

# PB Series Inductive Proximity Sensors

## Nickel-plated Brass - DC



**PBT-AN-1H**    **PBT-AN-2H**

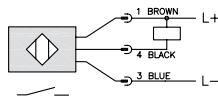
- Low cost/high performance
- Twelve models available
- IP67 rated
- LED status indicators
- M12 quick-disconnect; purchase cable separately
- Lifetime warranty

Basic Series Inductive Prox Selection Chart								
Part Number	Price	Sensing Range	Housing	Output State	Logic	Connection	Wiring	Dimensions
<b>M12 Models</b>								
<b>PBM-AN-1H</b>	\$14.00	2 mm (0.08 in)	Shielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 1
<b>PBM-AP-1H</b>	\$14.00				PNP	M12 (12 mm) connector	Diagram 2	
<b>PBM-AN-2H</b>	\$14.00	4 mm (0.157 in)	Unshielded		NPN	M12 (12 mm) connector	Diagram 1	
<b>PBM-AP-2H</b>	\$14.00				PNP	M12 (12 mm) connector	Diagram 2	
<b>M18 Models</b>								
<b>PBK-AN-1H</b>	\$14.50	5 mm (0.197 in)	Shielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 2
<b>PBK-AP-1H</b>	\$14.50				PNP	M12 (12 mm) connector	Diagram 2	
<b>PBK-AN-2H</b>	\$14.50	8 mm (0.315 in)	Unshielded		NPN	M12 (12 mm) connector	Diagram 1	
<b>PBK-AP-2H</b>	\$14.50				PNP	M12 (12 mm) connector	Diagram 2	
<b>M30 Models</b>								
<b>PBT-AN-1H</b>	\$17.00	10 mm (0.394 in)	Shielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 3
<b>PBT-AP-1H</b>	\$17.00				PNP	M12 (12 mm) connector	Diagram 2	
<b>PBT-AN-2H</b>	\$17.00	15 mm (0.590 in)	Unshielded		NPN	M12 (12 mm) connector	Diagram 1	
<b>PBT-AP-2H</b>	\$17.00				PNP	M12 (12 mm) connector	Diagram 2	

## Wiring diagrams

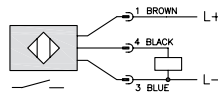
**Diagram 1**

NPN Output



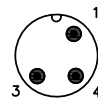
**Diagram 2**

PNP Output



**Connector**

M12 connector



# PB Series Inductive Proximity Sensors

PB Series Specifications	M12 Models		M18 Models		M30 Models	
<b>Mounting Type</b>	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded
<b>Nominal Sensing Distance</b>	2 mm (0.08 in)	4 mm (0.157 in)	5 mm (0.197 in)	8 mm (0.315 in)	10 mm (0.394 in)	15 mm (0.590 in)
<b>Operating Distance</b>	NA					
<b>Material Correction Factors</b>	See the <a href="#">Material influence table</a>					
<b>Output Type</b>	NPN or PNP, NO only					
<b>Operating Voltage</b>	15 to 30 VDC					
<b>No-load Supply Current</b>	<15 mA					
<b>Operating (Load) Current</b>	100 mA					
<b>Off-state (Leakage) Current</b>	<0.1 mA					
<b>Voltage Drop</b>	<2.5 V					
<b>Switching Frequency</b>	800Hz		400Hz	300Hz		200Hz
<b>Differential Travel (% of Nominal Distance)</b>	NA					
<b>Repeat Accuracy</b>	NA					
<b>Ripple</b>	NA					
<b>Time Delay Before Availability (tv)</b>	NA					
<b>Reverse Polarity Protection</b>	Yes					
<b>Short-circuit Protection</b>	Yes, pulsed					
<b>Operating Temperature</b>	-25° to 70°C (-13° to 158°F)					
<b>Protection Degree (DIN 40050)</b>	IEC IP67					
<b>Indication/Switch Status</b>	Yellow (output energized)					
<b>Housing Material</b>	Housing: brass, nickel-plated; Lock nuts: brass					
<b>Sensing Face Material</b>	Polybutylene Terephthalate (PBT)					
<b>Shock/Vibration</b>	See <a href="#">Proximity Sensor Terminology</a>					
<b>Tightening Torque</b>	7.0 Nm (5.16 lb-ft)		35.0 Nm (25.8 lb-ft)		50.0 Nm (36.8 lb-ft)	
<b>Weight</b>	1.70 g (0.06 oz)		2.83 g (0.10 oz)		8.50 g (0.30 oz)	5.70 g (0.20 oz)
<b>Connectors</b>	M12 connector. 2 lock nuts included					
<b>Agency Approvals</b>	cULus file E328811, CE, RoHS					

## Dimensions

mm [inches]

Figure 1

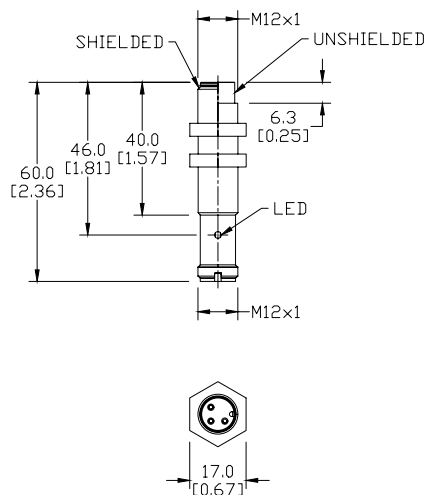


Figure 2

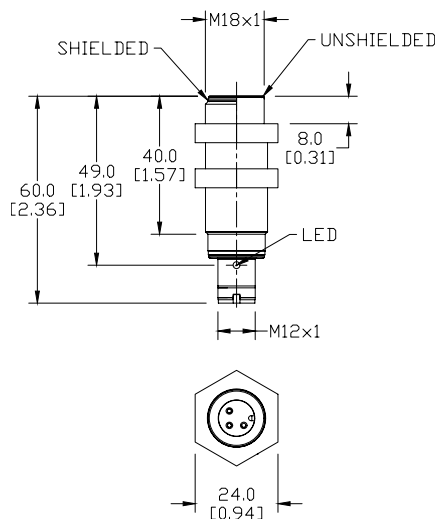
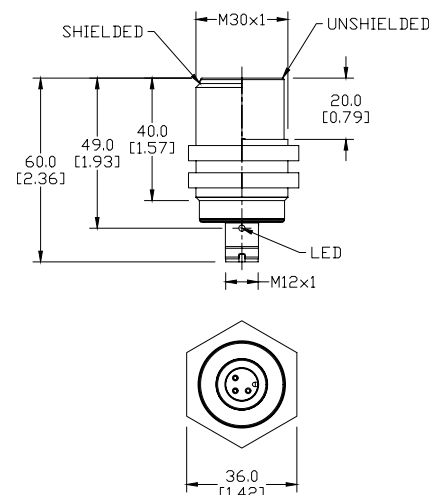


Figure 3



# Accessories for 30mm Sensors

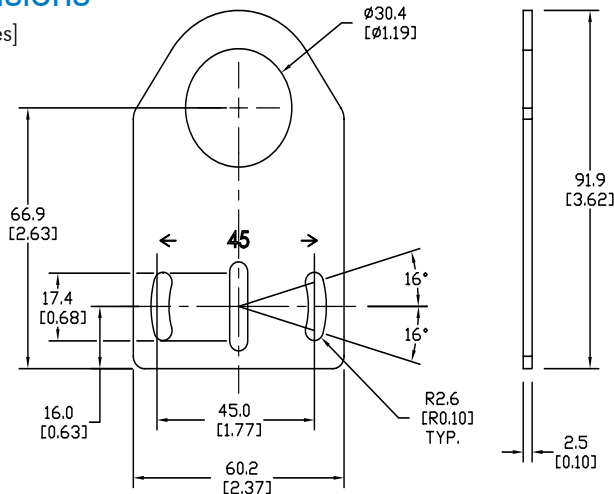
## Axial Mounting Bracket

Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for right-beam-angle-adaptor sensors. Hexagonal nuts not included.

Accessories for 30mm Sensors			
Part Number	Price	Description	Weight [lb]
ST30A	\$2.00	Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. 1/pk.	0.18

### Dimensions

mm [inches]



ST30A

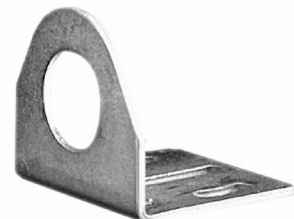
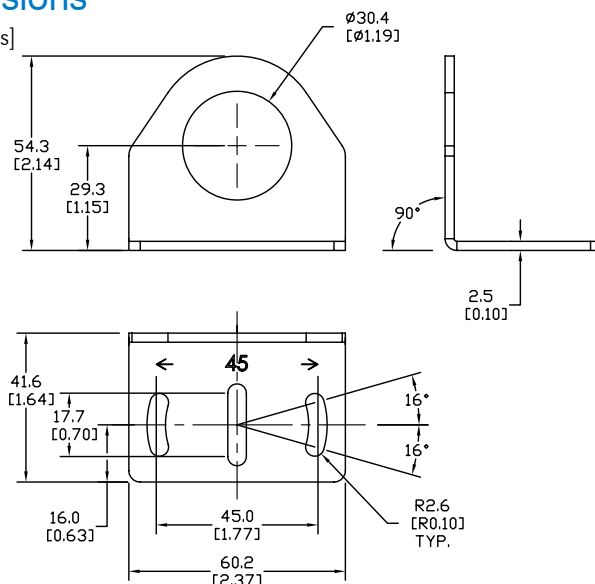
## Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

Accessories for 30mm Sensors			
Part Number	Price	Description	Weight [lb]
ST30C	\$2.00	Mounting bracket, right angle, zinc-plated steel. For use with 30mm sensors. 1/pk.	0.18

### Dimensions

mm [inches]



ST30C

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# Accessories for 30mm Sensors

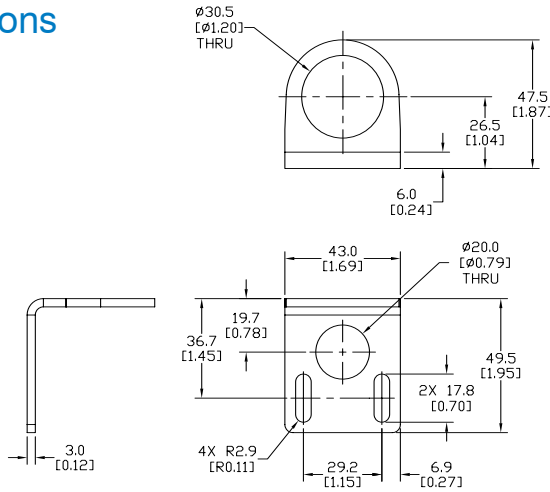
## Right-angle Mounting Bracket

Mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.

Accessories for FW Series Sensors			
Part Number	Price	Description	Weight [lb]
<b>ST30C6W</b>	\$2.50	Mounting bracket, right angle, 304 stainless steel. For use with 30mm sensors.	0.15

### Dimensions

mm [inches]



**ST30C6W**

## Right-angle Swivel Mounting Systems

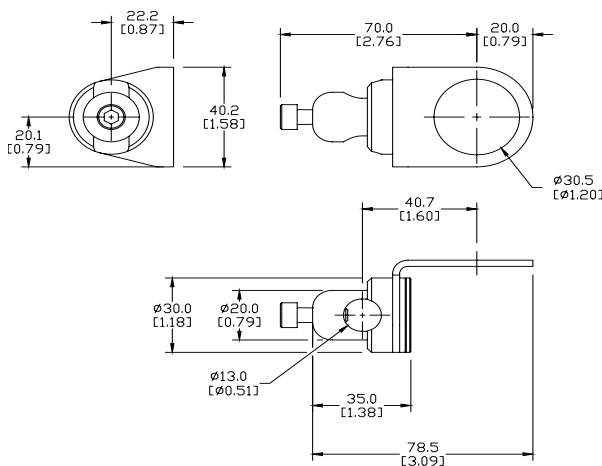
Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

Accessories for 30mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
<b>OPT2118</b>	\$9.25	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 30mm sensors.	Aluminum	304 Stainless Steel	0.18
<b>OPT2119</b>	\$16.50	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 30mm sensors.	304 Stainless Steel	304 Stainless Steel	0.30

**Note:** 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).

### Dimensions

mm [inches]



**OPT2118, OPT2119**

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings

# Mounting Rods

## Mounting Rods

304 Stainless steel rods for mounting swivel brackets OPT2112 - OPT2127. Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.

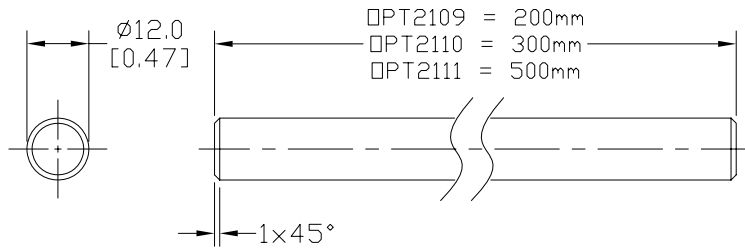
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
<b>OPT2109</b>	\$10.50	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
<b>OPT2110</b>	\$12.50	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
<b>OPT2111</b>	\$16.50	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	0.98



**OPT2109, OPT2110, OPT2111**

## Dimensions

mm [inches]



## Right-angle Mounting Bracket

Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.

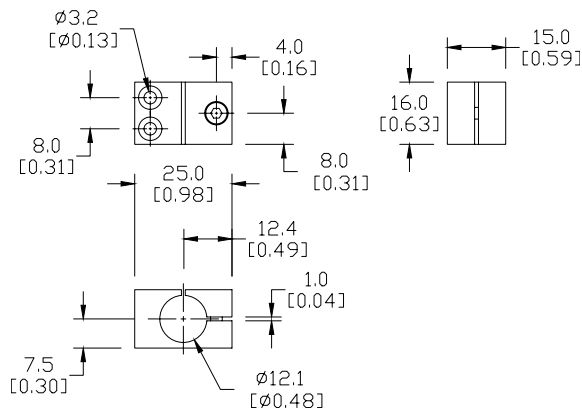
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
<b>OPT2108</b>	\$12.50	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



**OPT2108**

## Dimensions

mm [inches]



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