

CM Series Capacitive Proximity Sensors



M12 (12mm) metal – DC

- Sensitivity adjustment via potentiometer
- IP65 rated
- LED status indicators
- M12 quick-disconnect; purchase cable separately



CM Series Capacitive Prox Selection Chart

Part Number	Price	Sensing Distance	Mounting	Output State	Logic	Connection	Wiring	Dimensions
CM1-AP-1H	\$82.00	6mm (0.24 in)	Flush	NO	PNP	M12 (12mm) quick disconnect	Diagram 1	Figure 1
CM1-AP-2H	\$82.00	12mm (0.47 in)	Non-flush	NO	PNP	M12 (12mm) quick disconnect	Diagram 1	Figure 1

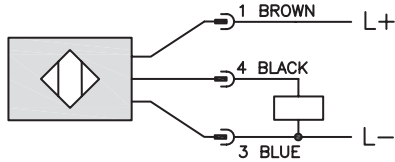
CM Series Specifications	CM1-AP-1H	CM1-AP-2H
Mounting Type	Flush	Non-flush
Nominal Sensing Distance	6mm (0.24 in)	12mm (0.47 in)
Operating Distance	NA	
Material Correction Factors	NA	
Output Type	PNP; NO only	
Operating Voltage	10 to 36VDC	
No-load Supply Current	<12mA	
Operating (Load) Current	100mA	
Off-state (Leakage) Current	NA	
Voltage Drop	<2.5V	
Switching Frequency	50Hz	
Differential Travel (% of Nominal Distance)	NA	
Repeat Accuracy	NA	
Ripple	NA	
Time Delay Before Availability (tv)	NA	
Reverse Polarity Protection	Yes	
Short-circuit Protection	Yes, pulsed	
Operating Temperature	-25° to 70°C (-13° to 158°F)	
Protection Degree (DIN 40050)	IEC IP65	
Indication/Switch Status	Yellow (output energized)	
Housing Material	Stainless steel	
Sensing Face Material	Polyether Ether Ketone (PEEK)	
Shock/Vibration	DIN EN 60947-5-2	
Tightening Torque	5.0 N•m (3.69 lb•ft)	
Weight	54g (1.90 oz)	
Connectors	M12 connector. 2 lock nuts included	
Agency Approvals	cULus file E328811, CE	

CM Series Capacitive Proximity Sensors

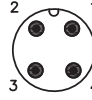
Wiring diagrams

Diagram 1

PNP Output



Connectors

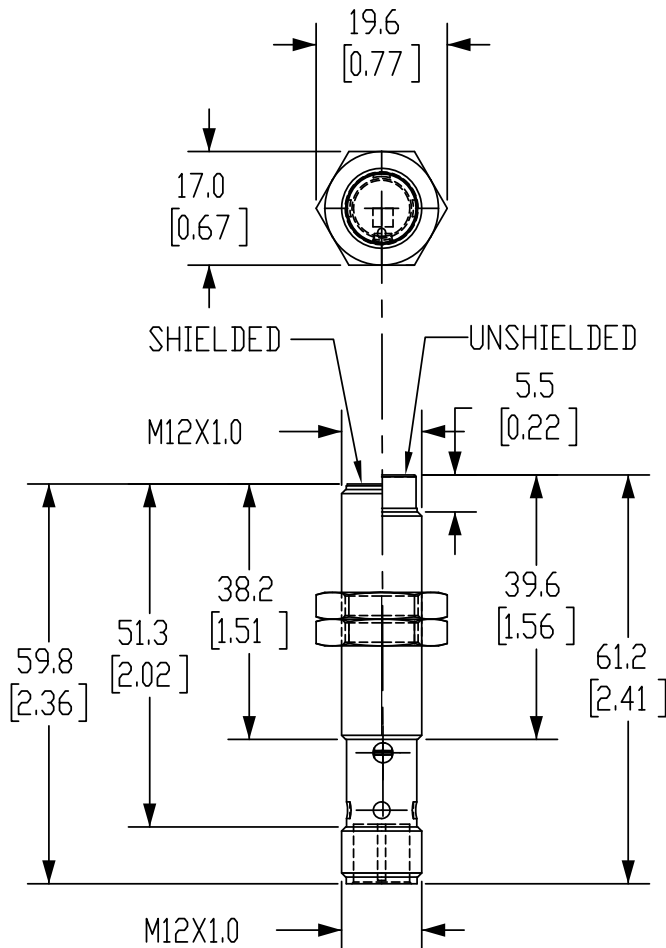


M12 connector

Dimensions

mm [inches]

Figure 1



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

Accessories for 12mm Sensors

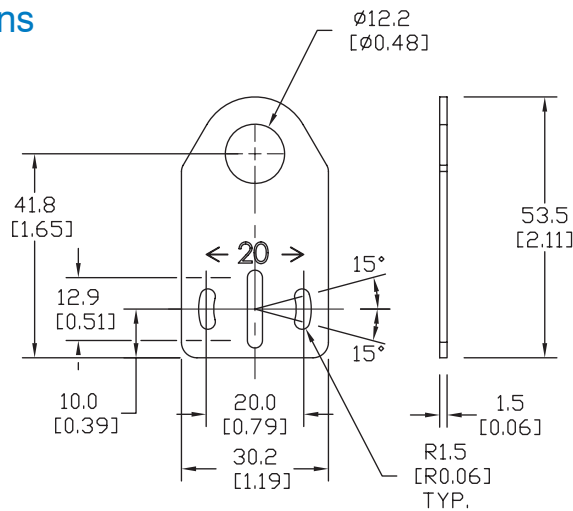
Axial Mounting Bracket

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 (gm)
ST12A	\$2.00	Mounting bracket, axial, zinc-plated steel. For use with 12mm sensors. 1/pk.	0.03
ST12A7W	\$6.75	Mounting bracket, axial, 316L stainless steel. For use with 12mm sensors. 1/pk.	0.03

Dimensions

mm [inches]



ST12A

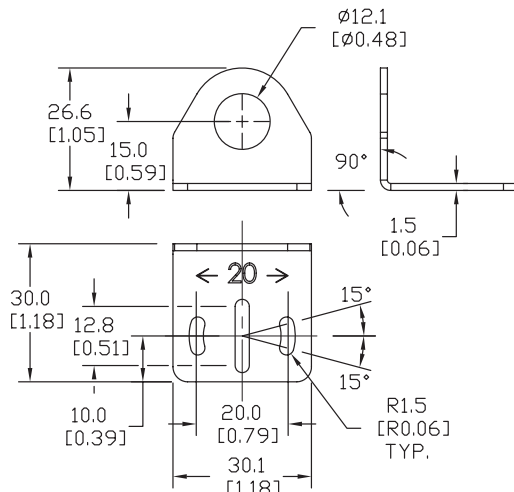
Right-angle Mounting Bracket

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 (gm)
ST12C	\$2.00	Mounting bracket, right angle, zinc-plated steel. For use with 12mm sensors. 1/pk.	0.03 (13.6)
ST12C7W	\$6.75	Mounting bracket, right angle, 316L stainless steel. For use with 12mm sensors. 1/pk.	0.03 (13.6)

Dimensions

mm [inches]



ST12C

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Accessories for 12mm Sensors

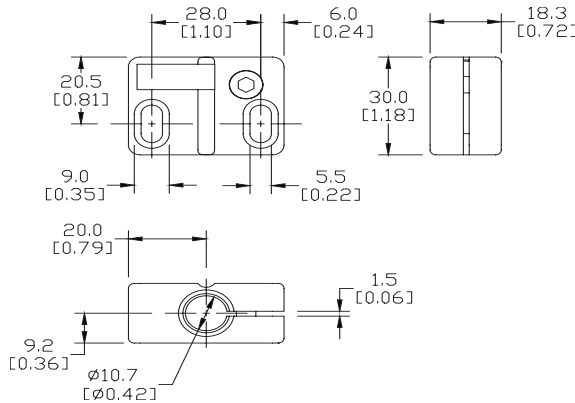
Right-angle Mounting Brackets

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 (g)		
OPT2102	\$6.75	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors.	0.05 (22.7)		
OPT2103	\$6.75	Mounting bracket, right-angle, plastic. For use with 12mm sensors.	0.05 (22.7)		

Dimensions

mm [inches]



OPT2102, OPT2103

Right-angle Swivel Mounting Systems

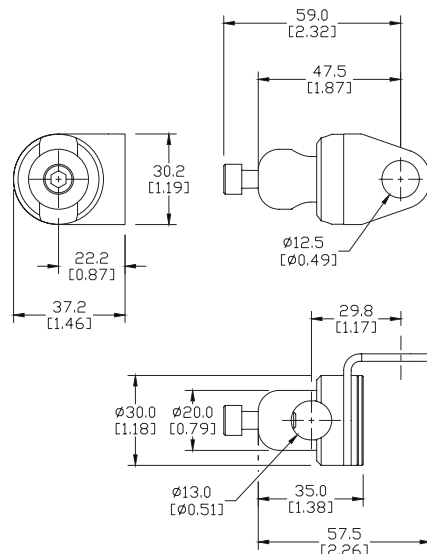
Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 12mm sensors. Available in all stainless steel or with an aluminum head and stainless steel mounting plate.

Accessories for 12mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight lb (g)
OPT2114	\$9.75	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 12mm sensors.	Aluminum	Stainless steel	0.14 (63.5)
OPT2115	\$17.50	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 (122.5)

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).

Dimensions

mm [inches]



OPT2114, OPT2115

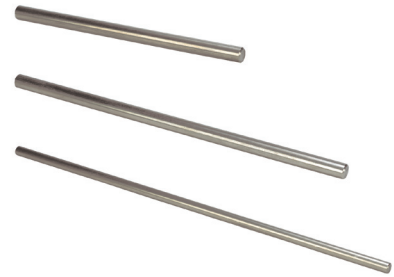
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Mounting Rods

Mounting Rods

304 Stainless steel rods for mounting swivel brackets OPT2112 - OPT2127. Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.

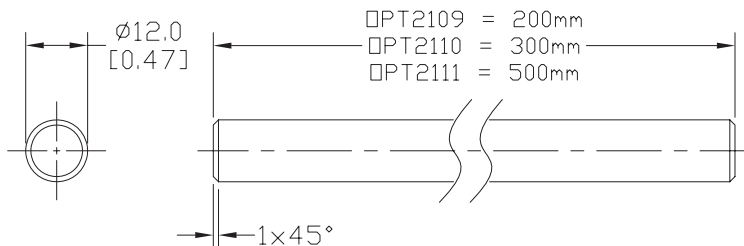
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight lb (g)
OPT2109	\$11.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41 (185.97)
OPT2110	\$13.50	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60 (272.16)
OPT2111	\$17.50	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	0.98 (444.52)



OPT2109, OPT2110, OPT2111

Dimensions

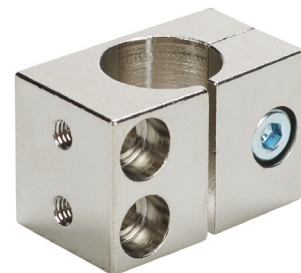
mm [inches]



Right-angle Mounting Bracket

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

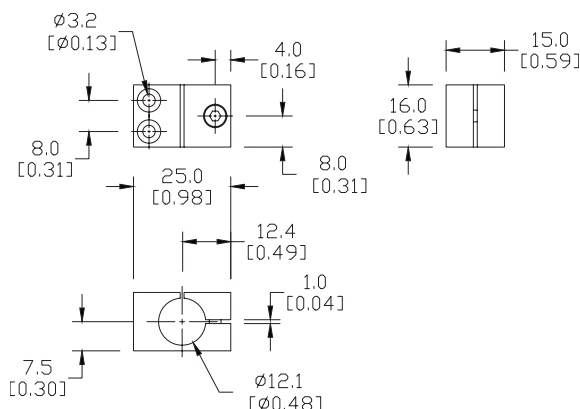
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight lb (g)
OPT2108	\$13.50	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07 (31.8)



OPT2108

Dimensions

mm [inches]



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