

CT Series Capacitive Proximity Sensors

M30 (30 mm) metal, plastic – DC, AC/DC



Plastic Housings:

- Auto-detect circuit (CT1-00-2H only)
- Push button teach
- NO/NC selectable
- IP65/IP67 rated
- LED status indicators
- M12 or 1/2 inch Micro AC quick-disconnect; purchase cable separately
- Mounting accessories available

Metal Housings:

- NO or NC options
- IP65 rated
- 2m axial cable
- LED status indicators
- Mounting accessories available



CT Series Capacitive Prox Selection Chart								
Part Number	Price	Sensing Distance	Housing	Output State	Logic	Connection	Wiring	Dimensions
Plastic Housing								
CTV-00-2M	\$88.00	40 mm (1.575 in)	Unshielded	NO/NC	-	1/2 inch micro AC quick disconnect	Diagram 1	Figure 1
CT1-00-2H	\$69.00				NPN/PNP	M12 (12 mm) quick disconnect	Diagram 2	Figure 2
Metal Housing								
CT1-AN-1A	\$72.00	15 mm (0.59 in)	Shielded	NO	NPN	2m (6.5') axial cable	Diagram 3	Figure 3
CT1-AP-1A	\$72.00				PNP		Diagram 4	
CT1-AN-2A	\$72.00	20 mm (0.70 in)	Unshielded		NPN		Diagram 3	
CT1-AP-2A	\$72.00				PNP		Diagram 4	
CT1-CN-2A	\$72.00	20 mm (0.70 in)		NC	NPN		Diagram 3	
CT1-CP-2A	\$72.00				PNP		Diagram 4	

Wiring diagrams

Diagram 1

AC Output

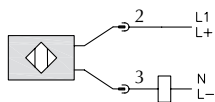


Diagram 2

NPN Output

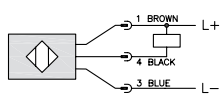


Diagram 3

NPN Output

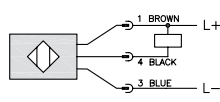
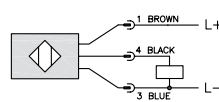


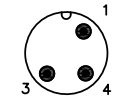
Diagram 4

PNP Output

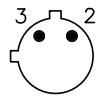


Connectors

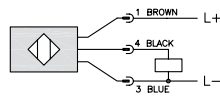
M12 connector



1/2" micro AC



PNP Output



CT Series Capacitive Proximity Sensors

CT Series Specifications	CT1-AN-1A	CT1-AP-1A	CT1-AN-2A	CT1-AP-2A	CT1-CN-2A	CT1-CP-2A	CT1-00-2H	CTV-00-2M
Mounting Type	Shielded		Unshielded					
Nominal Sensing Distance	15 mm (0.59 in)		20 mm (0.70 in)				40 mm (1.575 in)	
Sensitivity	20-turn potentiometer						Push to teach	
Operating Distance	NA							
Material Correction Factors	NA							
Output Type	NPN/PNP; NO/NC						AC/DC; NO/NC	
Operating Voltage	10 to 30 VDC				10 to 36 VDC		20 to 250 VDC/ 30 to 250 VAC	
No-load Supply Current	8 mA				<20 mA		NA	
Operating (Load) Current	≤200 mA				200 mA		150 mA (40°C)/ 100 mA (80°C) continuous or 1.0 A (20 ms/ 0.5 Hz) peak	
Off-state (Leakage) Current	≤10 µA				NA		<2.5 mA (250 VAC)/ <1.7 mA (110 VAC)/ <1.5 mA (24 VDC)	
Voltage Drop	1.8 volts maximum				<2.5 VDC		<8 VDC/ <10 VAC	
Switching Frequency	100Hz						10Hz	
Differential Travel (% of Nominal Distance)	2 to 20%						NA	
Repeat Accuracy	10%							
Ripple	≤10%							
Time Delay Before Availability (tv)	100 ms							
Reverse Polarity Protection	Yes							
Short-circuit Protection	Yes (switch auto-resets after overload is removed)						Yes, pulsed	No
Operating Temperature	-25° to +70°C (-13° to 158°F)						-25° to 80°C (-13° to 176°F) Sensing face: -25° to 110°C (-13° to 230°F)	
Protection Degree (DIN 40050)	IEC IP65						IEC IP65/IP67	
Indication/Switch Status	Green (supply), Red (NO output energized)						Yellow (output energized)	
Housing Material	Nickel-plated brass						Polybutylene Terephthalate (PBT)	
Sensing Face Material	Polybutylene Terephthalate (PBT)							
Shock/Vibration	See Proximity Sensor Terminology							
Tightening Torque	50 Nm (37 lb-ft)						8.0 Nm	
Weight	280g (19.88oz)				117g (4.13 oz)		122g (4.30 oz)	
Connectors	2m (6.5') axial cable 2 lock nuts included				M12 connector 2 lock nuts included		1/2 inch micro AC connector 2 lock nuts included	
Agency Approvals	CE						cULus file E328811, CE, RoHS	

Dimensions mm [inches]

Figure 1

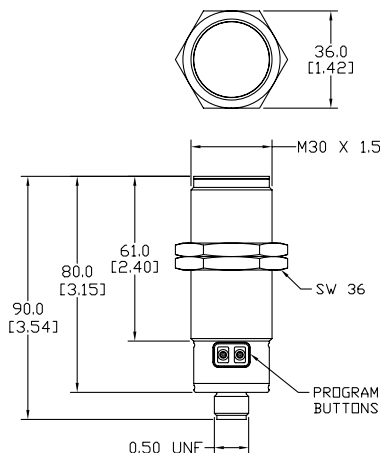


Figure 2

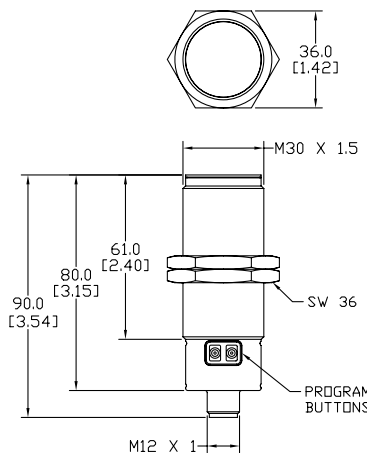
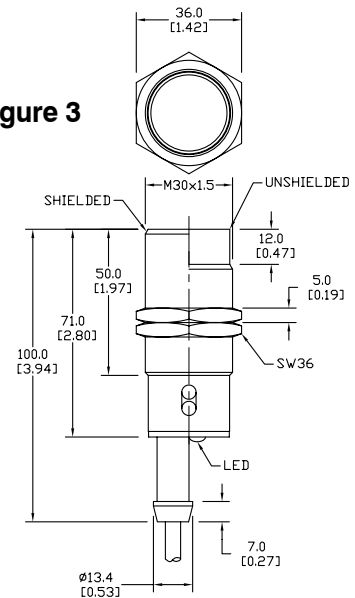


Figure 3



CR Series Capacitive Proximity Sensors

Rectangular plastic - DC



- Low profile housing ideal for sight glass applications
- NO/NC selectable
- IP65/IP67 rated
- LED status indicators
- Lifetime warranty
- Auto-detect circuit
- Push button teach
- Mounting accessories available

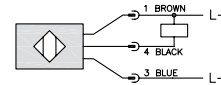
CR Series Capacitive Prox Selection Chart								
Part Number	Price	Sensing Distance	Housing	Output State	Logic	Connection	Wiring	Dimensions
CR1-00-2A	\$59.00	12 mm (0.472 in)	Unshielded	NO/NC	NPN/PNP	2 m (6.5 ft.) axial cable	Diagram 1	Figure 1

CR Series Specifications	CR1-00-2A
Mounting Type	Unshielded
Nominal Sensing Distance	12 mm (0.472 in)
Operating Distance	NA
Material Correction Factors	
Output Type	NPN/PNP; NO/NC
Operating Voltage	10 to 36 VDC
No-load Supply Current	<17 mA
Operating (Load) Current	100 mA
Off-state (Leakage) Current	NA
Voltage Drop	<2.5V
Switching Frequency	10Hz
Differential Travel (% of Nominal Distance)	
Repeat Accuracy	NA
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)
Protection Degree (DIN 40050)	IEC IP65/IP67
Indication/Switch Status	Yellow (output energized)
Housing Material	Polybutylene Terephthalate (PBT)
Sensing Face Material	
Shock/Vibration	See Proximity Sensor Terminology
Tightening Torque	NA
Weight	92g (3.25 oz)
Connectors	2 meter axial cable
Agency Approvals	cULus file E328811, CE, RoHS

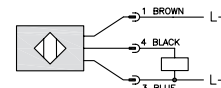
Wiring diagrams

Diagram 1

NPN Output

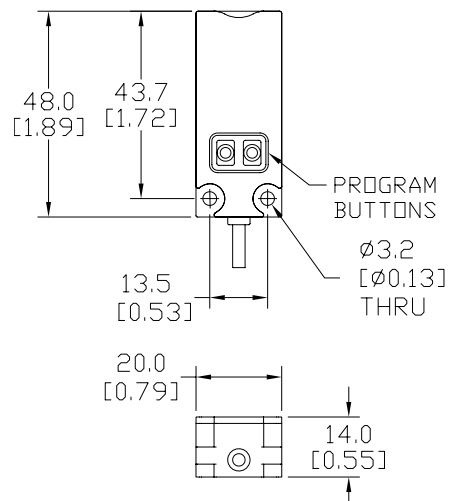


PNP Output



Dimensions mm [inches]

Figure 1



Capacitive Proximity Sensors - Accessories



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 Nm)	Figure 1
Mounting Wells				
MWT-01	\$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
MWK-01	\$35.00	18 mm sensor mounting well		Figure 3

Dimensions mm[inches]

Figure 1

CR1 Adapter

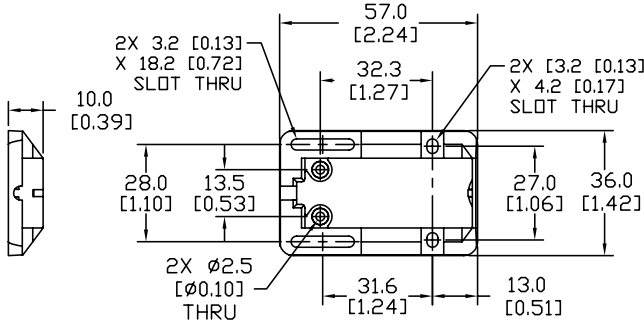


Figure 2

30mm Sensor Mounting Well

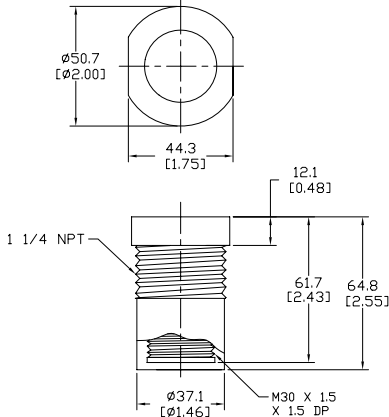
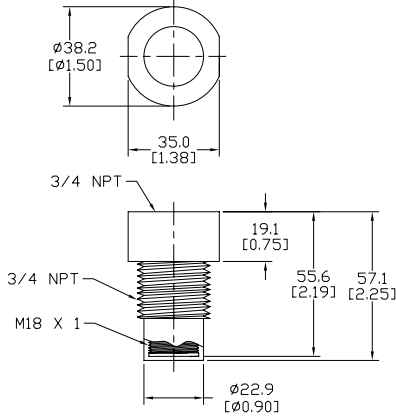


Figure 3

18mm Sensor Mounting Well



Accessories for 30mm Sensors

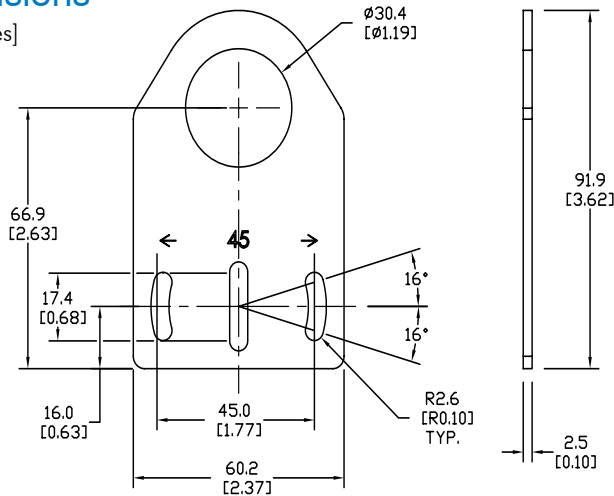
Axial Mounting Bracket

Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for right-beam-angle-adaptor sensors. Hexagonal nuts not included.

Accessories for 30mm Sensors			
Part Number	Price	Description	Weight [lb]
ST30A	\$2.25	Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. 1/pk.	0.18

Dimensions

mm [inches]



ST30A

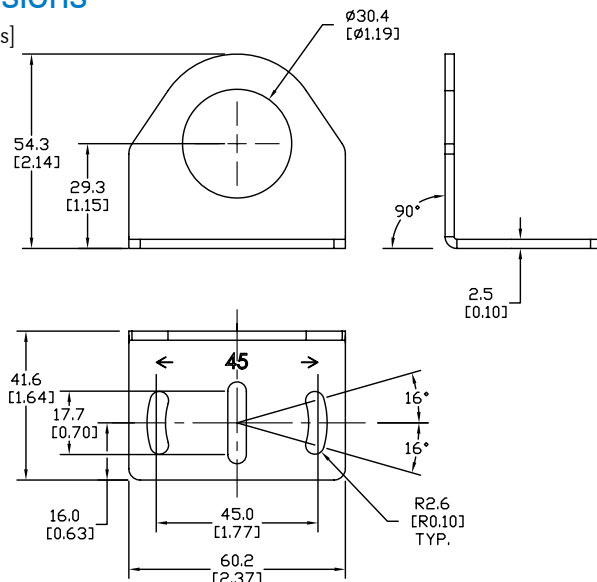
Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

Accessories for 30mm Sensors			
Part Number	Price	Description	Weight [lb]
ST30C	\$2.25	Mounting bracket, right angle, zinc-plated steel. For use with 30mm sensors. 1/pk.	0.18

Dimensions

mm [inches]



ST30C

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Accessories for 30mm Sensors

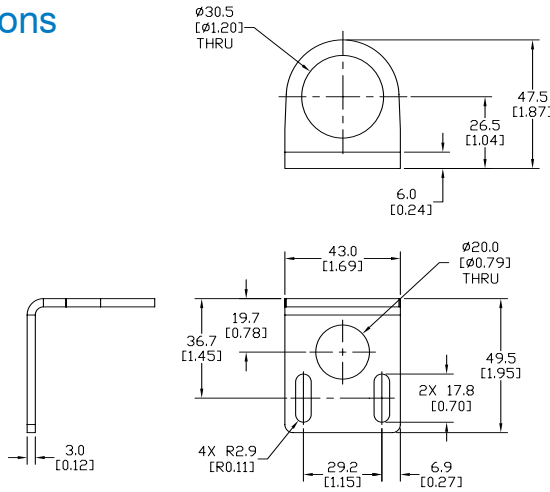
Right-angle Mounting Bracket

Mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.

Accessories for FW Series Sensors			
Part Number	Price	Description	Weight [lb]
ST30C6W	\$2.50	Mounting bracket, right angle, 304 stainless steel. For use with 30mm sensors.	0.15

Dimensions

mm [inches]



ST30C6W

Right-angle Swivel Mounting Systems

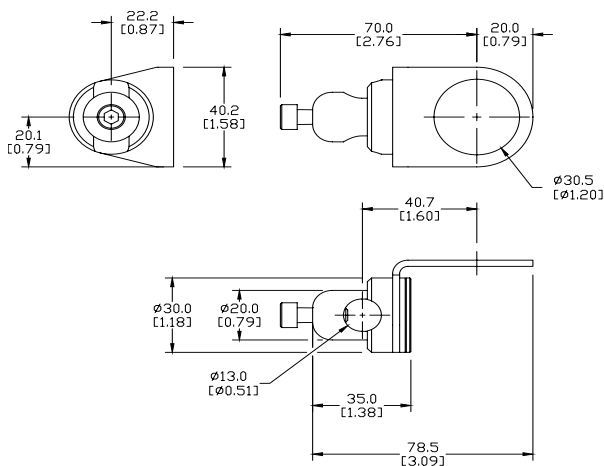
Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

Accessories for 30mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
OPT2118	\$9.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 30mm sensors.	Aluminum	304 Stainless Steel	0.18
OPT2119	\$16.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 30mm sensors.	304 Stainless Steel	304 Stainless Steel	0.30

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

Dimensions

mm [inches]



OPT2118, OPT2119

See our website: 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.

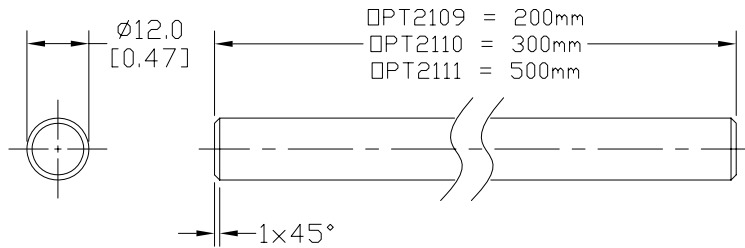
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
OPT2109	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
OPT2110	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
OPT2111	\$16.00	Mounting rod,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

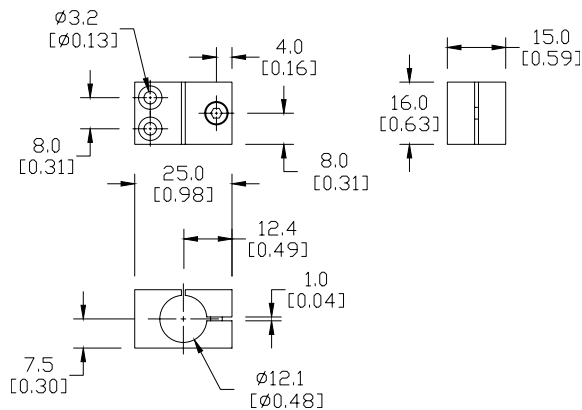
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
OPT2108	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



OPT2108

Dimensions

mm [inches]



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