PTW Series Inductive Proximity Sensors

M30 (30 mm) Stainless Steel - DC

• 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

NEED CABLES?

PTW Series M30 DC SS Inductive Proximity Selection Chart								
Part Number	Price	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
Triple Distance								
PTW-AN-5A	$-009gi:	20 mm [0.787 in]	Flush	N.O.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 1
PTW-AP-5A	$009gk:				PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 1
PTW-AN-5H	$-009gj:				NPN	M12 [12mm] connector	Diagram 1	Figure 2
PTW-AP-5H	$-009gl:				PNP	M12 [12mm] connector	Diagram 2	Figure 2

Wiring Diagrams

Diagram 1
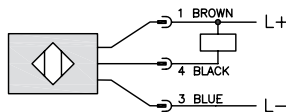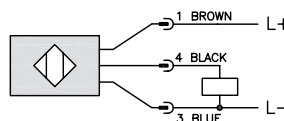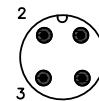
NPN Output

Diagram 2

PNP Output

Connector

M12 connector

Note: Pin 2 is not present on some models.

PTW Series Inductive Proximity Sensors

PTW Series M30 DC SS Inductive Proximity Specifications		
Models	PTW-A*-2H	PTW-A*-5*
Mounting Type	Non-flush	Flush
Nominal Distance	25mm [0.984 in]	20mm [0.787 in]
Operating Distance	0 to 24.3 mm [0.96 in]	NA
Material Correction Factors	See the Material influence table	
Output Type	NPN or PNP, N.O. only	
Operating Voltage	10 to 36 VDC	10 to 30 VDC
No-load Supply Current	25mA	10mA
Operating (Load) Current	100mA	≤ 200mA
Off-state (Leakage) Current	< 1mA	≤ 100µA
Voltage Drop	≤ 2.5V	≤ 2.0V
Switching Frequency	250Hz	100Hz
Differential Travel (% of Nominal Distance)	≤ 20%	≤ 15%
Repeat Accuracy	Not available	≤ 5%
Ripple	Not available	≤ 20%
Time Delay Before Availability (tv)	Not available	≤ 10ms
Reverse Polarity Protection	Yes	
Short-circuit Protection	Yes [non-latching]	
Operating Temperature	0 to 100°C [32 to 212°F]	-25 to 70°C [-13 to 158°F]
Protection Degree (DIN 40050)	IEC IP65/67/68/69K	IEC IP67[1] [connector] IP68[1] [cable]
Indication/Switch Status	Yellow [4 x 90°]	Yellow [N.O. 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	80Nm [50 lb-in]	15Nm [111 lb-in]
Weight	145g [5.11 oz]	114g [4.02 oz] / 50g [1.76 oz]
Connections	M12 connector, 2 lock nuts included	2m [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).
To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.
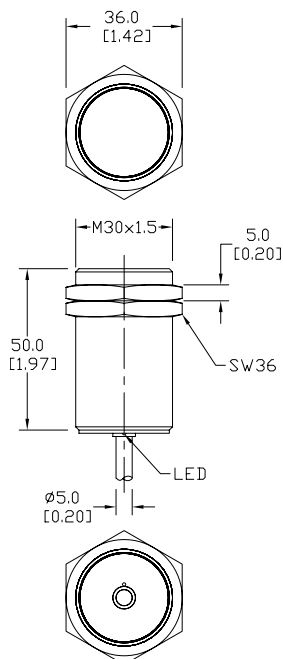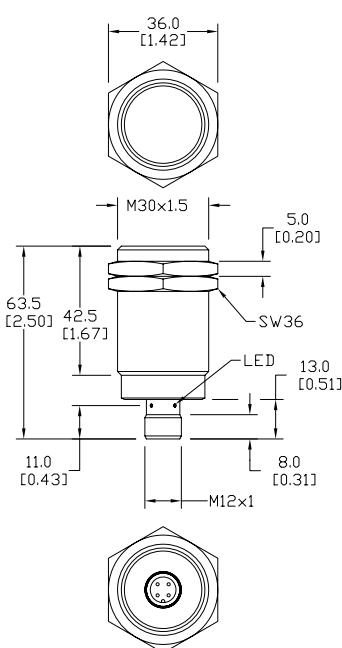
Dimensions

mm [inches]

Figure 1

36.0
[1.42]

M30×1.5

5.0
[0.20]

SW36

50.0
[1.97]

LED

ø5.0
[0.20]

Figure 2

36.0
[1.42]

M30×1.5

5.0
[0.20]

SW36

63.5
[2.50]

42.5
[1.67]

LED

13.0
[0.51]

11.0
[0.43]

8.0
[0.31]

M12×1

Note: Pin 2 is not present on some models.
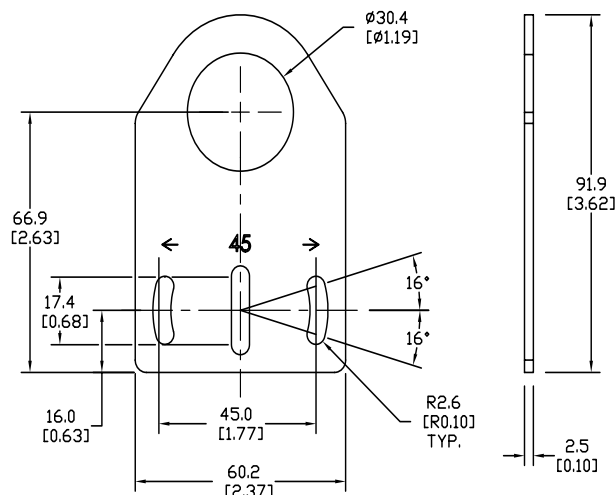
Accessories for 30mm Sensors

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.

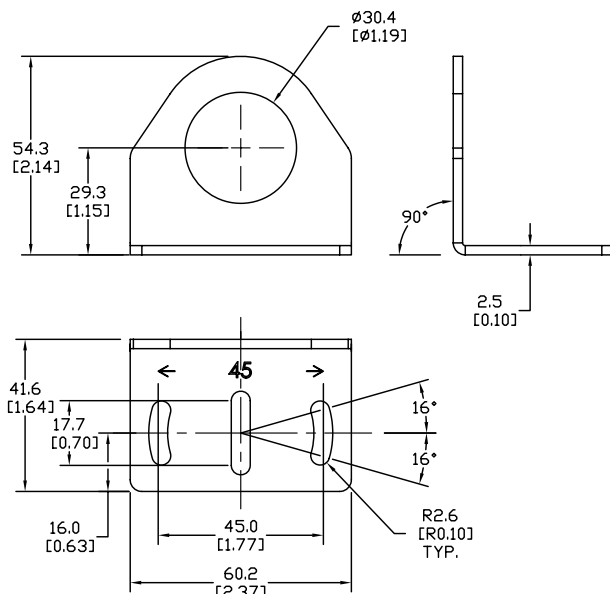| Accessories for 30mm Sensors			
Part Number	Price	Description	Weight lb [g]
ST30A	$983:	Micro Detectors mounting bracket, axial, zinc plated steel. For use with 30mm sensors.	0.18 [81.7]

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 [g]
ST30C	$984:	Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 30mm sensors.	0.18 [81.7]

Dimensions
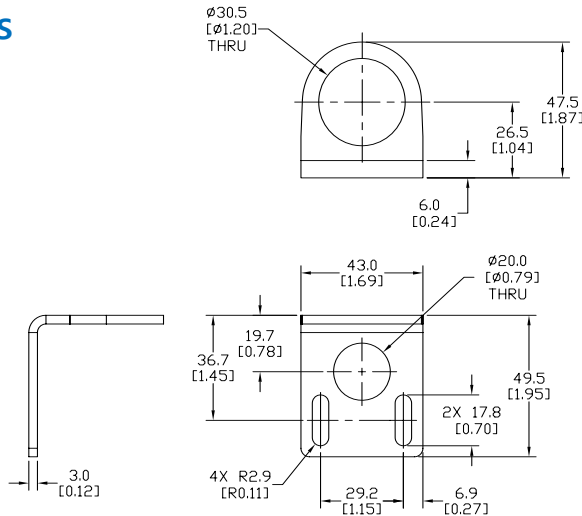
mm [inches]

ST30C

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 [g]
ST30C6W	$-5i1:	AutomationDirect mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.	0.15 (68.0)

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 lb [g]
OPT2118	$-1nl?:	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	PDF	0.18 [81.7]
OPT2119	$;-1nl,:	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	PDF	0.18 [81.7]

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)
OPT2109	$1nn9:	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	PDF	0.41 [185.97]
OPT2110	$1nna:	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	PDF	0.60 [272.16]
OPT2111	$1nnb:	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	PDF	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]
OPT2108	$-1nly:	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	PDF	0.07 [31.8]