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

NEED CABLES?

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		12mm (0.47 in)	Non-flush	N.O./N.C.	NPN/PNP	M12 (12mm) quick-disconnect	Diagram 1	Figure 1
Potentiometer sensitivity adjustment								
CK2-AP-1H		8mm (0.32 in)	Flush	N.O.	PNP	M12 (12mm) quick-disconnect	Diagram 1 (PNP)	Figure 2
CK2-CP-1H		8mm (0.32 in)	Flush	N.C.	PNP	M12 (12mm) quick-disconnect	Diagram 1 (PNP)	Figure 2
CK2-AP-2H		15mm (0.59 in)	Non-flush	N.O.	PNP	M12 (12mm) quick-disconnect	Diagram 1 (PNP)	Figure 2
CK2-CP-2H		15mm (0.59 in)	Non-flush	N.C.	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			
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		

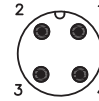# CK Series Capacitive Proximity Sensors

Wiring diagrams

Diagram 1

NPN Output
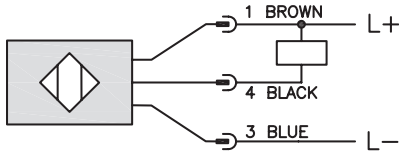
1 BROWN   L+
4 BLACK
3 BLUE   L−

PNP Output

1 BROWN   L+
4 BLACK
3 BLUE   L−

Connectors

M12 connector

2   1
3   4

Dimensions
mm [inches]

Figure 1

27.7 [1.09]
24.0 [0.94]

M18X1.0
2.7 [0.11]
55.5 [2.19]
4.0 [0.16]
77.0 [3.03]
87.0 [3.43]

PROGRAM BUTTONS

M12X1.0

Figure 2

27.7 [1.09]
24.0 [0.94]

M18X1.0
1.0 [0.04]
4.0 [0.16]
50.0 [1.97]
80.0 [3.15]
92.5 [3.64]

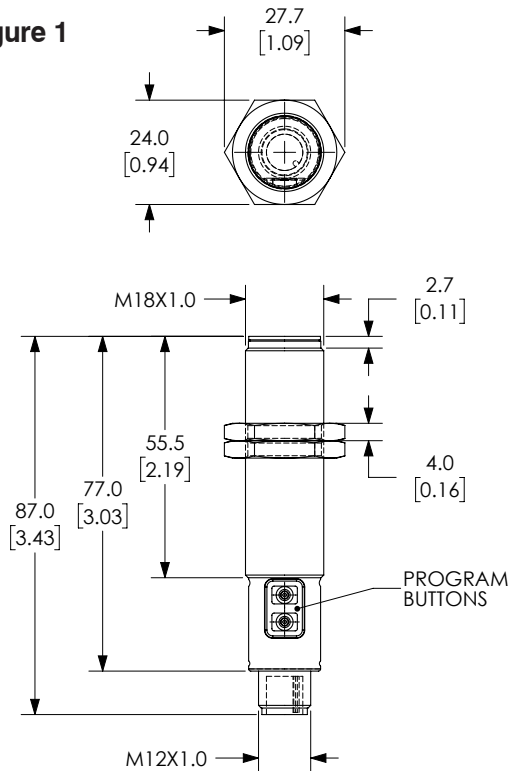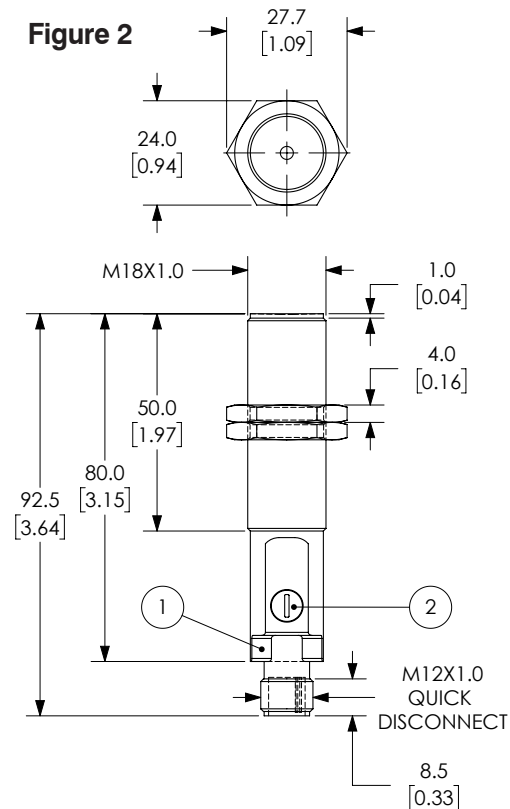1   2

M12X1.0 QUICK DISCONNECT

8.5 [0.33]
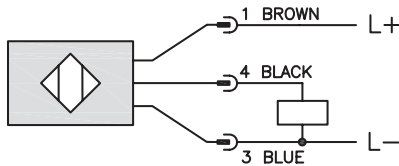
1 = LED YELLOW SWITCHING STATUS
2 = POTENTIOMETER SENSING RANGE

See our websfite: for compflete engfineerfing drawfings

Proximity Sensors   tSEN-159

Capacitive Proximity Sensors - Accessories

Mounting Well

Mounting Adapter

Capacitive Proximity Sensors Accessory Chart				
Part Number	*Price*	*Description*	*Material*	*Dimensions*
Mounting Adapter				
CR1-ADPTR		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		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		18mm (0.71 in) sensor mounting well		Figure 3

Dimensions

mm [inches]

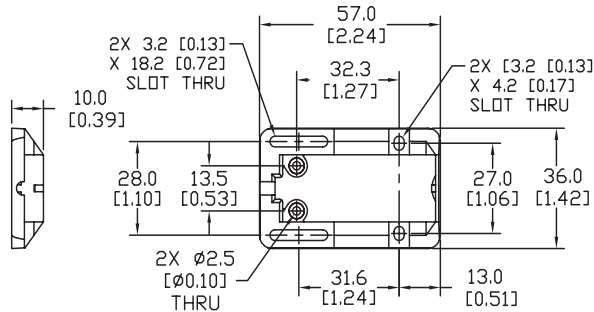**Figure 1**

CR1 Adapter

2X 3.2 [0.13] X 18.2 [0.72] SLOT THRU
57.0 [2.24]
32.3 [1.27]
10.0 [0.39]
2X [3.2 [0.13] X 4.2 [0.17] SLOT THRU
28.0 [1.10]
13.5 [0.53]
27.0 [1.06]
36.0 [1.42]
2X Ø2.5 [Ø0.10] THRU
31.6 [1.24]
13.0 [0.51]

Figure 2

30mm Sensor Mounting Well

Ø50.7 [Ø2.00]
44.3 [1.75]
12.1 [0.48]
1 1/4 NPT
61.7 [2.43]
64.8 [2.55]
Ø37.1 [1.46]
M30 X 1.5 X 1.5 DP
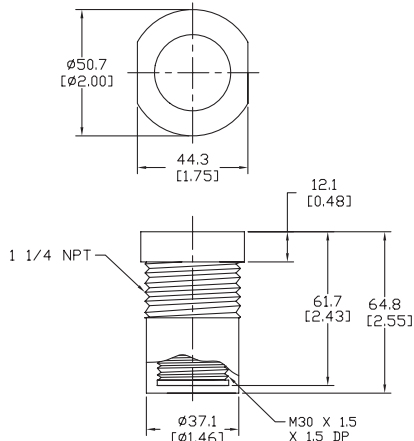
Figure 3

18mm Sensor Mounting Well

Ø38.2 [Ø1.50]
35.0 [1.38]
3/4 NPT
19.1 [0.75]
3/4 NPT
55.6 [2.19]
57.1 [2.25]
M18 X 1
Ø22.9 [Ø0.90]

See our websfite: for compleete engfineerfing drawfings

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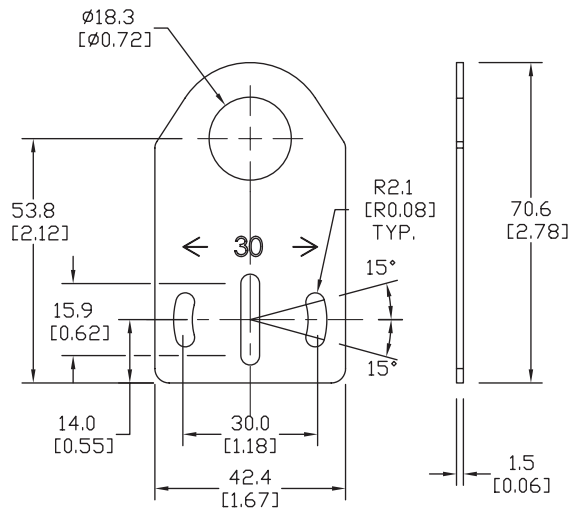
Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb (g)
ST18A		Mounting bracket, axial, zinc plated steel. For use with 18mm sensors.	0.06 (27.2)
ST18A7W		Mounting bracket, axial, 316L stainless steel. For use with 18mm sensors.	0.06 (27.2)

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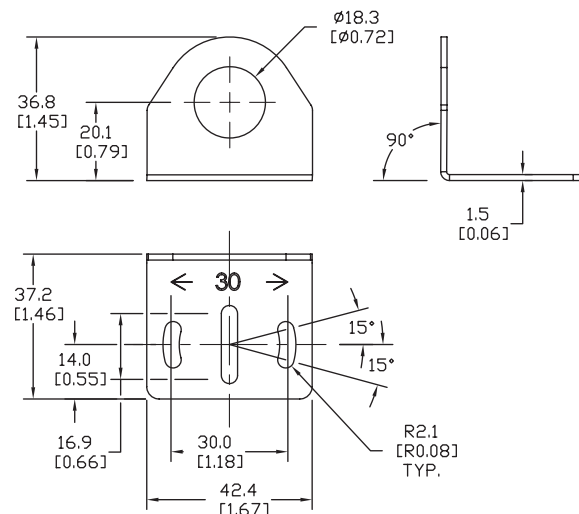
Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb (g)
ST18C		Mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors.	0.06 (27.2)
ST18C7W		Mounting bracket, right-angle, 316L stainless steel. For use with 18mm sensors.	0.06 (27.2)

ST18C

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)*
OPT2104		Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	PDF	0.06 (27.2)
OPT2105		Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors.	PDF	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)*
OPT2116		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	PDF	0.15 (68.0)
OPT2117		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	PDF	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).

OPT2116, OPT2117

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)
OPT2109		Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	PDF	0.41 (185.97)
OPT2110		Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	PDF	0.60 (272.16)
OPT2111		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)
OPT2108		Wenglor mounting bracket, right-angle, nickel plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	PDF	0.07 (31.8)