

# PTW Series Inductive Proximity Sensors



## M30 (30 mm) stainless steel - DC

- Eight low cost, high performance models available
- Metal sensing face for extreme environments
- LED status indicators are visible at a wide angle.
- One-piece stainless design
- Axial cable or M12 quick-disconnect models
- Purchase cable separately (for quick-disconnect models).
- Lifetime warranty

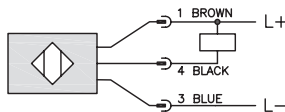


PTW Series M30 DC SS Inductive Prox Selection Chart								
Part Number	Price	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
<b>Extended Distance</b>								
<i>PTW-AN-2H</i>		25 mm (0.984 in)	Non-flush	N.O.	NPN	M12 (12mm) connector	Diagram 1	Figure 1
<i>PTW-AP-2H</i>					PNP	M12 (12mm) connector	Diagram 2	Figure 1
<b>Triple Distance</b>								
<i>PTW-AN-5A</i>		20 mm (0.787 in)	Flush	N.O.	NPN	2m [6.56 ft] axial cable	Diagram 1	Figure 2
<i>PTW-AP-5A</i>					PNP	2m [6.56 ft] axial cable	Diagram 2	Figure 2
<i>PTW-AN-5H</i>					NPN	M12 (12mm) connector	Diagram 1	Figure 3
<i>PTW-AP-5H</i>					PNP	M12 (12mm) connector	Diagram 2	Figure 3

## Wiring diagrams

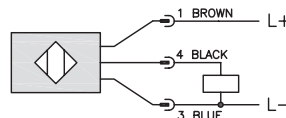
### Diagram 1

NPN Output



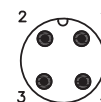
### Diagram 2

PNP Output



### Connector

M12 connector



*Note: Pin 2 is not present on some models.*

# PTW Series Inductive Proximity Sensors

Specifications	PTW-A*-1H	PTW-A*-2H	PTW-A*-5*
<b>Mounting Type</b>	Flush	Non-flush	Flush
<b>Nominal Distance</b>	10mm (0.394 in)	25mm (0.984 in)	20mm (0.787 in)
<b>Operating Distance</b>	0 to 8.1 mm (0.32 in)	0 to 24.3 mm (0.96 in)	NA
<b>Material Correction Factors</b>	See the <a href="#">Material influence table</a>		
<b>Output Type</b>	NPN or PNP, N.O. only		
<b>Operating Voltage</b>	10 to 36 VDC		10 to 30 VDC
<b>No-load Supply Current</b>	20mA	25mA	10mA
<b>Operating (Load) Current</b>	100mA		≤ 200 mA
<b>Off-state (Leakage) Current</b>	< 1 mA		≤ 100 μA
<b>Voltage Drop</b>	< 2.5V		≤ 2.0V
<b>Switching Frequency</b>	50Hz	250Hz	100Hz
<b>Differential Travel (% of Nominal Distance)</b>	≤ 20%		≤ 15%
<b>Repeat Accuracy</b>	Not available		≤ 5%
<b>Ripple</b>	Not available		≤ 20%
<b>Time Delay Before Availability (tv)</b>	negligible	Not available	≤ 10ms
<b>Reverse Polarity Protection</b>	Yes		
<b>Short-circuit Protection</b>	Yes (non-latching)		
<b>Operating Temperature</b>	-25° to 70°C (-13° to 158°F)	0° to 100°C (32° to 212°F)	-25° to 70°C (-13° to 158°F)
<b>Protection Degree (DIN 40050)</b>	IEC IP67, IP68 (coolant)	IEC IP65/67/68/69K	IEC IP67 (connector) IP68 (cable)
<b>Indication/Switch Status</b>	Yellow (4 x 90°)		Yellow (N.O. output energized)
<b>Housing Material</b>	Stainless steel		Stainless steel
<b>Sensing Face Material</b>	Stainless steel		Stainless steel
<b>Shock Resistance / Vibration Resistance</b>	See <a href="#">Proximity Sensor Terminology</a>		
<b>Tightening Torque</b>	80Nm (50 lb-in)		15Nm (111 lb-in)
<b>Weight</b>	145g (5.11 oz)		114g (4.02 oz) / 50 g (1.76 oz)
<b>Connections</b>	M12 connector, 2 lock nuts included		2m (6.5') axial cable or M12 connector
<b>Agency Approvals</b>	cULus, UL file E328811, CE, RoHS		UL file E328811, CE, RoHS

Note: <sup>1</sup> Fully submersible to 290 psi (20 bar).

## Dimensions

mm [inches]

Figure 1

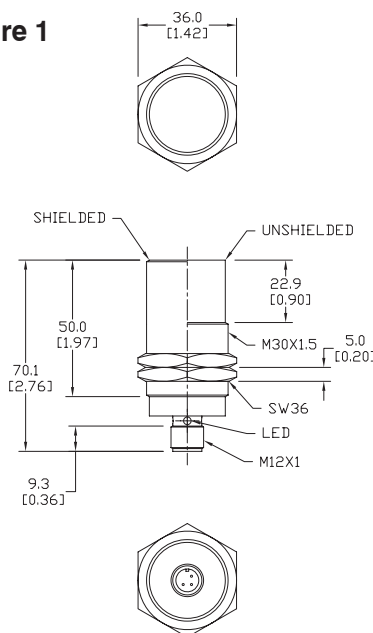


Figure 2

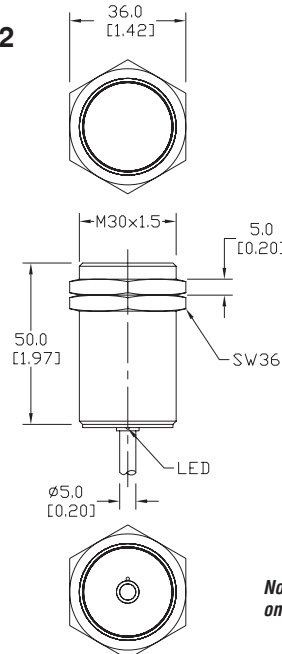
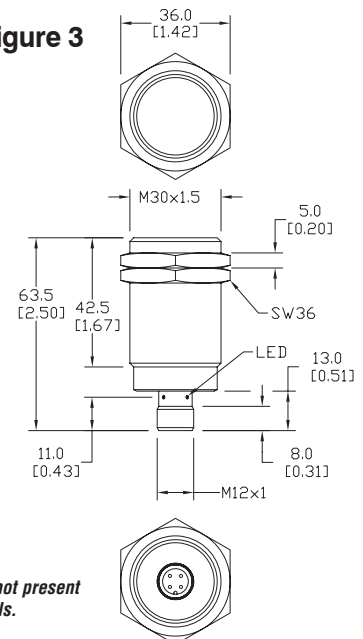


Figure 3



Note: Pin 2 is not present on some models.

# Accessories for 30mm Sensors

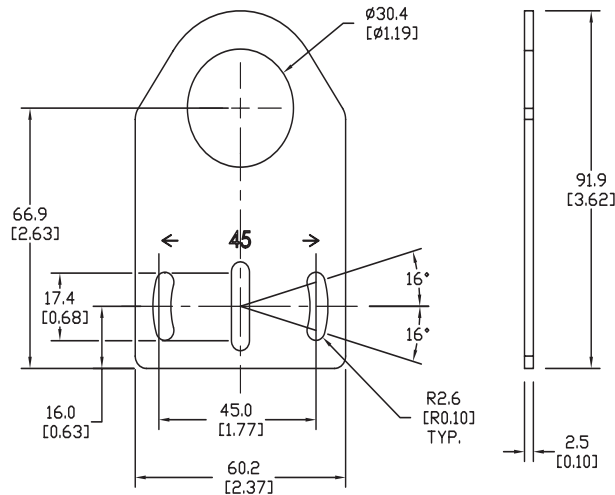
## Axial Mounting Bracket

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-adapter sensors. Hexagonal nuts not included.

Accessories for 30mm Sensors			
Part Number	Price	Description	Weight
<b>ST30A</b>		Mounting bracket, axial, zinc plated steel. For use with 30mm sensors.	0.18 (81.7 g)

### Dimensions

mm [inches]



**ST30A**

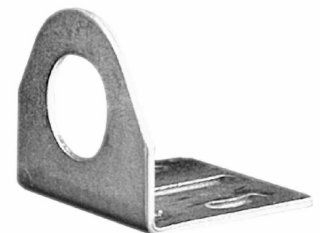
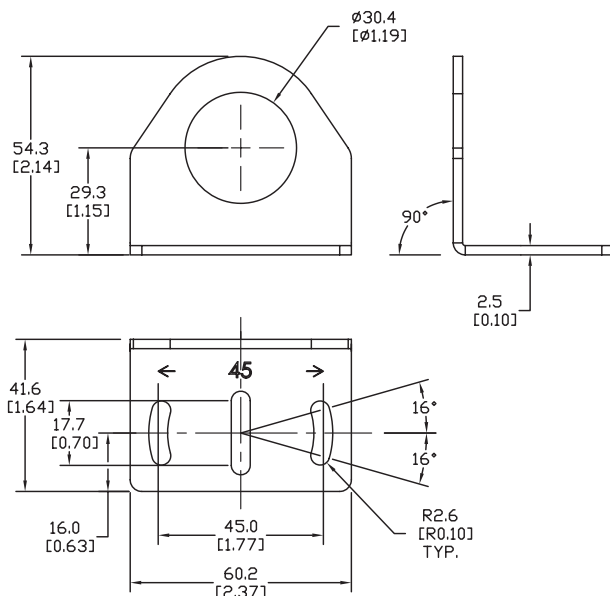
## Right-angle Mounting Bracket

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
<b>ST30C</b>		Mounting bracket, right-angle, zinc plated steel. For use with 30mm sensors.	0.18lb (81.7 g)

### Dimensions

mm [inches]



**ST30C**

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

# Accessories for 30mm Sensors

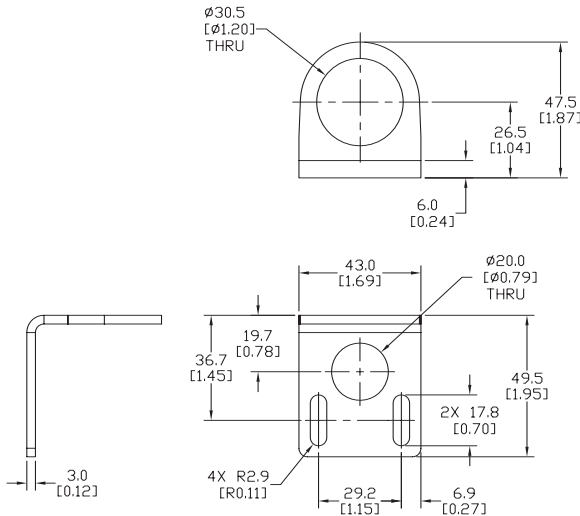
## Right-angle Mounting Bracket

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

Accessories for FW Series Sensors			
Part Number	Price	Description	Weight
<b>ST30C6W</b>		Mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.	0.15 lb (68.0 g)

### 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	Drawing Link	Weight
<b>OPT2118</b>		Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 30mm sensors.	Aluminum	304 Stainless steel	<a href="#">PDF</a>	0.18 lb (81.7 g)
<b>OPT2119</b>		Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 30mm sensors.	304 Stainless Steel	304 Stainless steel	<a href="#">PDF</a>	0.18 lb (81.7 g)

Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm [7.87 in] length), OPT2110 (300mm [11.81 in] length), and OPT2111 (500mm [19.69 in] length).



**OPT2118, OPT2119**

# Mounting Rods and Brackets

## 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	Drawing Link	Weight lb (g)
<b>OPT2109</b>		Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	<a href="#">PDF</a>	0.41 (185.97)
<b>OPT2110</b>		Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	<a href="#">PDF</a>	0.60 (272.16)
<b>OPT2111</b>		Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	<a href="#">PDF</a>	0.98 (444.52)



## Right-angle Mounting Bracket

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

Right-angle Mounting Brackets for 12mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb (g)
<b>OPT2108</b>		Wenglor mounting bracket, right-angle, nickel plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	<a href="#">PDF</a>	0.07 (31.8)

