AT Series Analog Inductive Proximity Sensors

M30 (30 mm) metal – analog output

- Voltage or current analog output
- 4 models available
- Metal housing
- Axial cable or M12 quick-disconnect models
- IP67 rated
- Purchase cable separately (for quick-disconnect model)
- Lifetime warranty

NEED CABLES?

AT Series M30 Analog Inductive Prox Selection Chart

Part Number	Price	Sensing Range	Housing	Output	Connection	Dimensions
AT9-05-1A	$105.00	0 to 20 mm (0-0.79 in)	Shielded	0 - 5 VDC or 1-5 mA	2 m (6.5') axial cable	Figure 1
AT9-05-1H	$105.00				M12 (12 mm) connector	Figure 2
AT9-10-1A	$105.00	0 to 20 mm (0-0.79 in)		0-10 VDC or 4-20 mA	2 m (6.5') axial cable	Figure 1
AT9-10-1H	$105.00				M12 (12 mm) connector	Figure 2

Specifications

	AT9-05-1*	AT9-10-1*
Mounting Type	Shielded	
Nominal Sensing Distance	0 to 20 mm (0-0.79 in)	0 to 20 mm (0-0.79 in)
Operating Distance	NA	
Material Correction Factors	See the Material influence table	
Output Type	0 to 5 VDC or 1 to 5 mA	0 to 10 VDC or 4 to 20 mA
Current Output Max. Load / Power Supply	1 kΩ / 10 VDC; 5 kΩ / 30 VDC	0.5 kΩ / 15 VDC; 1 kΩ / 30 VDC
Voltage Output Min. Load	500 Ω	1 kΩ
Operating Voltage	10 to 30 VDC	15 to 30 VDC
No-load Supply Current	≤10 mA	≤12 mA
Operating (Load) Current		
Off-state (Leakage) Current	NA	
Voltage Drop	≤2.0 V	
Switching Frequency	NA	
Differential Travel (% of Nominal Distance)	NA	
Repeat Accuracy	±0.05 mm	
Ripple	≤20%	
Response Time	5 ms	
Time Delay Before Availability (tv)	≤50ms	
Reverse Polarity Protection	Yes	
Short-Circuit Protection	Yes (switch auto-resets after overload is removed)	
Operating Temperature	-25° to +70° C (-13° to 158° F)	
Protection Degree (DIN 40050)	IEC IP67	
Indication/Switch Status	NA	
Housing Material	Chrome-plated brass	
Sensing Face Material	Polybutylene Terephthalate (PBT)	
Shock/Vibration	See Proximity Sensor Terminology	
Tightening Torque	60 Nm (44 lb-ft)	
Weight (cable/M8 connector)	190 g (6.71 oz.) / 135 g (4.76 oz.)	
Connection	2 m (6.5') axial cable or M12 (12 mm) connector	
Agency Approvals	UL file E328811	

Dimensions

mm [inches]
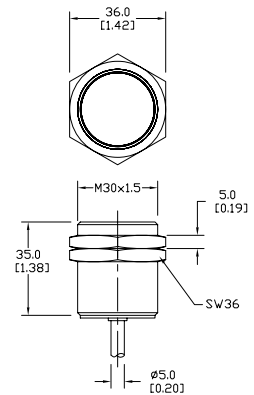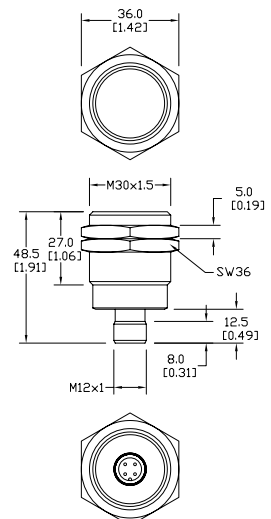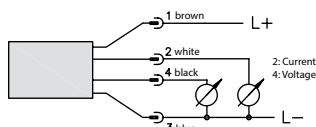
Figure 1

Figure 2

Wiring diagram

Connector

M12 connector

Sensors with M12 connectors must use 2M or 7M cables (4-wire).
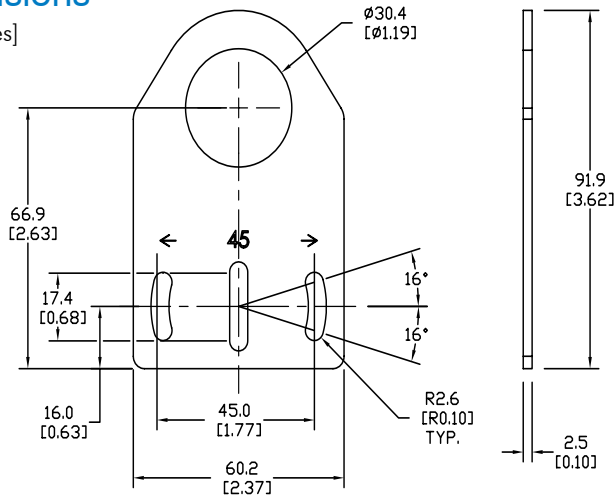
Accessories for 30mm Sensors

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]
ST30A	$2.00	Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. 1/pk.	0.18

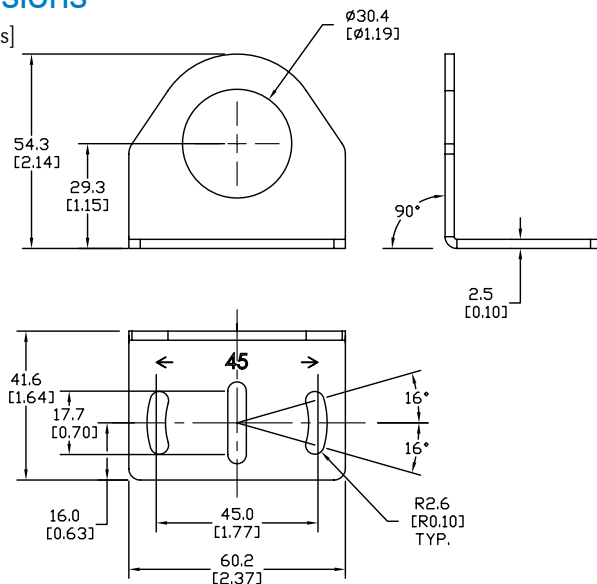## Dimensions

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

See our website: www.AutomationDirect.com for complete engineering drawings
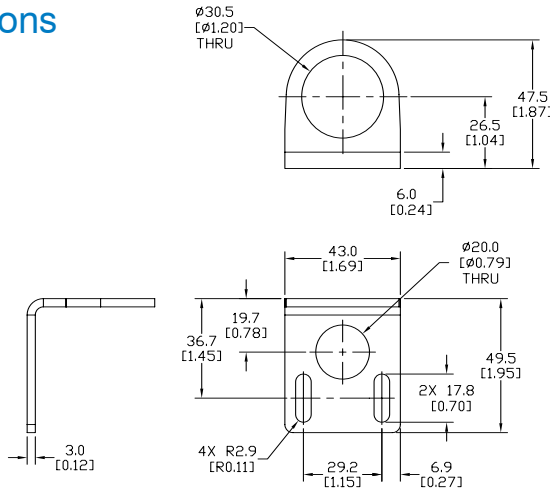
Accessories for 30mm Sensors

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]
ST30C6W	$2.50	Mounting bracket, right angle, 304 stainless steel. For use with 30mm sensors.	0.15

Dimensions
mm [inches]

ST30C6W

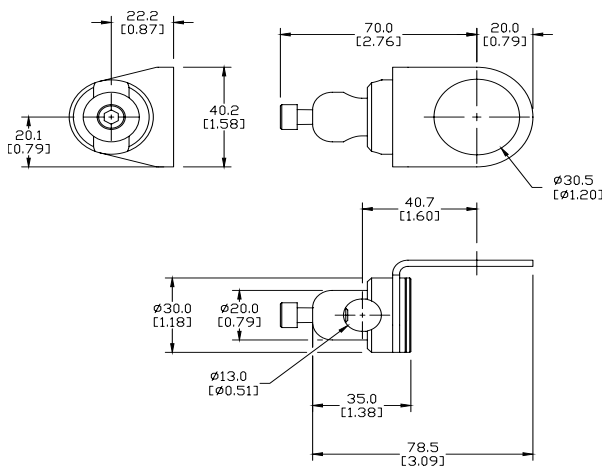## Right-angle Swivel Mounting Systems

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	$9.25	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
OPT2119	$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 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.
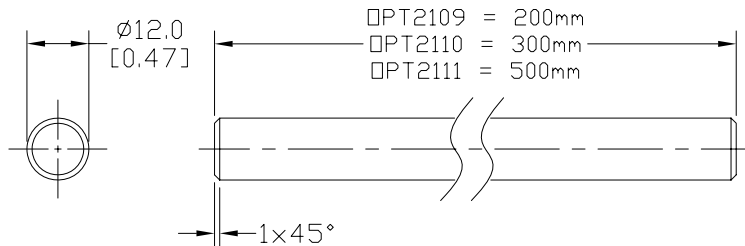
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets				
Part Number	Price	Description	Weight [lb]
OPT2109	$10.50	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
OPT2110	$12.50	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
OPT2111	$16.50	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	0.98

OPT2109, OPT2110, OPT2111

Dimensions

mm [inches]

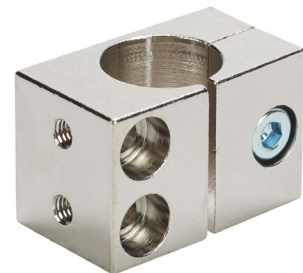Ø12.0 [0.47]

OPT2109 = 200mm
OPT2110 = 300mm
OPT2111 = 500mm

1×45°

Right-angle Mounting Bracket

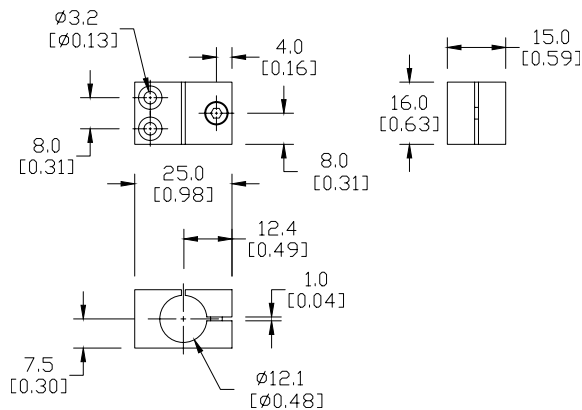Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.

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

OPT2108

Dimensions

mm [inches]

Ø3.2 [Ø0.13]
4.0 [0.16]
15.0 [0.59]
16.0 [0.63]
8.0 [0.31]
25.0 [0.98]
8.0 [0.31]
12.4 [0.49]
1.0 [0.04]
7.5 [0.30]
Ø12.1 [Ø0.48]

See our website: www.AutomationDirect.com for complete engineering drawings