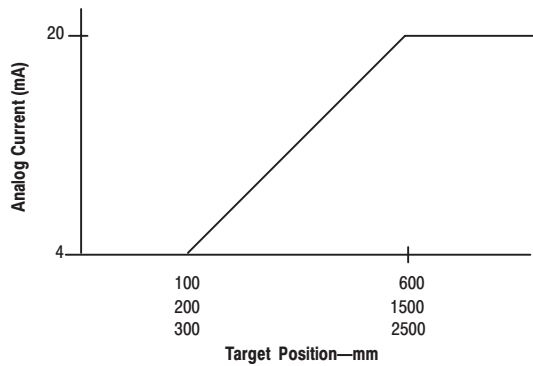
### Synchronize

To synchronize the transmission of ultrasonic pulses between several sensors connect the control pins together. This feature reduces the potential for sensor crosstalk between models that are mounted in close proximity to one another.

## Beam Pattern



## Analog Output



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