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



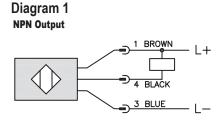
CK Series Capacitive Proximity Selection Chart								
Part Number	Price	Sensing Distance	Mounting	Output State	Logic	Connection	Wiring	Dimensions
Pushbutton select and teach								
CK1-00-2H	\$96.00	12mm [0.47 in]	Non-flush	N.O./N.C.	NPN/PNP	M12 [12mm] quick-disconnect	Diagram 1	Figure 1
Potentiometer sen	sitivity adjus	stment						
CK2-AP-1H	\$66.00	8mm [0.32 in]	Flush	N.O.	PNP	M12 [12mm] quick-disconnect	Diagram 1 (PNP)	Figure 2
CK2-CP-1H	\$66.00	8mm [0.32 in]	Flush	N.C.	PNP	M12 [12mm] quick-disconnect	Diagram 1 (PNP)	Figure 2
CK2-AP-2H	\$66.00	15mm [0.59 in]	Non-flush	N.O.	PNP	M12 [12mm] quick-disconnect	Diagram 1 (PNP)	Figure 2
CK2-CP-2H	\$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	<u>CK1-00-2H</u>	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 NA					
Material Correction Factors	NA	INF	1				
Output Type	NPN/PNP; N.O./N.C.	PNP; N.O	D./N.C.				
Operating Voltage	10 to 36VDC	10 to 30	OVDC				
No-load Supply Current	< 20mA	< 221	mA				
Operating (Load) Current	2	00mA					
Off-state (Leakage) Current		NA					
Voltage Drop	<	2.5V					
Switching Frequency	10Hz	30⊦	łz				
Differential Travel (% of Nominal Distance)							
Repeat Accuracy	NA.						
Ripple	NA						
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/IF	P67IP69K				
Indication/Switch Status	Yellow [ou	tput energized]					
Housing Material	Dali hut Jana T						
Sensing Face Material	Polybutylene i	erephthalate [PBT]					
Shock/Vibration	DIN EN	1 60947-5-2					
Tightening Torque	2.0 N•n	n [1.48 lb•ft]					
Weight	59g [2.08 oz]	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.

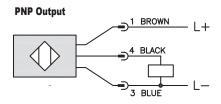
CK Series Capacitive Proximity Sensors

Wiring Diagrams



Connectors
M12 connector

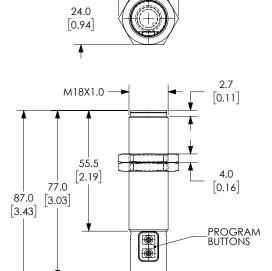




Dimensions

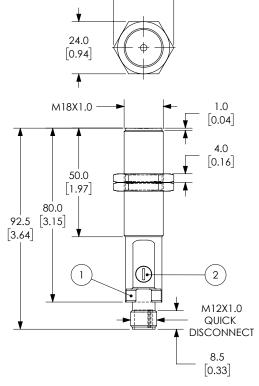
mm [inches]

Figure 1



[1.09]





27.7

[1.09]

1 = LED YELLOW SWITCHING STATUS 2 = POTENTIOMETER SENSING RANGE

M12X1.0 →

Capacitive Proximity Sensors - Accessories



Mounting Adapter

Capacitive Proximity Sensors Accessory Chart					
Part Number	Price	Description	Material	Dimensions	
Mounting Adapter					
CR1-ADPTR	\$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	
Mounting Wells					
MWT-01	\$52.00	30mm [1.18 in] sensor mounting well	PTFE - Polytetrafluoroethylene (Teflon®)	Figure 2	
<u>MWK-01</u>	\$42.50	18mm [0.71 in] sensor mounting well	Temp: -25 to 246°C [-13 to 474.8°F] Max. pressure: 100 PSI [6.9 bar]	Figure 3	

Dimensions

mm [inches]

Figure 1

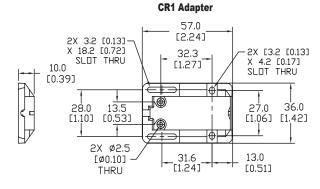
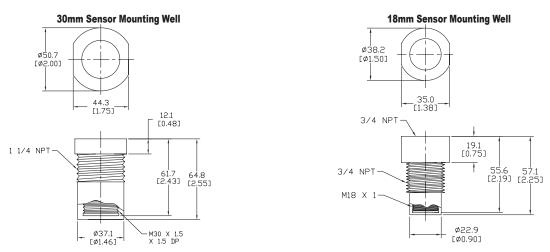


Figure 2 Figure 3



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

Accessories for 18mm Sensors

Axial Mounting Bracket

Axial mounting bracket available in zinc plated steel or 316L stainless steel. Has two mounting holes (use 4mm screws) and allows for rotation of an optical axis for right-beam-angle-adapter sensors. Hexagonal nuts not included. For use with 18mm sensors.

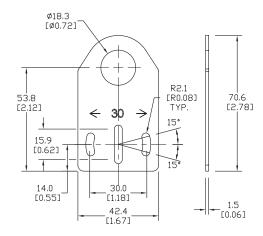
Accessories for 18mm Sensors					
Part Number	Weight lb [g]				
<u>ST18A</u>	\$2.00	Micro Detectors mounting bracket, axial, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]		
<u>ST18A7W</u>	\$7.25	Micro Detectors mounting bracket, axial, 316L stainless steel. For use with 18mm sensors.	0.06 [27.2]		



ST18A

Dimensions

mm [inches]



Right-angle Mounting Bracket

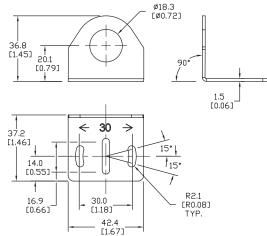
Right-angle mounting bracket for use with 18mm sensors. Has two mounting holes (use 4mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

Accessories for 18mm Sensors					
Part Number	Part Number Price Description				
ST18C	\$2.00	Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]		
<u>ST18C7W</u>	\$7.25	Micro Detectors mounting bracket, right-angle, 316L stainless steel. For use with 18mm sensors.	0.06 [27.2]		



Dimensions

mm [inches]



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]					
<u>OPT2104</u>	\$10.50	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	PDF	0.06 [27.2]					
<u>OPT2105</u>	\$10.50	Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors.	<u>PDF</u>	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]		
<u>OPT2116</u>	\$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	<u>PDF</u>	0.15 [68.0]		
<u>OPT2117</u>	\$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	<u>PDF</u>	0.28 [127.0]		



OPT2116, OPT2117

Note: 304 Stainless steel mounting rods sold separately: <u>OPT2109</u> (200mm [7.87 in] length), <u>OPT2110</u> (300mm [11.81 in] length), and <u>OPT2111</u> (500mm [19.69 in] length).

Mounting Rods and Brackets

Mounting Rods

304 Stainless steel rods for mounting swivel brackets <u>OPT2112</u> - <u>OPT2127</u> 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 Ib (g)			
<u>OPT2109</u>	\$13.00	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	PDF	0.41 [185.97]			
<u>OPT2110</u>	\$16.00	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	PDF	0.60 [272.16]			
<u>OPT2111</u>	\$21.00	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	PDF	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]			
<u>OPT2108</u>	\$16.00	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	<u>PDF</u>	0.07 [31.8]		

