

# CK Series Capacitive Proximity Sensors

## M18 (18mm) plastic – DC



### Pushbutton models

- N.O./N.C. selectable
- Pushbutton teach
- LED status indicators
- IP65/IP67 rated
- M12 quick-disconnect; purchase cable separately
- Mounting accessories available

### Potentiometer models

- N.O. or N.C. units available
- Potentiometer sensitivity adjustment
- LED status indicators
- IP65/IP67/IP69K rated
- M12 quick-disconnect; purchase cable separately
- Mounting accessories available



### CK Series Capacitive Proximity Selection Chart

Part Number	Price	Sensing Distance	Mounting	Output State	Logic	Connection	Wiring	Dimensions
<b>Pushbutton select and teach</b>								
<b>CK1-00-2H</b>	\$96.00	12mm [0.47 in]	Non-flush	N.O./N.C.	NPN/PNP	M12 [12mm] quick-disconnect	Diagram 1	Figure 1
<b>Potentiometer sensitivity adjustment</b>								
<b>CK2-AP-1H</b>	\$66.00	8mm [0.32 in]	Flush	N.O.	PNP	M12 [12mm] quick-disconnect	Diagram 1 (PNP)	Figure 2
<b>CK2-CP-1H</b>	\$66.00	8mm [0.32 in]	Flush	N.C.	PNP	M12 [12mm] quick-disconnect	Diagram 1 (PNP)	Figure 2
<b>CK2-AP-2H</b>	\$66.00	15mm [0.59 in]	Non-flush	N.O.	PNP	M12 [12mm] quick-disconnect	Diagram 1 (PNP)	Figure 2
<b>CK2-CP-2H</b>	\$66.00	15mm [0.59 in]	Non-flush	N.C.	PNP	M12 [12mm] quick-disconnect	Diagram 1 (PNP)	Figure 2

### CK Series Capacitive Proximity Specifications

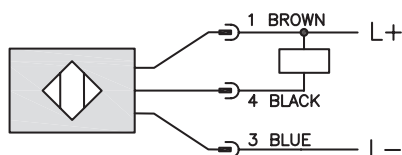
Part Number	CK1-00-2H	CK2-XX-XX	CK2-XX-XX
Mounting Type	Non-flush	Non-flush	Flush
Nominal Sensing Distance	12mm [0.47 in]	15mm [0.59 in]	8mm [0.32 in]
Operating Distance	NA	NA	
Material Correction Factors			
Output Type	NPN/PNP; N.O./N.C.	PNP; N.O./N.C.	
Operating Voltage	10 to 36VDC	10 to 30VDC	
No-load 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			
Ripple			
Time Delay Before Availability (tv)			
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/IP67IP69K	
Indication/Switch Status	Yellow [output energized]		
Housing Material	Polybutylene Terephthalate [PBT]		
Sensing Face Material			
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		

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

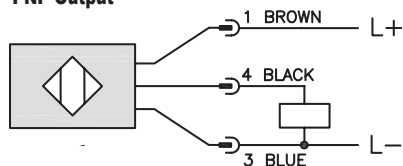
# CK Series Capacitive Proximity Sensors

## Wiring Diagrams

**Diagram 1**  
**NPN Output**

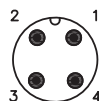


**PNP Output**



### Connectors

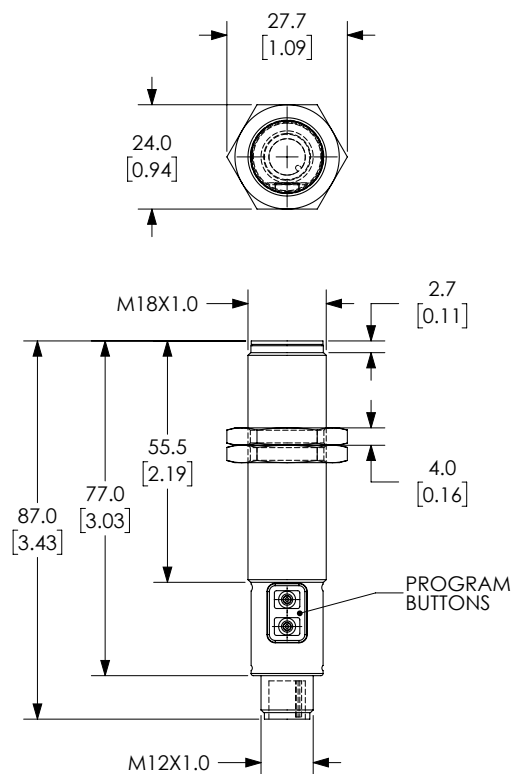
**M12 connector**



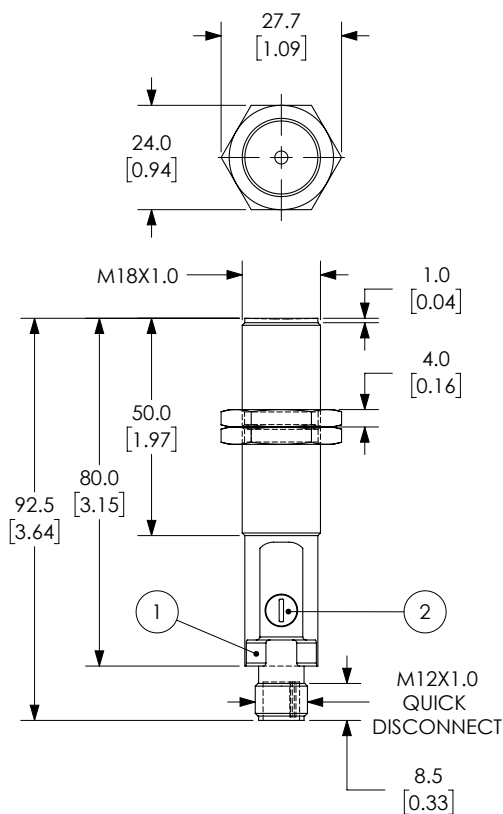
## Dimensions

mm [inches]

**Figure 1**



**Figure 2**



1 = LED YELLOW SWITCHING STATUS  
2 = POTENTIOMETER SENSING RANGE

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

# Capacitive Proximity Sensors - Accessories



Mounting Well

Mounting Adapter

Capacitive Proximity Sensors Accessory Chart				
Part Number	Price	Description	Material	Dimensions
<b>Mounting Adapter</b>				
<b>CR1-ADPTR</b>	\$4.50	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
<b>Mounting Wells</b>				
<b>MWT-01</b>	\$52.00	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
<b>MWK-01</b>	\$42.50	18mm [0.71 in] sensor mounting well		Figure 3

## Dimensions

mm [inches]

Figure 1

CR1 Adapter

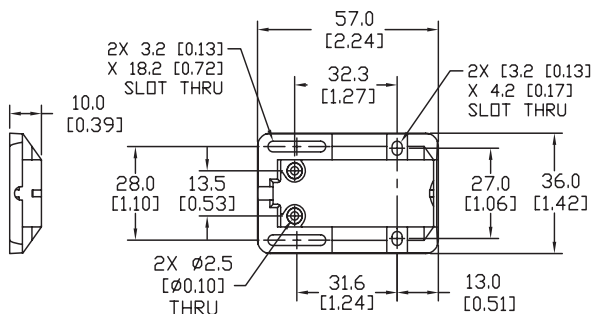


Figure 2

30mm Sensor Mounting Well

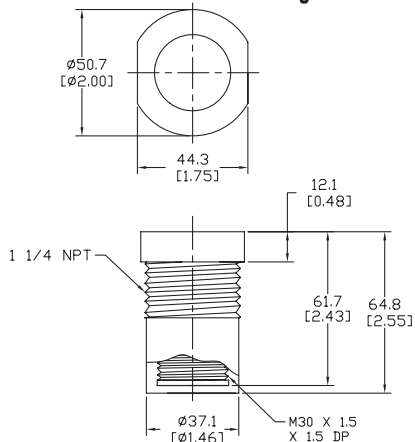
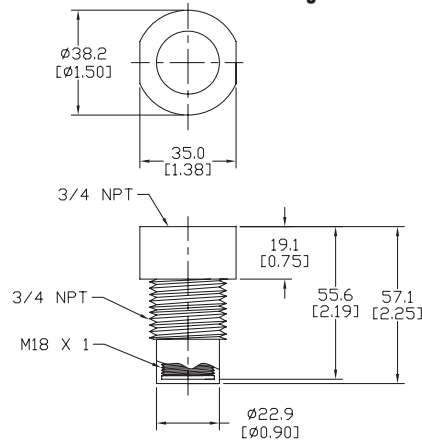


Figure 3

18mm Sensor Mounting Well

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	Drawing Link	Weight lb [g]
<a href="#">OPT2104</a>	\$10.50	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	<a href="#">PDF</a>	0.06 [27.2]
<a href="#">OPT2105</a>	\$10.50	Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors.	<a href="#">PDF</a>	0.06 [27.2]



[OPT2104](#), [OPT2105](#)

## 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	Drawing Link	Weight lb [g]
<a href="#">OPT2116</a>	\$11.50	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 18mm sensors.	Aluminum	304 Stainless steel	<a href="#">PDF</a>	0.15 [68.0]
<a href="#">OPT2117</a>	\$21.00	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 18mm sensors.	304 Stainless steel	304 Stainless steel	<a href="#">PDF</a>	0.28 [127.0]



[OPT2116](#), [OPT2117](#)

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).

# Mounting Rods and Brackets

## 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	Drawing Link	Weight lb (g)
<a href="#">OPT2109</a>	\$13.00	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	<a href="#">PDF</a>	0.41 [185.97]
<a href="#">OPT2110</a>	\$16.00	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	<a href="#">PDF</a>	0.60 [272.16]
<a href="#">OPT2111</a>	\$21.00	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	<a href="#">PDF</a>	0.98 [444.52]



## Right-angle Mounting Bracket

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

Right-angle Mounting Brackets for 12mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb [g]
<a href="#">OPT2108</a>	\$16.00	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	<a href="#">PDF</a>	0.07 [31.8]

