

CK Series Capacitive Proximity Sensors



M18 (18mm) plastic – DC

Pushbutton models

- NO/NC selectable
- Pushbutton teach
- LED status indicators
- IP65/IP67 rated
- M12 quick-disconnect; purchase cable separately
- Mounting accessories available

Potentiometer models

- NO or NC units available
- Potentiometer sensitivity adjustment
- LED status indicators
- IP65/IP67/IP69K rated
- M12 quick-disconnect; purchase cable separately
- Mounting accessories available



CK Series Capacitive Prox Selection Chart

Part Number	Price	Sensing Distance	Mounting	Output State	Logic	Connection	Wiring	Dimensions
Pushbutton select and teach								
CK1-00-2H	\$86.00	12mm (0.47 in)	Non-flush	NO/NC	NPN/PNP	M12 (12mm) quick disconnect	Diagram 1	Figure 1
Potentiometer sensitivity adjustment								
CK2-AP-1H	\$59.00	8mm (0.32 in)	Flush	NO	PNP	M12 (12mm) quick disconnect	Diagram 1 (PNP)	Figure 2
CK2-CP-1H	\$59.00	8mm (0.32 in)	Flush	NC	PNP	M12 (12mm) quick disconnect	Diagram 1 (PNP)	Figure 2
CK2-AP-2H	\$59.00	15mm (0.59 in)	Non-flush	NO	PNP	M12 (12mm) quick disconnect	Diagram 1 (PNP)	Figure 2
CK2-CP-2H	\$59.00	15mm (0.59 in)	Non-flush	NC	PNP	M12 (12mm) quick disconnect	Diagram 1 (PNP)	Figure 2

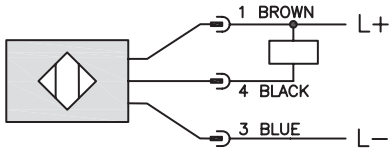
CK Series Specifications	CK1-00-2H	CK2-XX-XX
Mounting Type	Non-flush	Non-flush / Flush
Nominal Sensing Distance	12mm (0.47 in)	15mm (0.59 in) / 8mm (0.32 in)
Operating Distance	NA	NA
Material Correction Factors	NA	NA
Output Type	NPN/PNP; NO/NC	PNP; NO/NC
Operating Voltage	10 to 36VDC	10 to 30VDC
No-load Supply Current	<20mA	<22mA
Operating (Load) Current	200mA	
Off-state (Leakage) Current	NA	
Voltage Drop	<2.5V	
Switching Frequency	10Hz	30Hz
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 80°C (-13° to 176°F) Sensing face: -25° to 110°C (-13° to 230°F)	
Protection Degree (DIN 40050)	IEC IP65/IP67	IEC IP65/IP67/IP69K
Indication/Switch Status	Yellow (output energized)	
Housing Material	Polybutylene Terephthalate (PBT)	
Sensing Face Material	Polybutylene Terephthalate (PBT)	
Shock/Vibration	DIN EN 60947-5-2	
Tightening Torque	2.0 N•m (1.48 lb•ft)	
Weight	59g (2.08 oz)	26.1 g (0.92 oz)
Connectors	M12 connector. 2 lock nuts included	
Agency Approvals	cULus file E328811, CE	

CK Series Capacitive Proximity Sensors

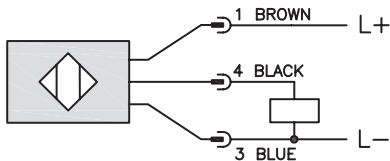
Wiring diagrams

Diagram 1

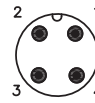
NPN Output



PNP Output



Connectors



M12 connector

Dimensions

mm [inches]

Figure 1

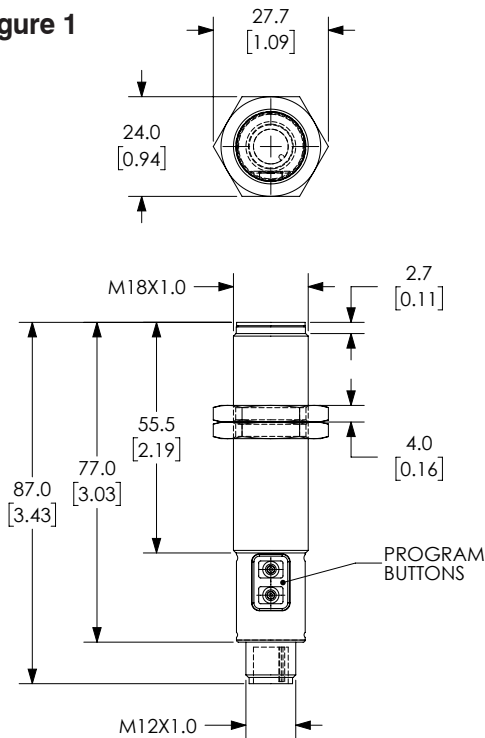
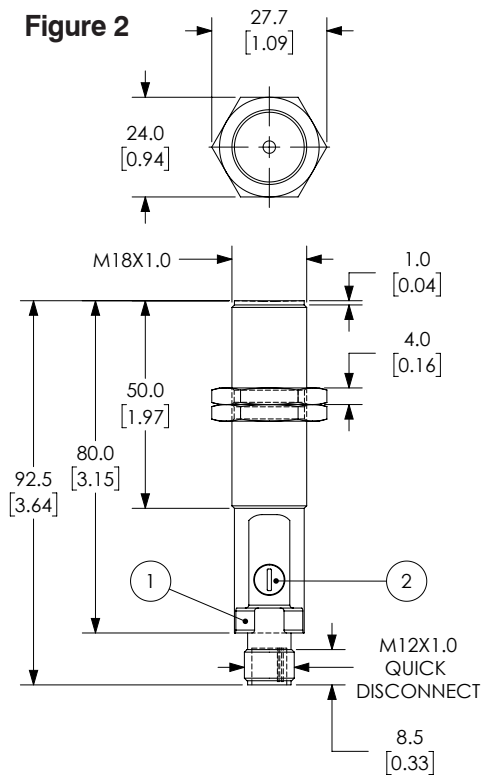


Figure 2



1 = LED YELLOW SWITCHING STATUS
2 = POTENTIOMETER SENSING RANGE

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Capacitive Proximity Sensors - Accessories



Mounting Well

Mounting Adapter

Capacitive Proximity Sensors Accessory Chart				
Part Number	Price	Description	Material	Dimensions
Mounting Adapter				
CR1-ADPTR	\$4.00	Adapter for CR1 series capacitive sensors	Housing: Polybutylene Terephthalate (PBT) Included Screws: M3 x 6 Steel (0.5 N•m [0.37 lb•ft])	Figure 1
Mounting Wells				
MWT-01	\$46.50	30mm (1.18 in) 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
MWK-01	\$38.00	18mm (0.71 in) sensor mounting well		Figure 3

Dimensions

mm [inches]

Figure 1

CR1 Adapter

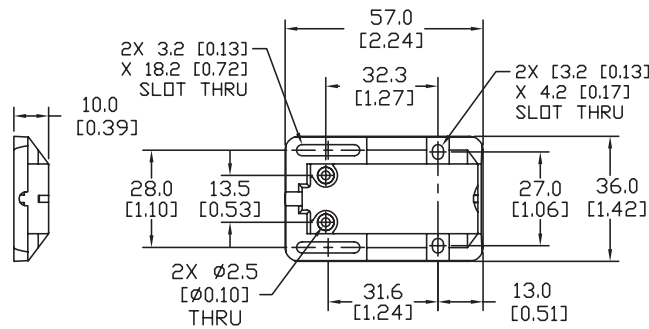


Figure 2

30mm Sensor Mounting Well

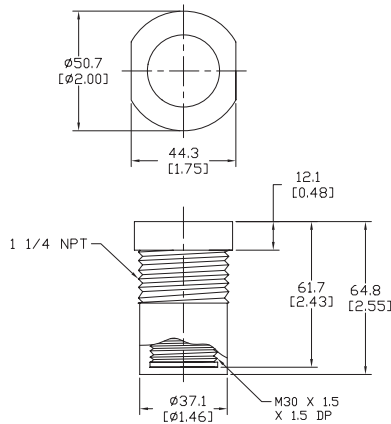
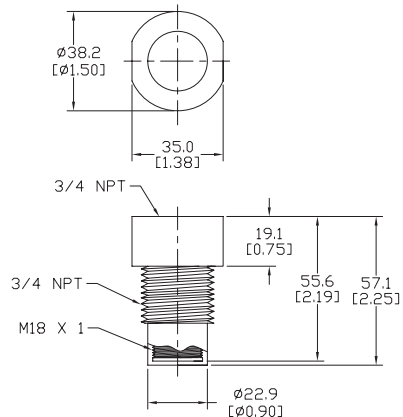


Figure 3

18mm Sensor Mounting Well



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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.

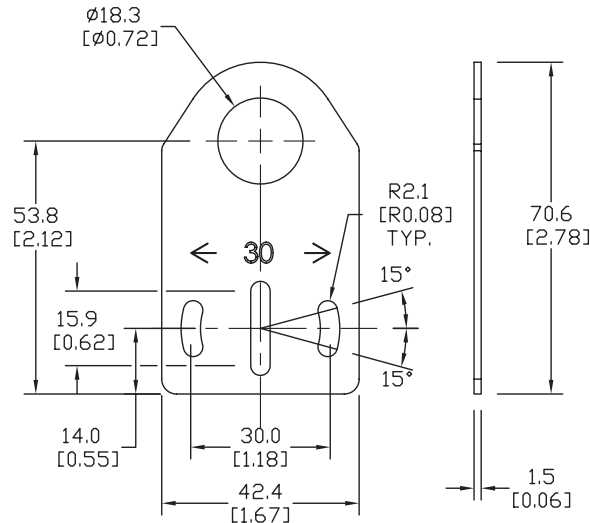
Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb (g)
ST18A	\$2.00	Mounting bracket, axial, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06 (27.2)
ST18A7W	\$6.75	Mounting bracket, axial, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06 (27.2)



ST18A

Dimensions

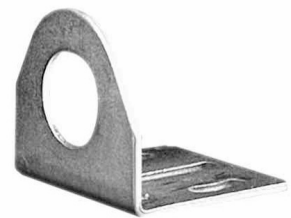
mm [inches]



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.

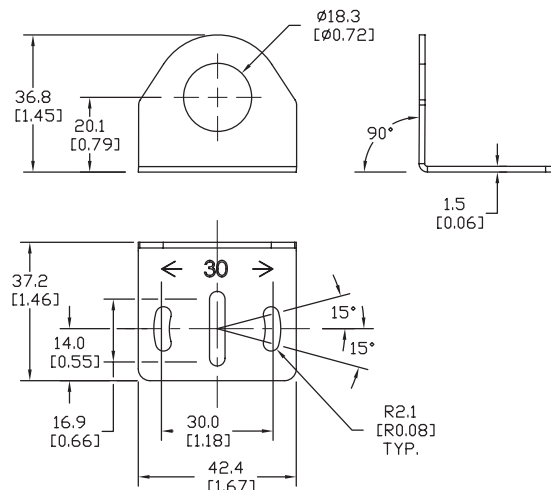
Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb (g)
ST18C	\$2.00	Mounting bracket, right angle, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06 (27.2)
ST18C7W	\$6.75	Mounting bracket, right angle, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06 (27.2)



ST18C

Dimensions

mm [inches]



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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.

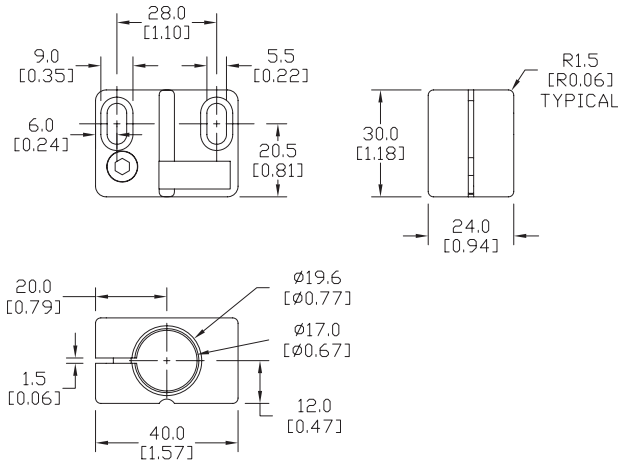


OPT2104, OPT2105

Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb (g)
OPT2104	\$8.75	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	0.06 (27.2)
OPT2105	\$8.75	Mounting bracket, right-angle, plastic. For use with 18mm sensors.	0.06 (27.2)

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.



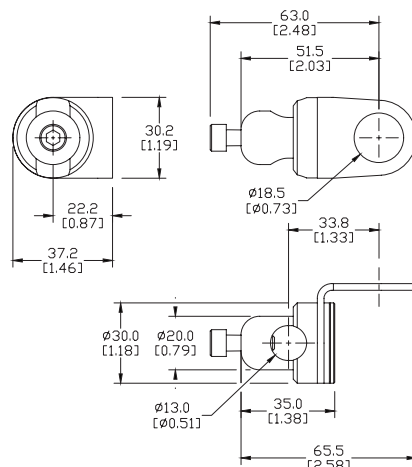
OPT2116, OPT2117

Accessories for 18mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight lb (g)
OPT2116	\$9.75	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 (68.0)
OPT2117	\$17.50	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 (127.0)

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]



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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.

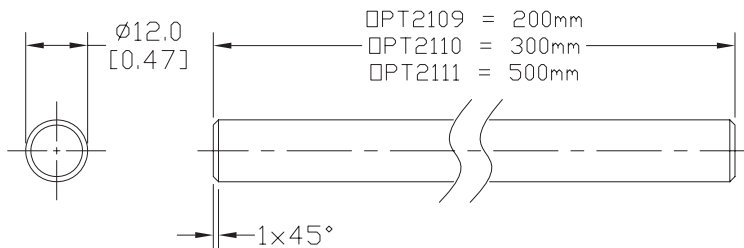
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight lb (g)
OPT2109	\$11.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41 (185.97)
OPT2110	\$13.50	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60 (272.16)
OPT2111	\$17.50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



OPT2109, OPT2110, OPT2111

Dimensions

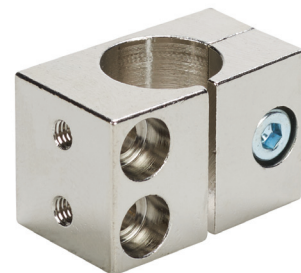
mm [inches]



Right-angle Mounting Bracket

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

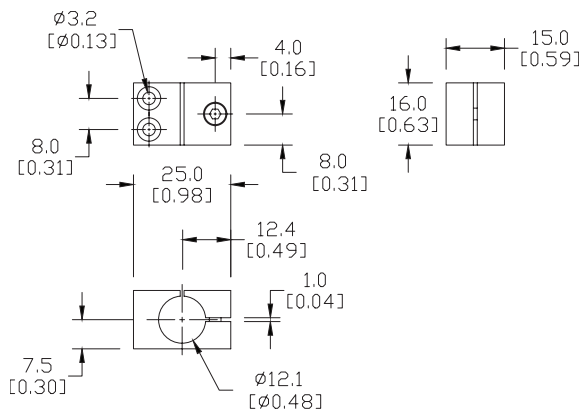
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight lb (g)
OPT2108	\$13.50	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07 (31.8)



OPT2108

Dimensions

mm [inches]



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