

# CM Series Capacitive Proximity Sensors

## M12 (12 mm) metal – DC

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

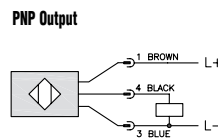


CM Series Capacitive Prox Selection Chart								
Part Number	Price	Sensing Distance	Housing	Output State	Logic	Connection	Wiring	Dimensions
CM1-AP-1H	\$75.00	6 mm (0.236 in)	Shielded	NO	PNP	M12 (12 mm) quick disconnect	Diagram 1	Figure 1
CM1-AP-2H	\$75.00	12 mm (0.472 in)	Unshielded	NO	PNP	M12 (12 mm) quick disconnect	Diagram 1	Figure 1

CM Series Specifications	CM1-AP-1H	CM1-AP-2H
<b>Mounting Type</b>	Shielded	Unshielded
<b>Nominal Sensing Distance</b>	6 mm (0.236 in)	12 mm (0.472 in)
<b>Operating Distance</b>	NA	
<b>Material Correction Factors</b>	NA	
<b>Output Type</b>	PNP; NO only	
<b>Operating Voltage</b>	10 to 36 VDC	
<b>No-load Supply Current</b>	<12 mA	
<b>Operating (Load) Current</b>	100 mA	
<b>Off-state (Leakage) Current</b>	NA	
<b>Voltage Drop</b>	<2.5V	
<b>Switching Frequency</b>	50Hz	
<b>Differential Travel (% of Nominal Distance)</b>	NA	
<b>Repeat Accuracy</b>	NA	
<b>Ripple</b>	NA	
<b>Time Delay Before Availability (tv)</b>	NA	
<b>Reverse Polarity Protection</b>	Yes	
<b>Short-circuit Protection</b>	Yes, pulsed	
<b>Operating Temperature</b>	-25° to 70°C (-13° to 158°F)	
<b>Protection Degree (DIN 40050)</b>	IEC IP65	
<b>Indication/Switch Status</b>	Yellow (output energized)	
<b>Housing Material</b>	Stainless steel	
<b>Sensing Face Material</b>	Polyether Ether Ketone (PEEK)	
<b>Shock/Vibration</b>	See <a href="#">Proximity Sensor Terminology</a>	
<b>Tightening Torque</b>	5.0 Nm	
<b>Weight</b>	54g (1.90 oz)	
<b>Connectors</b>	M12 connector. 2 lock nuts included	
<b>Agency Approvals</b>	cULus file E328811, CE, RoHS	

## Wiring diagrams

### Diagram 1

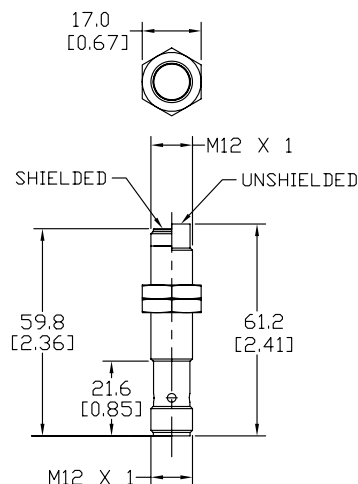


### Connectors



## Dimensions mm [inches]

Figure 1



# Accessories for 12mm Sensors

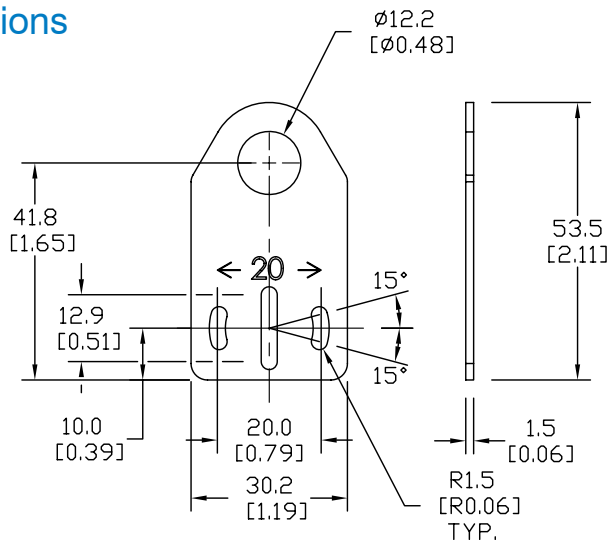
## Axial Mounting Bracket

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

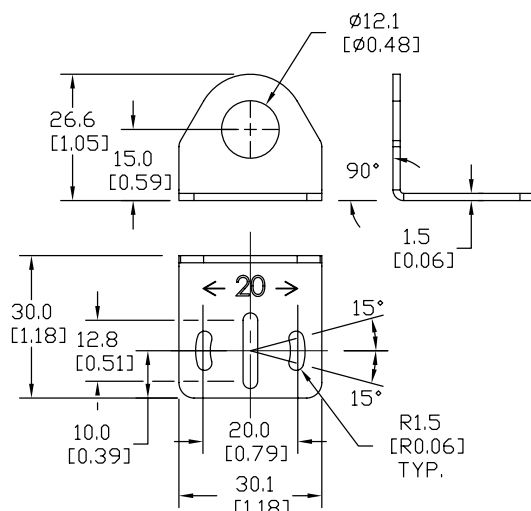
## Right-angle Mounting Bracket

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](http://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.

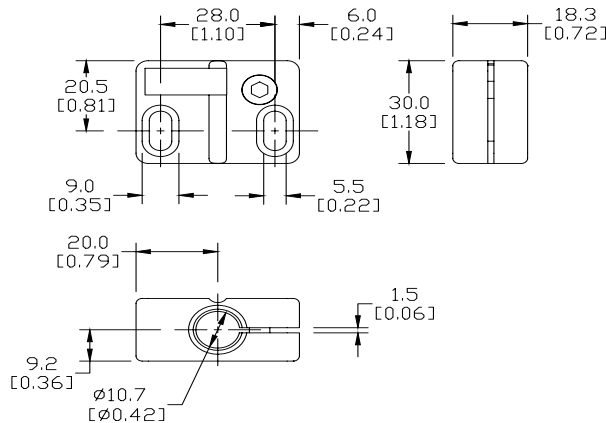
Accessories for 12mm Sensors					
Part Number	Price	Description	Weight [lb]		
<b>OPT2102</b>	\$6.00	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors.	0.05		
<b>OPT2103</b>	\$6.00	Mounting bracket, right-angle, plastic. For use with 12mm sensors.	0.05		



**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]
<b>OPT2114</b>	\$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
<b>OPT2115</b>	\$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

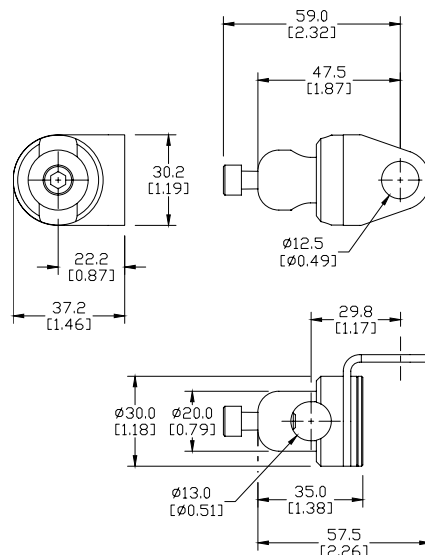
**Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).**



**OPT2114, OPT2115**

### Dimensions

mm [inches]



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# Mounting Rods

## Mounting Rods

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

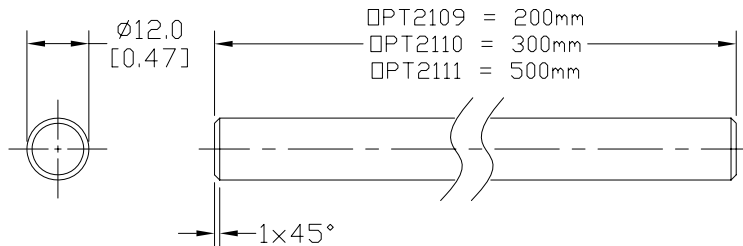
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
<b>OPT2109</b>	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
<b>OPT2110</b>	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
<b>OPT2111</b>	\$16.00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

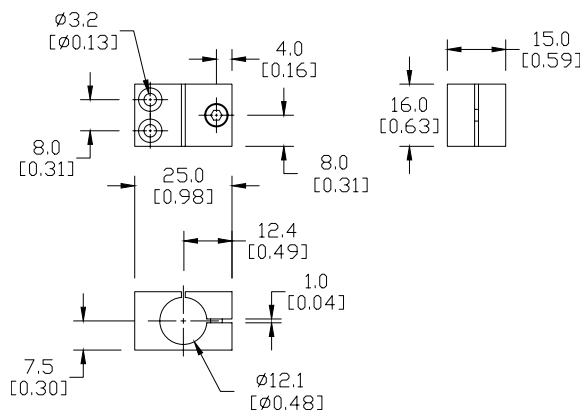
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
<b>OPT2108</b>	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



**OPT2108**

## Dimensions

mm [inches]



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