

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	Housing	Output State	Logic	Connection	Wiring	Dimensions
Standard Distance								
PTW-AN-1H	\$49.00	10 mm (0.394 in)	Shielded	N.O	NPN	M12 (12 mm) connector	Diagram 1	Figure 1
PTW-AP-1H	\$49.00				PNP	M12 (12 mm) connector	Diagram 2	Figure 1
Extended Distance								
PTW-AN-2H	\$59.00	25 mm (0.984 in)	Unshielded	N.O	NPN	M12 (12 mm) connector	Diagram 1	Figure 1
PTW-AP-2H	\$59.00				PNP	M12 (12 mm) connector	Diagram 2	Figure 1
Triple Distance								
PTW-AN-5A	\$101.00	20 mm (0.787 in)	Shielded	N.O	NPN	2 m (6.5') axial cable	Diagram 1	Figure 2
PTW-AP-5A	\$101.00				PNP	2 m (6.5') axial cable	Diagram 2	Figure 2
PTW-AN-5H	\$101.00				NPN	M12 (12 mm) connector	Diagram 1	Figure 3
PTW-AP-5H	\$101.00				PNP	M12 (12 mm) connector	Diagram 2	Figure 3

Wiring diagrams

Diagram 1

NPN Output

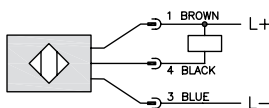
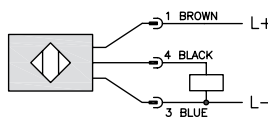


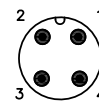
Diagram 2

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*
Mounting Type	Shielded	Unshielded	Shielded
Nominal Distance	10 mm (0.394 in)	25 mm (0.984 in)	20 mm (0.787 in)
Operating Distance	0 to 8.1 mm (0.32 in)	0 to 24.3 mm (0.96 in)	NA
Material Correction Factors	See the Material influence table		
Output Type	NPN or PNP, NO only		
Operating Voltage	10 to 36 VDC		10 to 30 VDC
No-load Supply Current	20 mA	25 mA	10 mA
Operating (Load) Current	100 mA		≤200 mA
Off-state (Leakage) Current	<1 mA		≤100 μA
Voltage Drop	<2.5V		≤2.0V
Switching Frequency	50 Hz	250 Hz	100 Hz
Differential Travel (% of Nominal Distance)	≤20%		≤15%
Repeat Accuracy	Not available		≤5%
Ripple	Not available		≤20%
Time Delay Before Availability (tv)	negligible	Not available	≤10 ms
Reverse Polarity Protection	Yes		
Short-circuit Protection	Yes (non-latching)		
Operating Temperature	-25° to 70°C (-13° to 158°F)	0° to 100°C (32° to 212°F)	-25° to 70°C (-13° to 158°F)
Protection Degree (DIN 40050)	IEC IP67, IP68 (coolant)	IEC IP65/67/68/69K	IEC IP67* (connector) IP68* (cable)
Indication/Switch Status	Yellow (4 x 90°)		Yellow (NO output energized)
Housing Material	Stainless steel		Stainless steel
Sensing Face Material	Stainless steel		Stainless steel
Shock Resistance / Vibration Resistance	See Proximity Sensor Terminology		
Tightening Torque	80 Nm (50 lb-in)		150 Nm (111 lb-in)
Weight	145 g (5.11 oz)		114 g (4.02 oz) / 50 g (1.76 oz)
Connections	M12 connector, 2 lock nuts included		2 m (6.5') axial cable or M12 connector
Agency Approvals	cULus, UL file E328811, CE, RoHS		UL file E328811, CE, RoHS

Note: 1 Fully submersible to 290 psi (20 bar).

Dimensions

mm [inches]

Figure 1

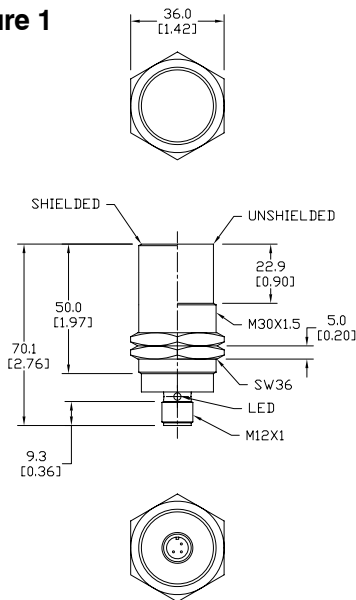


Figure 2

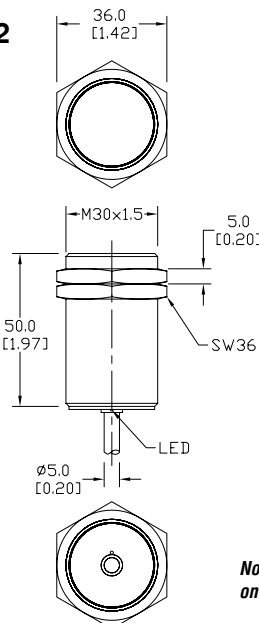
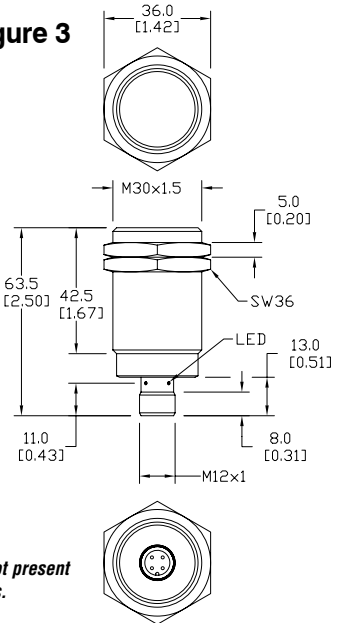


Figure 3



Note: Pin 2 is not present on some models.

Accessories for 30mm Sensors

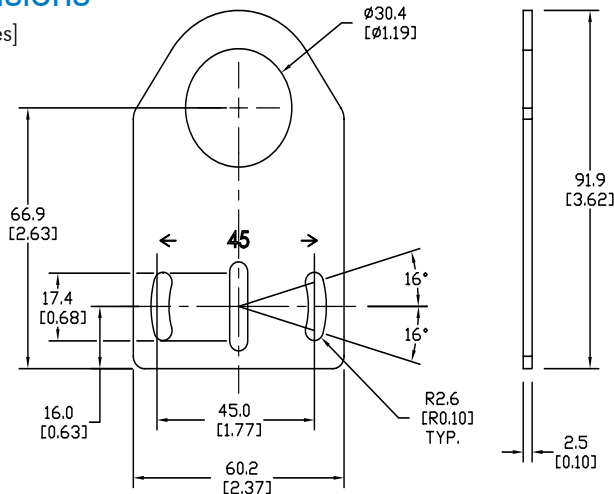
Axial Mounting Bracket

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-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

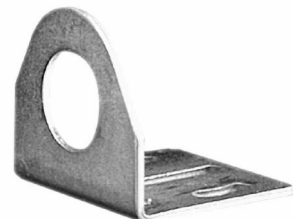
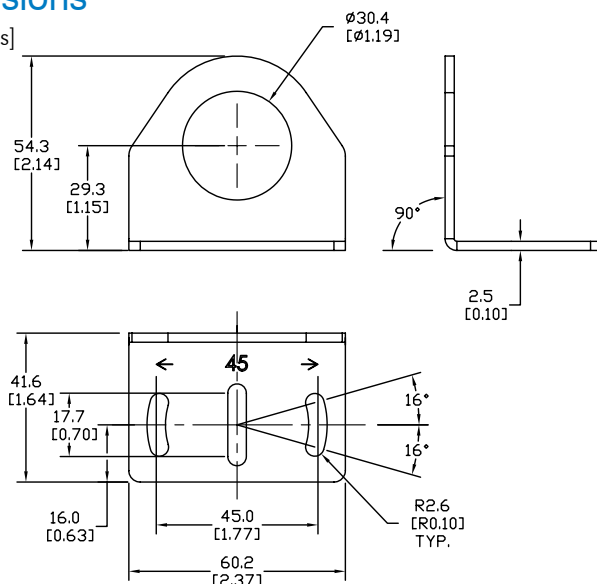
Right-angle Mounting Bracket

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

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Accessories for 30mm Sensors

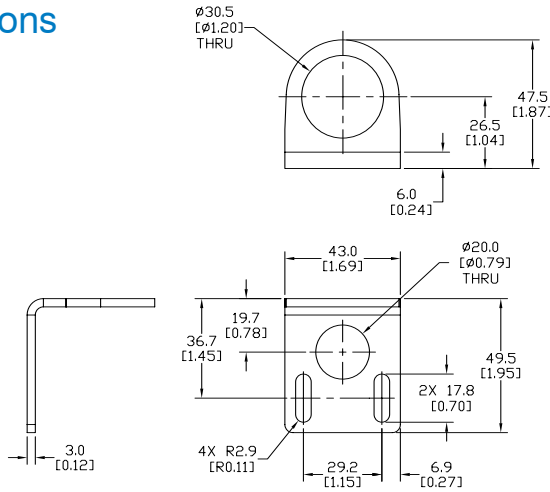
Right-angle Mounting Bracket

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

Accessories for FW Series Sensors			
Part Number	Price	Description	Weight [lb]
ST30C6W	\$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

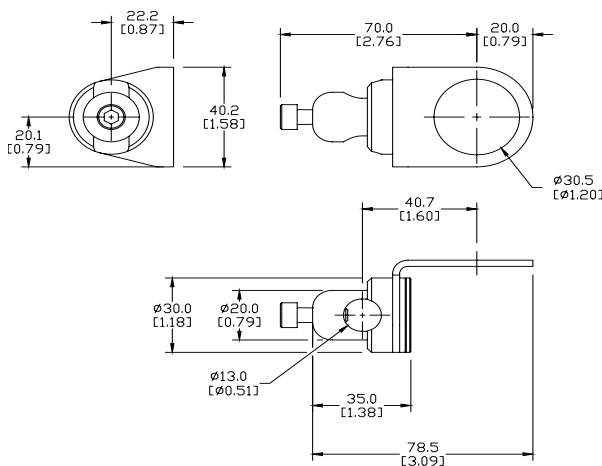
Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

Accessories for 30mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
OPT2118	\$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
OPT2119	\$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 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.

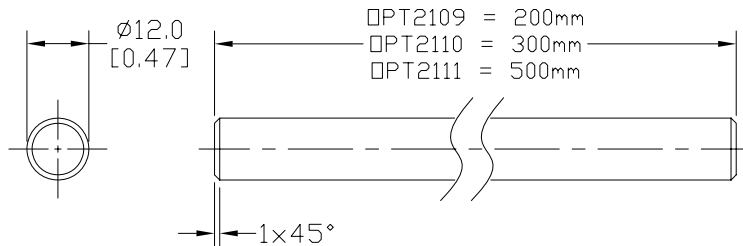
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
OPT2109	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
OPT2110	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
OPT2111	\$16.00	Mounting rod,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

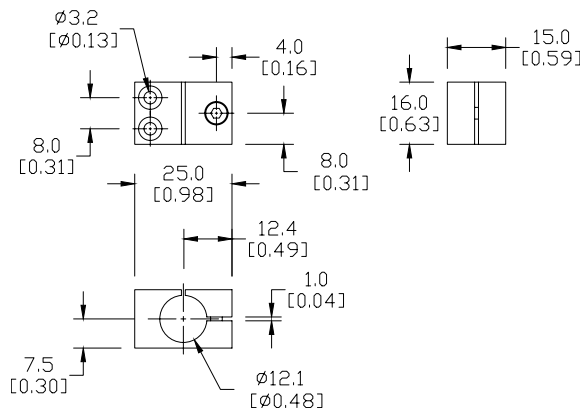
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
OPT2108	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



OPT2108

Dimensions

mm [inches]



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