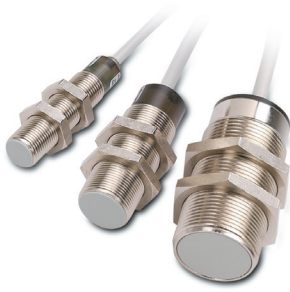


V Series AC Inductive Proximity Sensors

M12 (12 mm), M18 (18 mm), M30 (30 mm) metal – AC



- Multi-voltage: 20 to 253 VAC
- 2-wire
- Metal housing
- Axial cable with tang or quick-disconnect models; purchase cable separately
- IP67 rated
- LED status indicator
- Lifetime warranty



V Series M12/18/30 AC Inductive Prox Selection Chart

Part Number	Price	Sensing Range	Housing	Output State	Connection	Wiring	Dimensions
M12 Models							
VM1-A0-1B	\$35.50	2 mm (0.06 in) ¹	Shielded	NO	2 m (6.5') axial cable	Diagram 1 or 2	Figure 1
VM1-A0-2B	\$35.50	4 mm (0.157 in) ¹	Unshielded		2 m (6.5') axial cable		Figure 1
VM1-A0-1H	\$35.50	2 mm (0.08 in) ¹	Shielded		M12 (12 mm)		Figure 2
VM1-A0-2H	\$35.50	4 mm (0.157 in) ¹	Unshielded		M12 (12 mm)		Figure 2
M18 Models							
VK1-A0-1B	\$31.00	5 mm (0.197 in) ²	Shielded	NO	2 m (6.5') axial cable	Diagram 1 or 2	Figure 3
VK1-A0-2B	\$31.00	8 mm (0.315 in) ²	Unshielded		2 m (6.5') axial cable		Figure 3
VK1-A0-1H	\$31.00	5 mm (0.197 in) ²	Shielded		M12 (12 mm)		Figure 4
VK1-A0-2H	\$31.00	8 mm (0.315 in) ²	Unshielded		M12 (12 mm)		Figure 4
M30 Models							
VT1-A0-1B	\$37.50	10 mm (0.394 in) ³	Shielded	NO	2 m (6.5') axial cable	Diagram 1 or 2	Figure 5
VT1-A0-2B	\$37.50	15 mm (0.591 in) ³	Unshielded		2 m (6.5') axial cable		Figure 5
¹ With 12x12 Fe360 target ² With 18x18 Fe360 target ³ With 30x30 Fe360 target							

¹With 12x12 Fe360 target ²With 18x18 Fe360 target ³With 30x30 Fe360 target

* V Series sensors with 4-pin M12 connectors do not work with Zip Port junction blocks.

Wiring diagram

Diagram 1

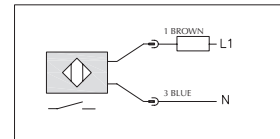
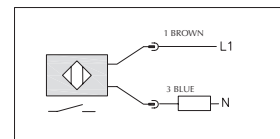


Diagram 2



Connector

M12 connector



Dimensions

mm [inches]

Figure 1

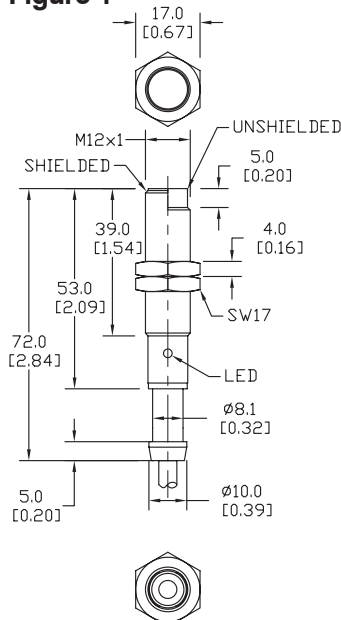


Figure 2

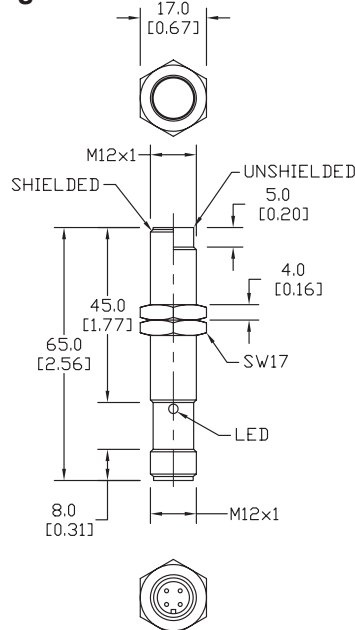
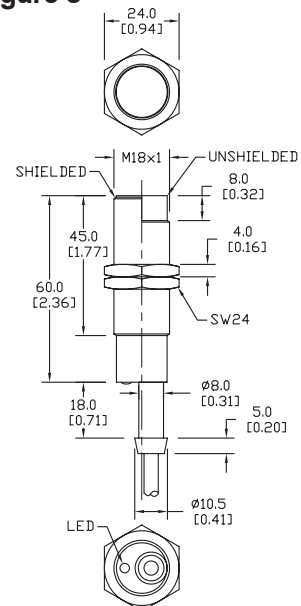


Figure 3



V Series AC Inductive Proximity Sensors

Specifications	M12 Models		M18 Models		M30 Models	
Mounting Type	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded
Nominal Sensing Distance	2	4	5	8	10	15
Operating Distance	NA					
Material Correction Factors	See the Material influence table					
Output Type	Triac/NO/2-wire					
Operating Voltage	20 to 253 VAC, 50/60 Hz					
No-load Supply Current	NA					
Operating (Load) Current	5 to 300 mA (RMS)					
Off-state Leakage Current	1.0 mA max. (RMS)					
Voltage Drop						
Switching Frequency	25 Hz					
Differential Travel (% of Nominal Distance)	2 to 10%					
Repeat Accuracy	5%					
Ripple	NA					
Time Delay Before Availability (tv)	200 ms					
Reverse Polarity Protection	NA					
Short Circuit Protection	No					
Operating Temperature	-25° to +70°C (-13° to 158°F)					
Protection Degree (DIN 40 050)	IEC IP67					
LED Indicators	Yellow (output energized)					
Housing Material	Nickel-plated brass					
Sensing Face Material	Polybutylene Terephthalate (PBT)					
Shock/Vibration	See Proximity Sensor Terminology					
Tightening Torque	10 Nm (11 lb-ft)		25 Nm (18.44 lb-ft)		50 Nm (36.88 lb-ft)	
Weight	70 g (2.47 oz)		120 g (4.23 oz)		300 g (10.6 oz)	
Connection	2 m (6.5') axial cable or M12 (12 mm) connector					
Agency Approvals	CE, ULRecognized file E130644					
Use only 2M or 7M cables for AC sensors with M12 connectors.						

Dimensions

mm [inches]

Figure 4

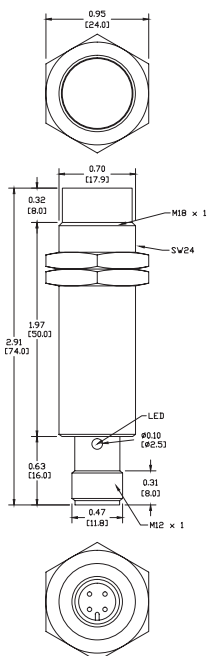
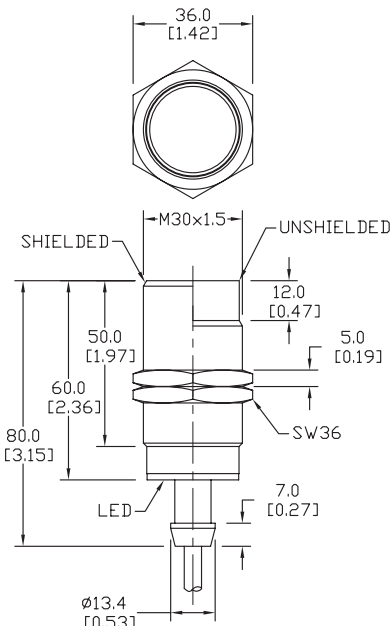


Figure 5



Accessories for 12mm Sensors

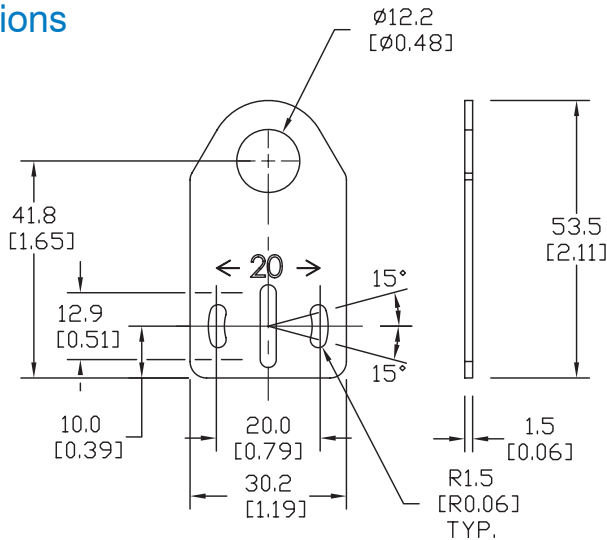
Axial Mounting Bracket

Mounting bracket, axial, zinc-plated steel. For use with 12mm sensors. Has two mounting holes (use 3mm screws) and allows the rotation of an optical axis for right-angle adapter sensors. Hexagonal nuts not included.

Accessories for 12mm Sensors			
Part Number	Price	Description	Weight (lb)
ST12A	\$2.00	Mounting bracket, axial, zinc-plated steel. For use with 12mm sensors. 1/pk.	0.03
ST12A7W	\$6.00	Mounting bracket, axial, 316L stainless steel. For use with 12mm sensors. 1/pk.	0.03

Dimensions

mm [inches]



ST12A

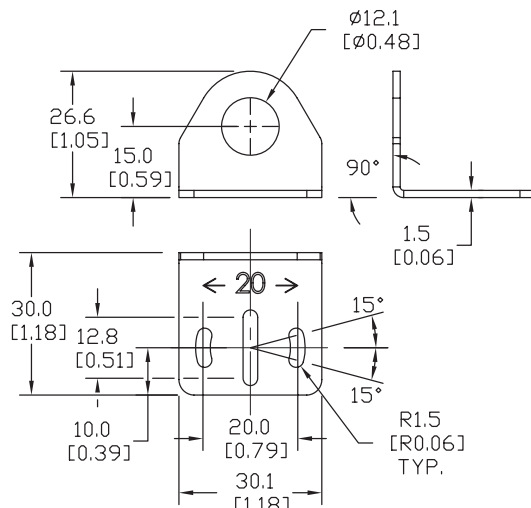
Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel or 316L stainless steel. For use with 12mm sensors. Has two mounting holes (use 3mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal screws not included.

Accessories for 12mm Sensors			
Part Number	Price	Description	Weight (lb)
ST12C	\$2.00	Mounting bracket, right angle, zinc-plated steel. For use with 12mm sensors. 1/pk.	0.03
ST12C7W	\$6.00	Mounting bracket, right angle, 316L stainless steel. For use with 12mm sensors. 1/pk.	0.03

Dimensions

mm [inches]



ST12C

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

Accessories for 12mm Sensors

Right-angle Mounting Brackets

Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors. Available with or without fixed insertion stop.

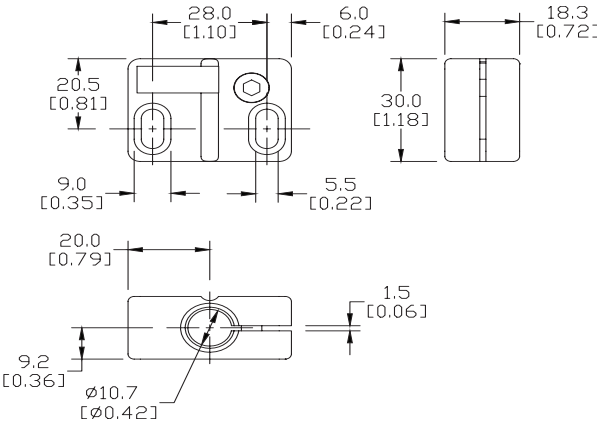
Accessories for 12mm Sensors				
Part Number	Price	Description		Weight [lb]
OPT2102	\$6.00	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors.		0.05
OPT2103	\$6.00	Mounting bracket, right-angle, plastic. For use with 12mm sensors.		0.05



OPT2102, OPT2103

Dimensions

mm [inches]



Right-angle Swivel Mounting Systems

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

Accessories for 12mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
OPT2114	\$9.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 12mm sensors.	Aluminum	Stainless Steel	0.14
OPT2115	\$16.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 12mm sensors.	304 Stainless Steel	304 Stainless Steel	0.27

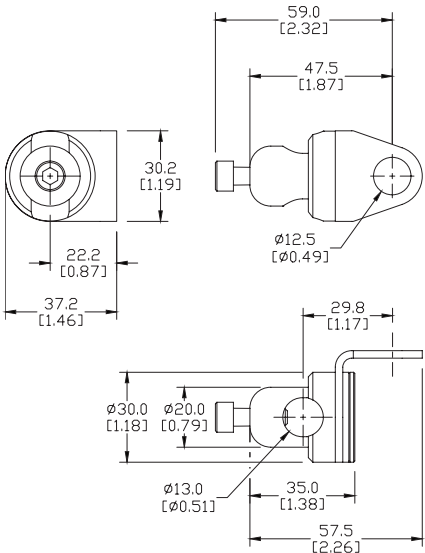
Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).



OPT2114, OPT2115

Dimensions

mm [inches]



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Accessories for 18mm Sensors

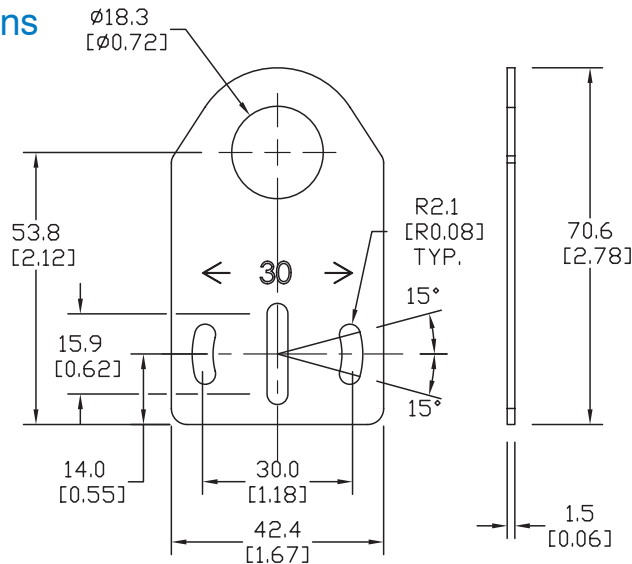
Axial Mounting Bracket

Axial mounting bracket for use with 18mm sensors. Has two mounting holes (use 4mm screws) and allows for rotation of an optical axis for right-beam-angle-adaptor sensors. Hexagonal nuts not included.

Accessories for 18mm Sensors			
Part Number	Price	Description	Weight [lb]
ST18A	\$1.25	Mounting bracket, axial, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06
ST18A7W	\$6.00	Mounting bracket, axial, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06

Dimensions

mm [inches]



ST18A

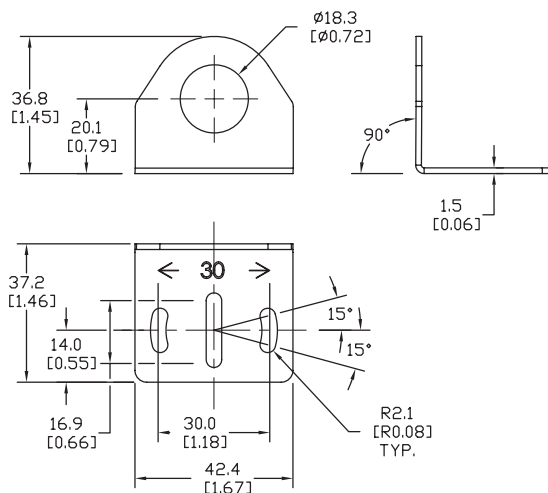
Right-angle Mounting Bracket

Right-angle mounting bracket for use with 18mm sensors. Has two mounting holes (use 4mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

Accessories for 18mm Sensors			
Part Number	Price	Description	Weight [lb]
ST18C	\$1.25	Mounting bracket, right angle, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06
ST18C7W	\$6.00	Mounting bracket, right angle, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06

Dimensions

mm [inches]



ST18C

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

Accessories for 18mm Sensors

Right-angle Mounting Brackets

Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors. Available with or without fixed insertion stop.

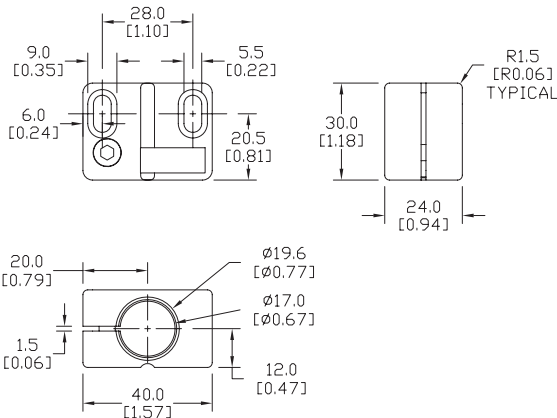
Accessories for 18mm Sensors			
Part Number	Price	Description	Weight [lb]
OPT2104	\$8.00	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	0.06
OPT2105	\$8.00	Mounting bracket, right-angle, plastic. For use with 18mm sensors.	0.06



OPT2104, OPT2105

Dimensions

mm [inches]



Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 18mm sensors. Available in all 304 stainless steel or with an aluminum head and a stainless steel mounting plate.

Accessories for 18mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
OPT2116	\$9.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 18mm sensors.	Aluminum	304 Stainless Steel	0.15
OPT2117	\$16.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 18mm sensors.	304 Stainless Steel	304 Stainless Steel	0.28

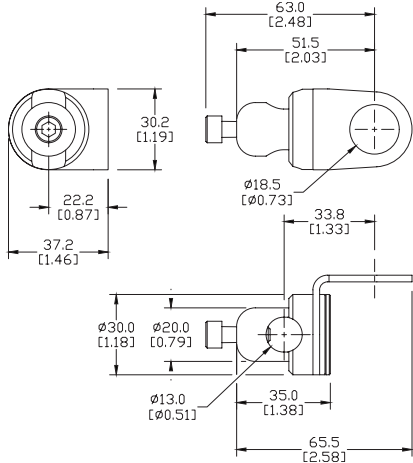
Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).



OPT2116, OPT2117

Dimensions

mm [inches]



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Accessories for 30mm Sensors

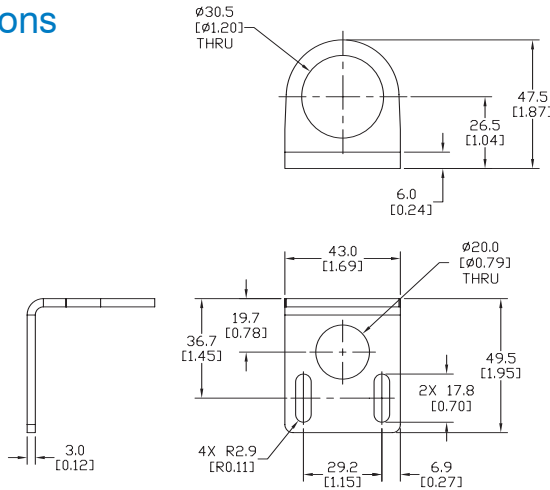
Right-angle Mounting Bracket

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

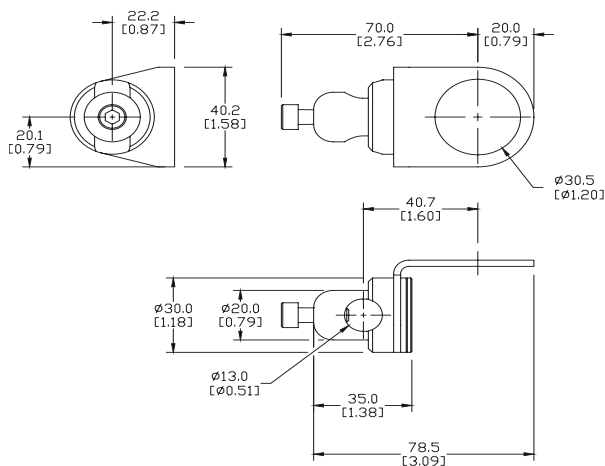
Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

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.

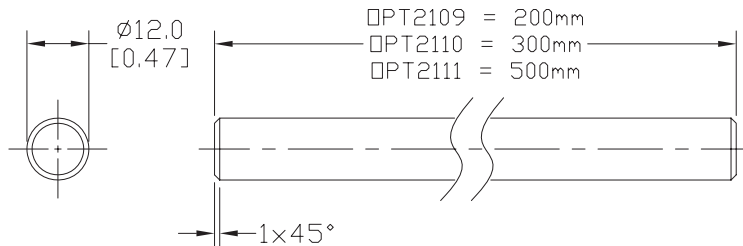
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
OPT2109	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
OPT2110	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
OPT2111	\$16.00	Mounting rod,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



OPT2109, OPT2110, OPT2111

Dimensions

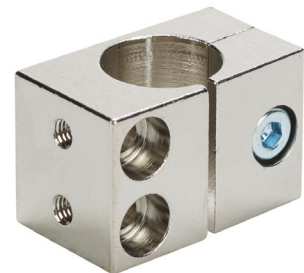
mm [inches]



Right-angle Mounting Bracket

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

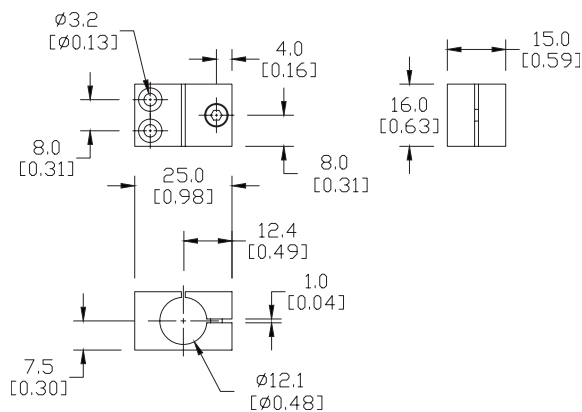
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
OPT2108	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



OPT2108

Dimensions

mm [inches]



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