

# PNT Series Inductive Proximity Sensors

## M30 (30mm) Bronze-plated Brass - DC



- Low cost/high performance
- 32 models available
- Short and regular body styles
- IP65 / IP66 / IP67 / IP68 / IP69K rated
- Axial cable / M12 quick-disconnect; purchase cable separately
- Lifetime warranty



**PNT Series Inductive Prox Selection Chart (Short Body)**

Part Number	Price	Sensing Range	Housing	Output State	Logic	Connection	Wiring	Dimensions
<b>M30 Models (short body)</b>								
<b>PNT6-AN-3A</b>	\$25.00	15mm (0.59 in)	Shielded	NO	NPN	2m axial cable	Diagram 1	Figure 9
<b>PNT6-AN-3H</b>	\$25.00	15mm (0.59 in)	Shielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 10
<b>PNT6-AN-4A</b>	\$25.00	22mm (0.87 in)	Unshielded	NO	NPN	2m axial cable	Diagram 1	Figure 9
<b>PNT6-AN-4H</b>	\$25.00	22mm (0.87 in)	Unshielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 10
<b>PNT6-AP-3A</b>	\$25.00	15mm (0.59in)	Shielded	NO	PNP	2m axial cable	Diagram 2	Figure 9
<b>PNT6-AP-3H</b>	\$25.00	15mm (0.59in)	Shielded	NO	PNP	M12 (12 mm) connector	Diagram 2	Figure 10
<b>PNT6-AP-4A</b>	\$25.00	22mm (0.87 in)	Unshielded	NO	PNP	2m axial cable	Diagram 2	Figure 9
<b>PNT6-AP-4H</b>	\$25.00	22mm (0.87 in)	Unshielded	NO	PNP	M12 (12 mm) connector	Diagram 2	Figure 10
<b>PNT6-CN-3A</b>	\$25.00	15mm (0.59 in)	Shielded	NC	NPN	2m axial cable	Diagram 3	Figure 9
<b>PNT6-CN-3H</b>	\$25.00	15mm (0.59 in)	Shielded	NC	NPN	M12 (12 mm) connector	Diagram 3	Figure 10
<b>PNT6-CN-4A</b>	\$25.00	22mm (0.87 in)	Unshielded	NC	NPN	2m axial cable	Diagram 3	Figure 9
<b>PNT6-CN-4H</b>	\$25.00	22mm (0.87 in)	Unshielded	NC	NPN	M12 (12 mm) connector	Diagram 3	Figure 10
<b>PNT6-CP-3A</b>	\$25.00	15mm (0.59 in)	Shielded	NC	PNP	2m axial cable	Diagram 4	Figure 9
<b>PNT6-CP-3H</b>	\$25.00	15mm (0.59 in)	Shielded	NC	PNP	M12 (12 mm) connector	Diagram 4	Figure 10
<b>PNT6-CP-4A</b>	\$25.00	22mm (0.87 in)	Unshielded	NC	PNP	2m axial cable	Diagram 4	Figure 9
<b>PNT6-CP-4H</b>	\$25.00	22mm (0.87 in)	Unshielded	NC	PNP	M12 (12 mm) connector	Diagram 4	Figure 10

**PNT Series Inductive Prox Selection Chart (Regular Body)**

Part Number	Price	Sensing Range	Housing	Output State	Logic	Connection	Wiring	Dimensions
<b>M30 Models (regular body)</b>								
<b>PNT-AN-3A</b>	\$26.00	15mm (0.59 in)	Shielded	NO	NPN	2m axial cable	Diagram 1	Figure 11
<b>PNT-AN-3H</b>	\$26.00	15mm (0.59 in)	Shielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 12
<b>PNT-AN-4A</b>	\$26.00	22mm (0.87 in)	Unshielded	NO	NPN	2m axial cable	Diagram 1	Figure 11
<b>PNT-AN-4H</b>	\$26.00	22mm (0.87 in)	Unshielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 12
<b>PNT-AP-3A</b>	\$26.00	15mm (0.59 in)	Shielded	NO	PNP	2m axial cable	Diagram 2	Figure 11
<b>PNT-AP-3H</b>	\$26.00	15mm (0.59 in)	Shielded	NO	PNP	M12 (12 mm) connector	Diagram 2	Figure 12
<b>PNT-AP-4A</b>	\$26.00	22mm (0.87 in)	Unshielded	NO	PNP	2m axial cable	Diagram 2	Figure 11
<b>PNT-AP-4H</b>	\$26.00	22mm (0.87 in)	Unshielded	NO	PNP	M12 (12 mm) connector	Diagram 2	Figure 12
<b>PNT-CN-3A</b>	\$26.00	15mm (0.59 in)	Shielded	NC	NPN	2m axial cable	Diagram 3	Figure 11
<b>PNT-CN-3H</b>	\$26.00	15mm (0.59 in)	Shielded	NC	NPN	M12 (12 mm) connector	Diagram 3	Figure 12
<b>PNT-CN-4A</b>	\$26.00	22mm (0.87 in)	Unshielded	NC	NPN	2m axial cable	Diagram 3	Figure 11
<b>PNT-CN-4H</b>	\$26.00	22mm (0.87 in)	Unshielded	NC	NPN	M12 (12 mm) connector	Diagram 3	Figure 12
<b>PNT-CP-3A</b>	\$26.00	15mm (0.59 in)	Shielded	NC	PNP	2m axial cable	Diagram 4	Figure 11
<b>PNT-CP-3H</b>	\$26.00	15mm (0.59 in)	Shielded	NC	PNP	M12 (12 mm) connector	Diagram 4	Figure 12
<b>PNT-CP-4A</b>	\$26.00	22mm (0.87 in)	Unshielded	NC	PNP	2m axial cable	Diagram 4	Figure 11
<b>PNT-CP-4H</b>	\$26.00	22mm (0.87 in)	Unshielded	NC	PNP	M12 (12 mm) connector	Diagram 4	Figure 12

# PN Series Inductive Proximity Sensors

PN Series Specifications	M12 Models (PNM)	M18 Models (PNK)	M30 Models (PNT)
<b>Mounting Type</b>	Shielded or Unshielded		
<b>Nominal Sensing Distance</b>	Shielded: 4mm (0.16 in) Unshielded: 7mm (0.28 in)	Shielded: 8mm (0.31 in) Unshielded: 12mm (0.47 in)	Shielded: 15mm (0.6 in) Unshielded: 22mm (0.79 in)
<b>Operating Distance</b>	Shielded: 0 to 3.24 mm Unshielded: 0 to 5.67 mm	Shielded: 0 to 6.48 mm Unshielded: 0 to 9.72 mm	Shielded: 0 to 12.15 mm Unshielded: 0 to 17.82 mm
<b>Material Correction Factors</b>	See the <a href="#">Material influence table</a>		
<b>Output Type</b>	NPN or PNP, NO or NC		
<b>Operating Voltage</b>	10 to 30 VDC		
<b>No-load Supply Current</b>	<10 mA		
<b>Operating (Load) Current</b>	100mA		
<b>Off-state (Leakage) Current</b>	For 3-wire (< 50µ)		
<b>Voltage Drop</b>	<2.5 V		
<b>Switching Frequency</b>	700Hz	Shielded 400Hz; Unshielded 300Hz	100Hz
<b>Differential Travel (% of Nominal Distance)</b>	3 . . . 15		
<b>Repeat Accuracy</b>	< 10%		
<b>Ripple</b>	NA		
<b>Time Delay Before Availability (tv)</b>	≤ 300 mA		
<b>Reverse Polarity Protection</b>	Yes		
<b>Short-circuit Protection</b>	Yes, pulsed		
<b>Operating Temperature</b>	-40° to 85°C (-40° to 185°F)		
<b>Protection Degree (DIN 40050)</b>	IP65, IP66, IP67, IP68, IP69K		
<b>Indication/Switch Status</b>	Yellow (output energized), 1 LED prewired/4 LEDs for quick disconnect		
<b>Housing Material</b>	Housing: brass, bronze-plated; PEI; 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>	Connector type: 7Nm (1.57 lb-ft) Cable type: 12Nm (2.70 lb-ft)	25 Nm (5.62 lb-ft)	50Nm (11.21 lb-ft)
<b>Weight</b>	NA		
<b>Connectors</b>	M12 connector/2m axial cable. 2 lock nuts included		
<b>Agency Approvals</b>	M12 Connector versions cULus file E328811, CE, RoHS; Cable versions UL file E328811, CE, RoHS		

## Wiring diagrams

Diagram 1

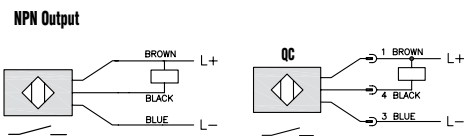
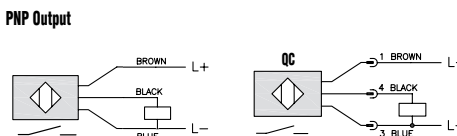


Diagram 2



Connector

M12 connector

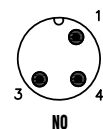


Diagram 3

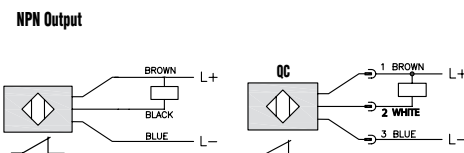
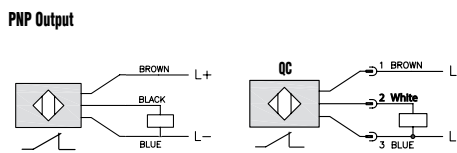
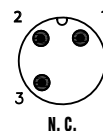


Diagram 4



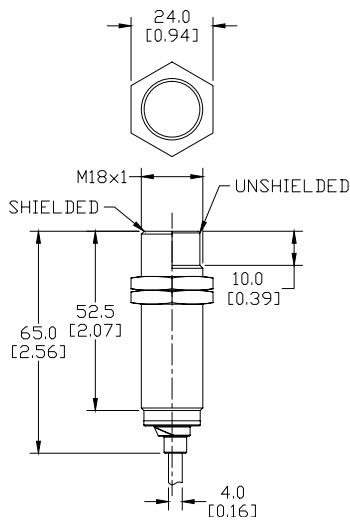
M12 connector



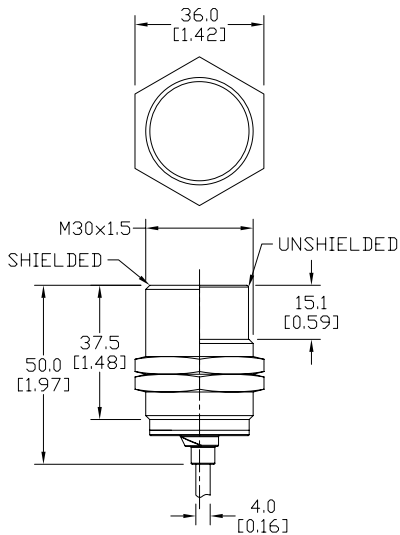
\*Note: Use M12 4 connector cable. M12 3 connector cable will not work for normally closed units.

# PN Series Inductive Proximity Sensors

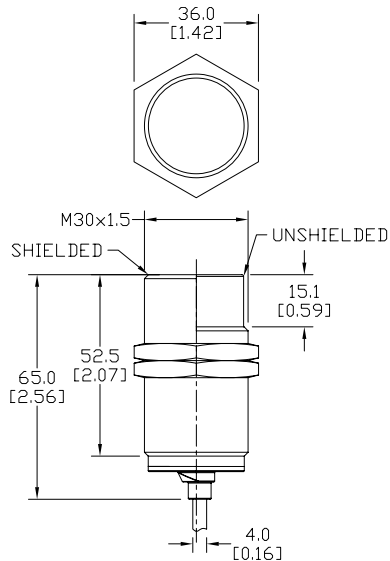
**Figure 7**



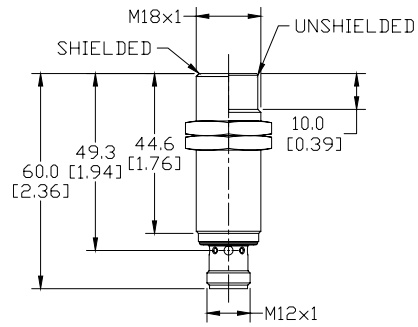
**Figure 9**



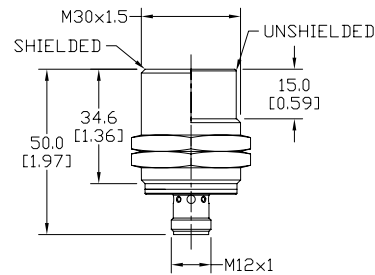
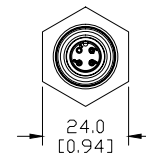
**Figure 11**



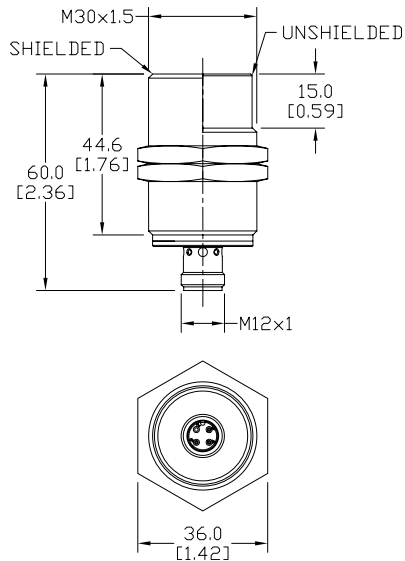
**Figure 8**



**Figure 10**



**Figure 12**



# Accessories for 30mm Sensors

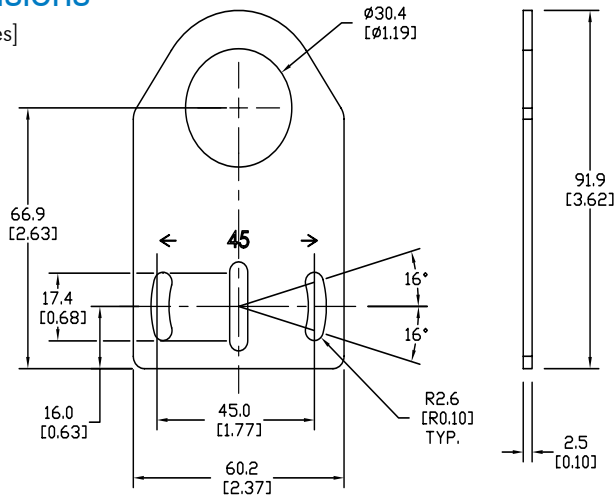
## Axial Mounting Bracket

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	\$2.25	Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. 1/pk.	0.18

### Dimensions

mm [inches]



ST30A

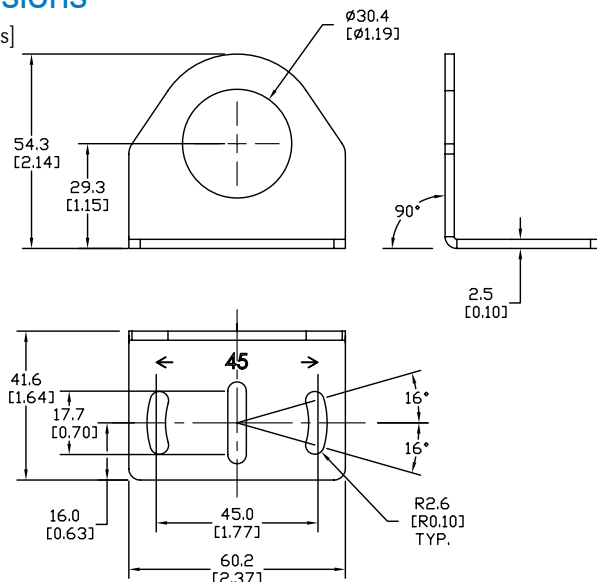
## Right-angle Mounting Bracket

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	\$2.25	Mounting bracket, right angle, zinc-plated steel. For use with 30mm sensors. 1/pk.	0.18

### Dimensions

mm [inches]



ST30C

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

# Accessories for 30mm Sensors

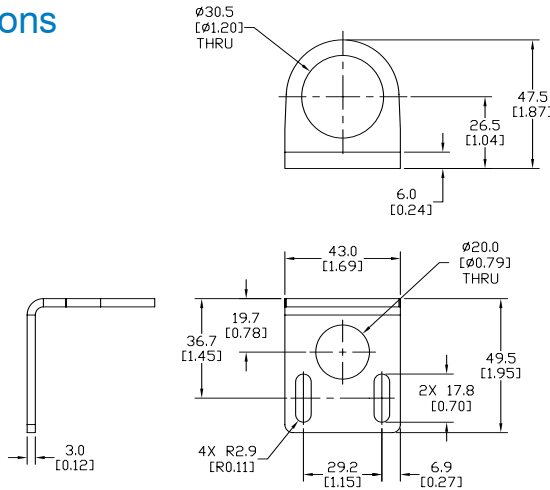
## Right-angle Mounting Bracket

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

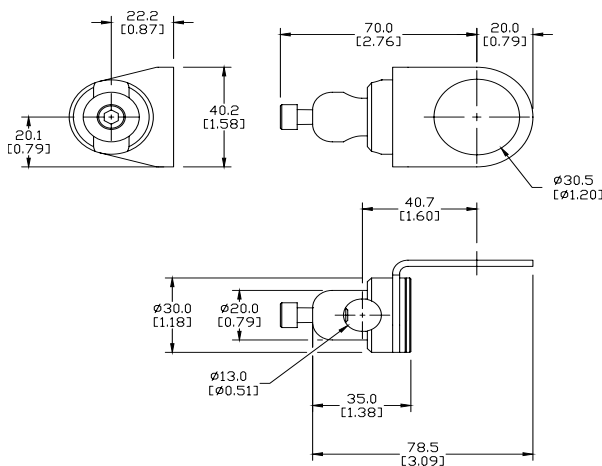
Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

Accessories for 30mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
<b>OPT2118</b>	\$9.00	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>	\$16.00	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.

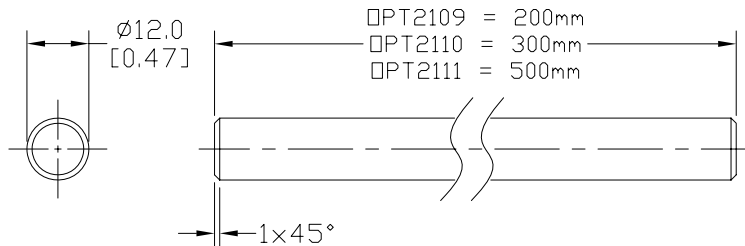
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
<b>OPT2109</b>	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
<b>OPT2110</b>	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
<b>OPT2111</b>	\$16.00	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	0.98



**OPT2109, OPT2110, OPT2111**

## Dimensions

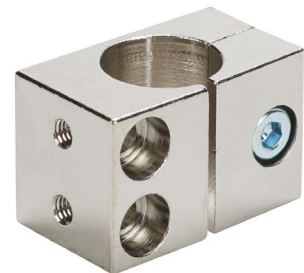
mm [inches]



## Right-angle Mounting Bracket

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

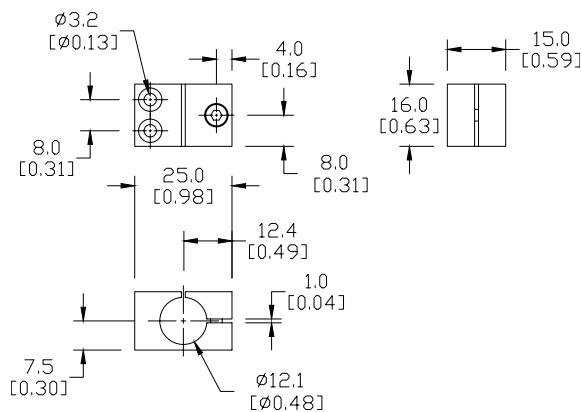
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
<b>OPT2108</b>	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



**OPT2108**

## Dimensions

mm [inches]



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