

# CK Series Capacitive Proximity Sensors

## M18 (18 mm) plastic – DC



- NO/NC selectable
- IP65/IP67 rated
- LED status indicators
- M12 quick-disconnect; purchase cable separately
- Lifetime warranty
- Auto-detect circuit
- Push button teach
- Mounting accessories available



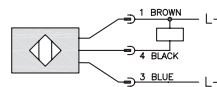
CK Series Capacitive Prox Selection Chart								
Part Number	Price	Sensing Distance	Housing	Output State	Logic	Connection	Wiring	Dimensions
CK1-00-2H	\$79.00	12 mm (0.472 in)	Unshielded	NO/NC	NPN/PNP	M12 (12 mm) quick disconnect	Diagram 1	Figure 1

CK Series Specifications	CK1-00-2H
<b>Mounting Type</b>	Unshielded
<b>Nominal Sensing Distance</b>	12 mm (0.472 in)
<b>Operating Distance</b>	NA
<b>Material Correction Factors</b>	
<b>Output Type</b>	NPN/PNP; NO/NC
<b>Operating Voltage</b>	10 to 36 VDC
<b>No-load Supply Current</b>	<20 mA
<b>Operating (Load) Current</b>	200 mA
<b>Off-state (Leakage) Current</b>	NA
<b>Voltage Drop</b>	<2.5V
<b>Switching Frequency</b>	10Hz
<b>Differential Travel (% of Nominal Distance)</b>	
<b>Repeat Accuracy</b>	NA
<b>Ripple</b>	
<b>Time Delay Before Availability (tv)</b>	
<b>Reverse Polarity Protection</b>	Yes
<b>Short-circuit Protection</b>	Yes, pulsed
<b>Operating Temperature</b>	-25° to 80°C (-13° to 176°F) Sensing face: -25° to 110°C (-13° to 230°F)
<b>Protection Degree (DIN 40050)</b>	IEC IP65/IP67
<b>Indication/Switch Status</b>	Yellow (output energized)
<b>Housing Material</b>	Polybutylene Terephthalate (PBT)
<b>Sensing Face Material</b>	
<b>Shock/Vibration</b>	See <a href="#">Proximity Sensor Terminology</a>
<b>Tightening Torque</b>	2.0 Nm
<b>Weight</b>	59g (2.08 oz)
<b>Connectors</b>	M12 connector. 2 lock nuts included
<b>Agency Approvals</b>	cULus file E328811, CE, RoHS

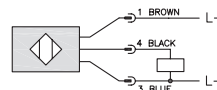
## Wiring diagrams

### Diagram 1

NPN Output

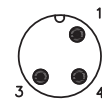


PNP Output



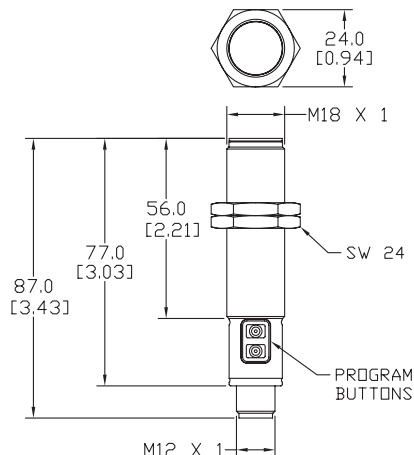
### Connectors

M12 connector



## Dimensions mm [inches]

Figure 1



# Capacitive Proximity Sensors - Accessories

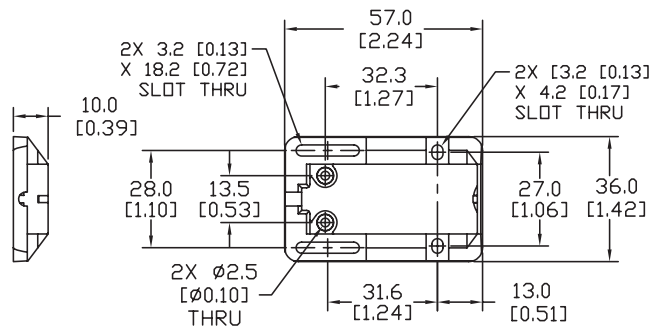


Capacitive Proximity Sensors Accessory Chart				
Part Number	Price	Description	Material	Dimensions
<b>Mounting Adapter</b>				
<b>CR1-ADPTR</b>	\$4.00	Adapter for CR1 series capacitive sensors	Housing: Polybutylene Terephthalate (PBT) Included Screws: M3 x 6 Steel (0.5 Nm)	Figure 1
<b>Mounting Wells</b>				
<b>MWT-01</b>	\$43.00	30 mm sensor mounting well	PTFE - Polytetrafluoroethylene (Teflon®) Temp: -25° to 246°C (-13° to 474.8°F) Max. pressure: 100 PSI (6.9 bar)	Figure 2
<b>MWK-01</b>	\$35.00	18 mm sensor mounting well		Figure 3

Dimensions mm[inches]

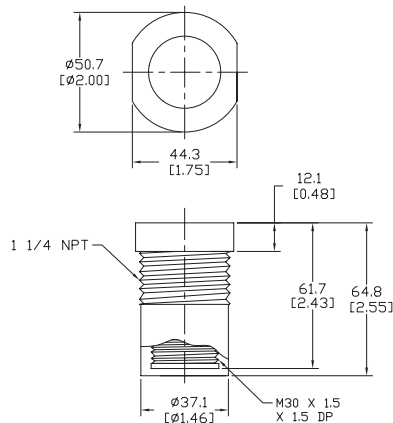
**Figure 1**

**CR1 Adapter**



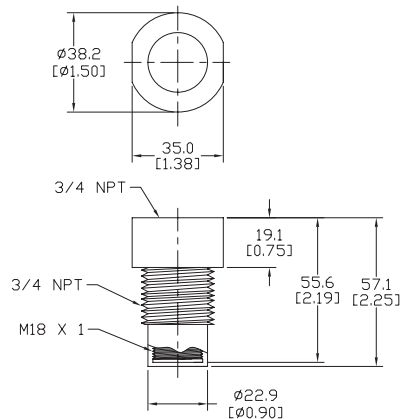
**Figure 2**

**30mm Sensor Mounting Well**



**Figure 3**

**18mm Sensor Mounting Well**



# Accessories for 18mm Sensors

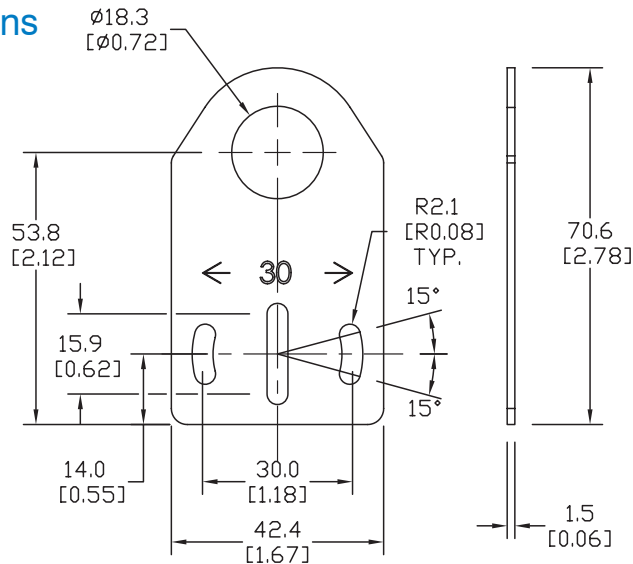
## Axial Mounting Bracket

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

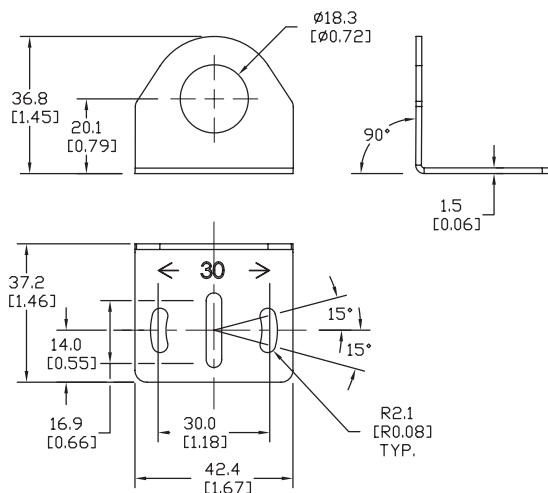
## Right-angle Mounting Bracket

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](http://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.

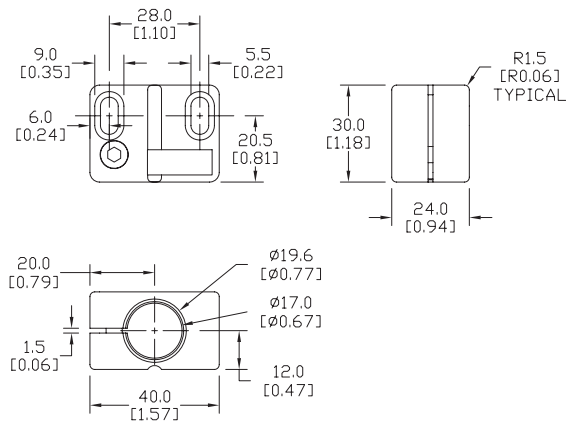
Accessories for 18mm Sensors				
Part Number	Price	Description	Weight [lb]	
OPT2104	\$8.00	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	0.06	
OPT2105	\$8.00	Mounting bracket, right-angle, plastic. For use with 18mm sensors.	0.06	



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

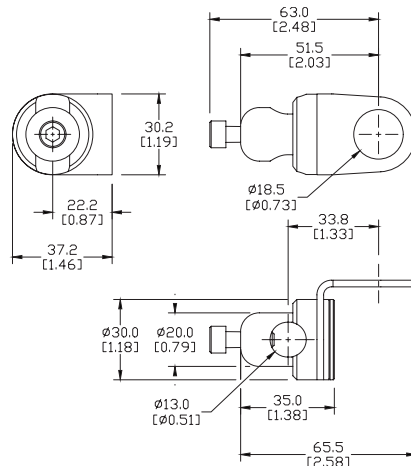
Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).



OPT2116, OPT2117

## Dimensions

mm [inches]



See our website: [www.AutomationDirect.com](http://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.

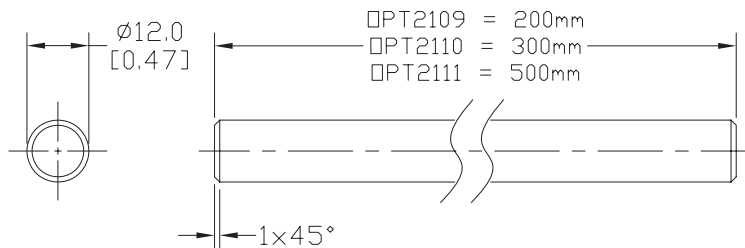
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
<b>OPT2109</b>	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
<b>OPT2110</b>	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
<b>OPT2111</b>	\$16.00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



**OPT2109, OPT2110, OPT2111**

## Dimensions

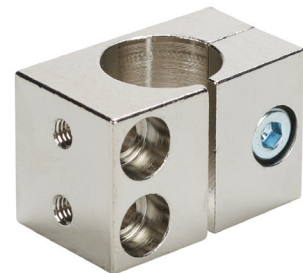
mm [inches]



## Right-angle Mounting Bracket

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

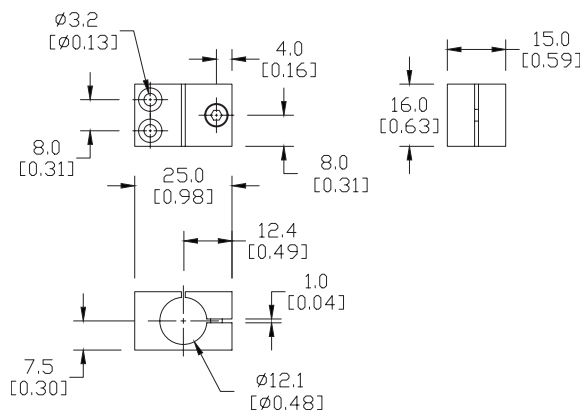
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
<b>OPT2108</b>	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



**OPT2108**

## Dimensions

mm [inches]



See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings