CT Series Capacitive Proximity Sensors

M30 (30mm) metal

- Potentiometer sensitivity adjustment
- NO or NC units
- IP65 rated
- LED status indicators
- 2m (6.56 ft) axial cable
- Mounting accessories available

NEED CABLES?

CT Series Capacitive Prox Selection Chart								
Part Number	**Price**	**Sensing Distance**	**Housing**	**Output State**	**Logic**	**Connection**	**Wiring**	**Dimensions**
Metal Housing								
CT1-AN-1A	$75.00	15mm (0.59 in)	Shielded	NO	NPN	2m (6.56 ft) axial cable	Diagram 1	Figure 1
CT1-AP-1A	$75.00	15mm (0.59 in)	Shielded	NO	PNP	2m (6.56 ft) axial cable	Diagram 2	Figure 1
CT1-AN-2A	$75.00	20mm (0.79 in)	Unshielded	NO	NPN	2m (6.56 ft) axial cable	Diagram 1	Figure 1
CT1-AP-2A	$75.00	20mm (0.79 in)	Unshielded	NO	PNP	2m (6.56 ft) axial cable	Diagram 2	Figure 2
CT1-CN-2A	$75.00	20mm (0.79 in)	Unshielded	NC	NPN	2m (6.56 ft) axial cable	Diagram 1	Figure 1
CT1-CP-2A	$75.00	20mm (0.79 in)	Unshielded	NC	PNP	2m (6.56 ft) axial cable	Diagram 2	Figure 1

CT Series Specifications	CT1-xx-1x	CT1-xx-2x
Mounting Type	Shielded	Unshielded
Nominal Sensing Distance	15mm (0.59 in)	20mm (0.79 in)
Sensitivity	20-turn potentiometer	
Operating Distance	NA	
Material Correction Factors		
Output Type	NPN/PNP; NO/NC	
Operating Voltage	10 to 30VDC	
No-load Supply Current	8mA	
Operating (Load) Current	≤200mA	
Off-state (Leakage) Current	≤10µA	
Voltage Drop	1.8 volts maximum	
Switching Frequency	100Hz	
Differential Travel (% of Nominal Distance)	2 to 20%	
Repeat Accuracy	10%	
Ripple	≤10%	
Time Delay Before Availability (tv)	100ms	
Reverse Polarity Protection	Yes	
Short-circuit Protection	Yes (switch auto-resets after overload is removed)	
Operating Temperature	-25° to +70°C (-13° to 158°F)	
Protection Degree (DIN 40050)	IEC IP65	
Indication/Switch Status	Green (supply, Red [NO output energized])	
Housing Material	Nickel-plated brass	
Sensing Face Material	Polybutylene Terephthalate (PBT)	
Shock/Vibration	DIN EN 60947-5-2	
Tightening Torque	50N•m (36.9 lb•ft)	
Weight	280g (19.88oz)	
Connectors	2m (6.56 ft) axial cable, 2 lock nuts included	
Agency Approvals	CE	

CT Series Capacitive Proximity Sensors

Wiring diagrams

Diagram 1
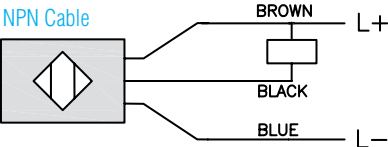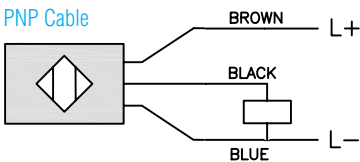
NPN Cable

BROWN — L+

BLACK

BLUE — L−

Diagram 2

PNP Cable

BROWN — L+

BLACK

BLUE — L−

Dimensions

mm [inches]

Figure 1

36.0 [1.42]

41.6 [1.64]

SHIELDED

UNSHIELDED

M30X1.5

12.0 [0.47]

58.9 [2.32]

79.9 [3.15]

87.1 [3.43]

59.4 [2.34]

80.4 [3.17]

87.6 [3.45]

7.2 [0.28]
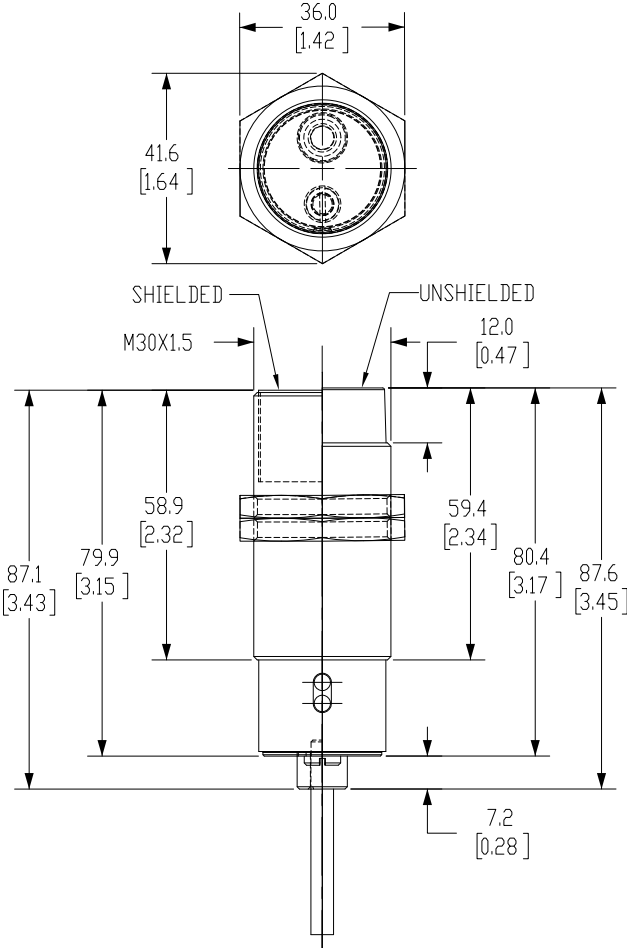
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Capacitive Proximity Sensors - Accessories

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	$44.50	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	$36.50	18mm (0.71 in) sensor mounting well		Figure 3

Dimensions

mm [inches]
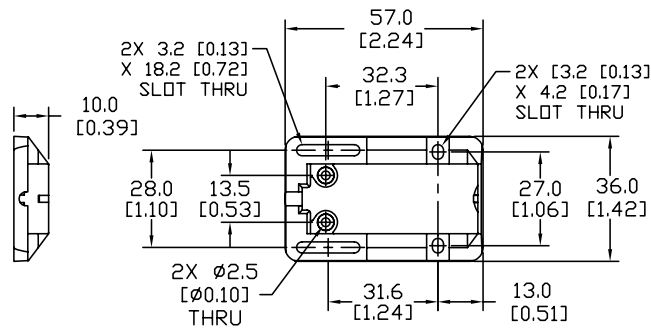
Figure 1

CR1 Adapter

Figure 2

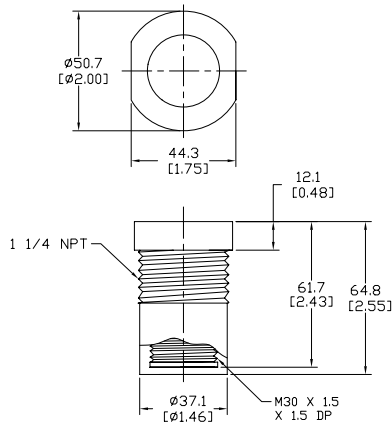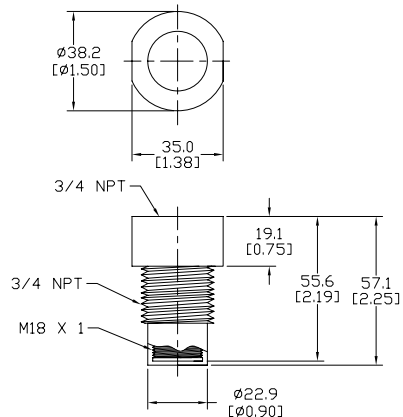**30mm Sensor Mounting Well**

Figure 3

18mm Sensor Mounting Well

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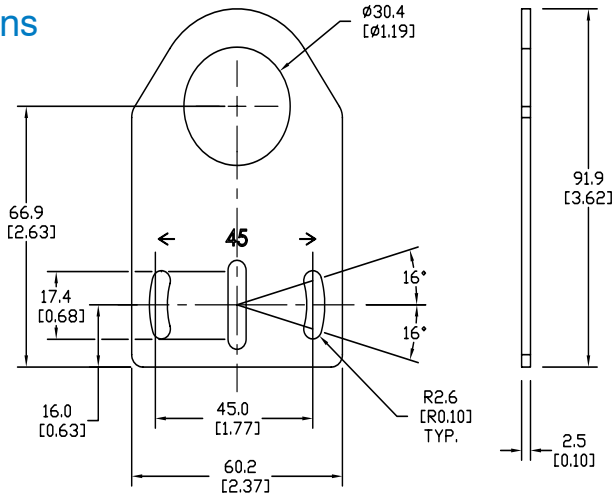
Accessories for 30mm Sensors

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-adapter sensors. Hexagonal nuts not included.

Accessories for 30mm Sensors				
Part Number	Price	Description		Weight lb (g)
ST30A	$2.00	Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. 1/pk.		0.18 (81.7 g)

ST30A

Dimensions

mm [inches]

Ø30.4 [Ø1.19]

91.9 [3.62]

66.9 [2.63]

45

17.4 [0.68]

16°

16°

16.0 [0.63]

45.0 [1.77]

R2.6 [R0.10] TYP.

60.2 [2.37]

2.5 [0.10]

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 (g)
ST30C	$2.00	Mounting bracket, right angle, zinc-plated steel. For use with 30mm sensors. 1/pk.		0.18 (81.7 g)

ST30C

Dimensions

mm [inches]

Ø30.4 [Ø1.19]

54.3 [2.14]

29.3 [1.15]

90°

2.5 [0.10]

45

41.6 [1.64]

17.7 [0.70]

16°

16°

16.0 [0.63]

45.0 [1.77]

R2.6 [R0.10] TYP.

60.2 [2.37]

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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 (g)**
ST30C6W	$2.50	Mounting bracket, right angle, 304 stainless steel. For use with 30mm sensors.	0.15 (68.0)

Dimensions

mm [inches]

Ø30.5 [Ø1.20] THRU

47.5 [1.87]

26.5 [1.04]

6.0 [0.24]

43.0 [1.69]

Ø20.0 [Ø0.79] THRU

19.7 [0.78]

36.7 [1.45]

49.5 [1.95]

2X 17.8 [0.70]

3.0 [0.12]

4X R2.9 [R0.11]

29.2 [1.15]

6.9 [0.27]

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 (g)**
OPT2118	$9.25	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	$16.50	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 [7.87 in] length), OPT2110 (300mm [11.81 in] length), and OPT2111 (500mm [19.69 in] length).

Dimensions

mm [inches]

22.2 [0.87]

70.0 [2.76]

20.0 [0.79]

40.2 [1.58]

20.1 [0.79]

Ø30.5 [Ø1.20]

40.7 [1.60]

Ø30.0 [Ø1.18]

Ø20.0 [Ø0.79]

Ø13.0 [Ø0.51]

35.0 [1.38]

78.5 [3.09]

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 (g)
OPT2109	$10.50	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.		0.41
OPT2110	$12.50	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.		0.60
OPT2111	$16.50	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.		0.98

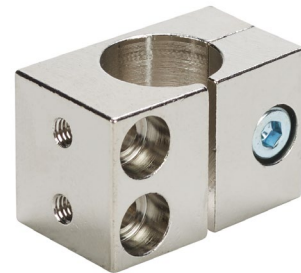*OPT2109, OPT2110, OPT2111*

Dimensions

mm [inches]
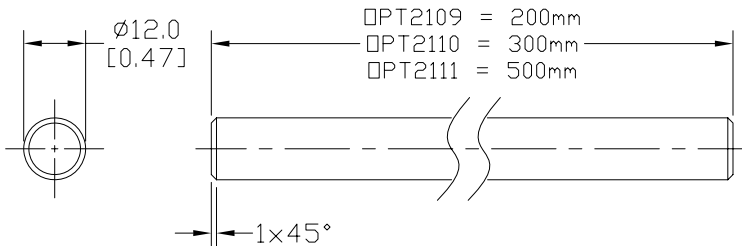
Right-angle Mounting Bracket

Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.
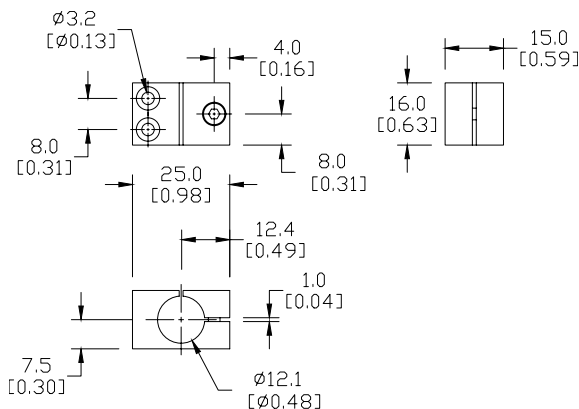
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight lb (g)
OPT2108	$12.50	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07 (31.8)

OPT2108

Dimensions

mm [inches]