

DW Series 18mm Triple Sensing Proximity Sensors



M18 (18mm) chrome plated brass – DC



- Sixteen models available
- 18mm threaded triple distance proximity sensor
- 12mm and 20mm sensing
- Complete overload protection
- IP67 rated
- Two M18 lock nuts included
- Chrome plated brass construction
- LED status indicator
- Lifetime warranty



DW Series 18mm Triple Distance Inductive Prox Selection Chart									
Part Number	Price	Size	Sensing Range	Housing	Output State	Logic	Connection	Wiring	Dimensions
Triple Distance Shielded									
DW-AD-501-M18	\$54.00	M18	12mm (0.472 in)	Shielded	NO	NPN	2m (6.5') axial cable	Diagram 1	Figure 1
DW-AD-503-M18	\$54.00					PNP		Diagram 2	Figure 1
DW-AS-501-M18-002	\$54.00					NPN	M12 quick disconnect	Diagram 3	Figure 3
DW-AS-503-M18-002	\$54.00					PNP		Diagram 4	Figure 3
DW-AD-502-M18	\$54.00				NC	NPN	2m (6.5') axial cable	Diagram 1	Figure 1
DW-AD-504-M18	\$54.00					PNP		Diagram 2	Figure 1
DW-AS-502-M18-002	\$54.00					NPN	M12 quick disconnect	Diagram 3	Figure 3
DW-AS-504-M18-002	\$54.00					PNP		Diagram 4	Figure 3
Triple Distance Unshielded									
DW-AD-511-M18	\$58.00	M18	20mm (0.787 in)	Unshielded	NO	NPN	2m (6.5') axial cable	Diagram 1	Figure 2
DW-AD-513-M18	\$58.00					PNP		Diagram 2	Figure 2
DW-AS-511-M18-002	\$58.00					NPN	M12 quick disconnect	Diagram 3	Figure 4
DW-AS-513-M18-002	\$58.00					PNP		Diagram 4	Figure 4
DW-AD-512-M18	\$58.00				NC	NPN	2m (6.5') axial cable	Diagram 1	Figure 2
DW-AD-514-M18	\$58.00					PNP		Diagram 2	Figure 2
DW-AS-512-M18-002	\$58.00					NPN	M12 quick disconnect	Diagram 3	Figure 4
DW-AS-514-M18-002	\$58.00					PNP		Diagram 4	Figure 4

Wiring diagrams

Diagram 1

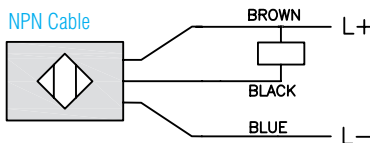


Diagram 2

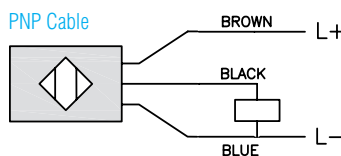


Diagram 3

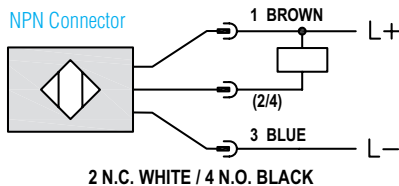
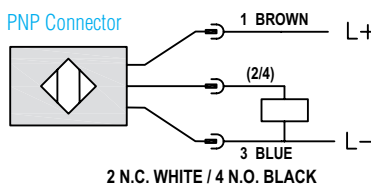
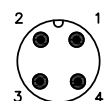


Diagram 4



Connectors

M12 connector



DW Series 18mm Triple Sensing Proximity Sensors

DW Series Specifications		
	DW-Ax-50x-M18	DW-Ax-51x-M18
Mounting Type	Shielded	Unshielded
Nominal Sensing Distance	12mm	20mm
Operating Distance	NA	
Material Correction Factors	See the Material influence table	
Output Type	NPN or PNP, NO or NC	
Operating Voltage	10 to 30 VDC	
No-load Supply Current	≤ 10mA	
Operating (Load) Current	≤ 200mA	
Off-state (Leakage) Current	≤ 0.1 mA	
Voltage Drop	≤ 2 V	
Switching Frequency	≤ 600 Hz	≤ 500Hz
Differential Travel (% of Nominal Distance)	≤ 10%	
Repeat Accuracy	0.60 mm	1.0 mm
Ripple	≤ 20%	
Time Delay Before Availability (tv)	≤40ms	≤50ms
Reverse Polarity Protection	Yes	
Short-Circuit Protection	Yes	
Operating Temperature	-25 to 70°C (-13 to 158°F)	
Protection Degree (DIN 40050)	IP67	
Indication/Switch Status	Yellow LED	
Housing Material	Chrome plated brass	
Sensing Face Material	PBT (Polybutylene terephthalate)	
Shock/Vibration	IEC 60947-5-2/7.4	
Tightening Torque	-	
Weight	130g (4.59 oz), 56g (1.98 oz)	95.2 g (3.36 oz), 31.8 g (1.12 oz)
Connection	2m cable, M12 connection	
IO-Link	-	
Agency Approvals	CE, cULus E239373	

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

DW Series 18mm Triple Sensing Proximity Sensors

Dimensions

mm [inches]

Figure 1

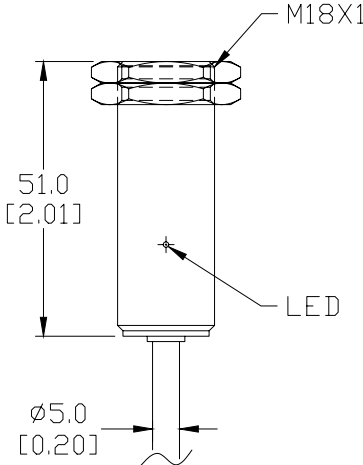


Figure 2

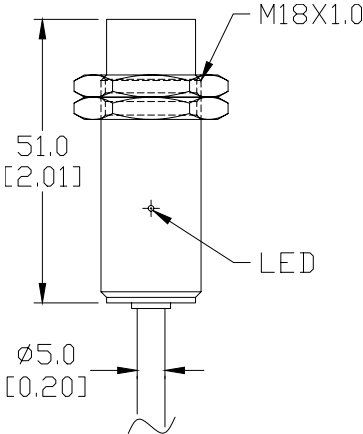


Figure 3

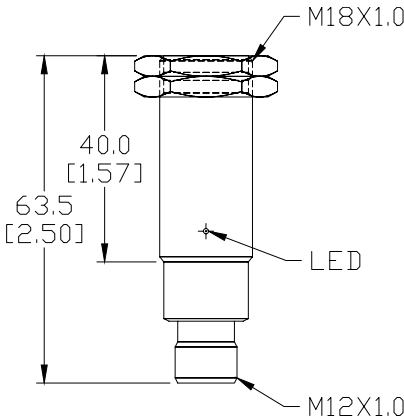
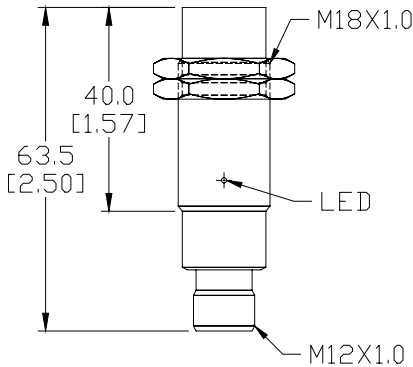


Figure 4



Accessories for 18mm Sensors

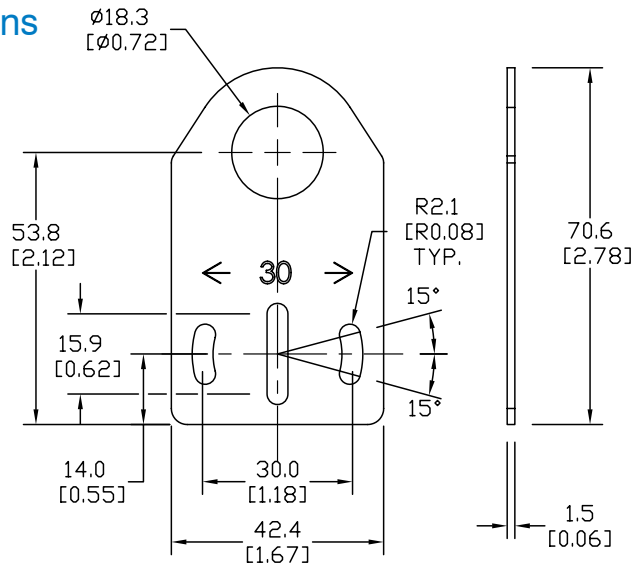
Axial Mounting Bracket

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

Accessories for 18mm Sensors			
Part Number	Price	Description	Weight [lb]
ST18A	\$2.00	Mounting bracket, axial, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06
ST18A7W	\$2.00	Mounting bracket, axial, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06

Dimensions

mm [inches]



ST18A

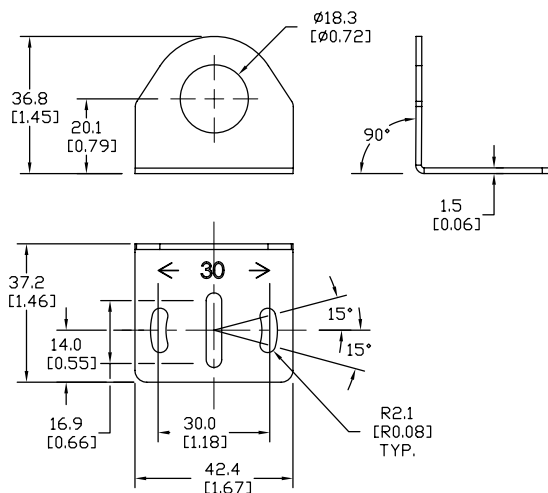
Right-angle Mounting Bracket

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]
ST18C	\$2.00	Mounting bracket, right angle, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06
ST18C7W	\$2.00	Mounting bracket, right angle, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06

Dimensions

mm [inches]



ST18C

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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.

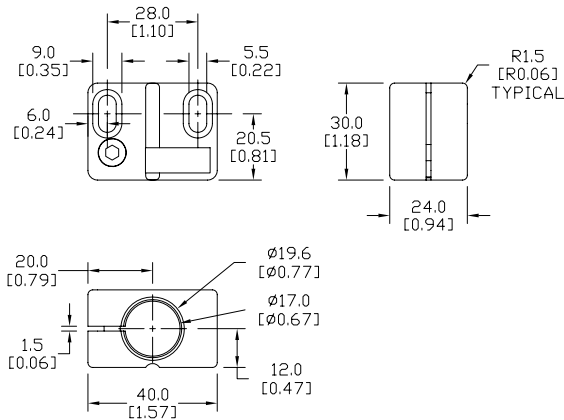
Accessories for 18mm Sensors				
Part Number	Price	Description	Weight [lb]	
OPT2104	\$8.25	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	0.06	
OPT2105	\$8.25	Mounting bracket, right-angle, plastic. For use with 18mm sensors.	0.06	



OPT2104, OPT2105

Dimensions

mm [inches]



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	Weight [lb]
OPT2116	\$9.25	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 18mm sensors.	Aluminum	304 Stainless Steel	0.15
OPT2117	\$16.50	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 18mm sensors.	304 Stainless Steel	304 Stainless Steel	0.28

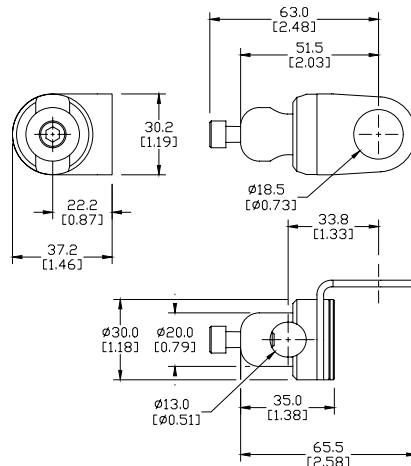
Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).



OPT2116, OPT2117

Dimensions

mm [inches]



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.

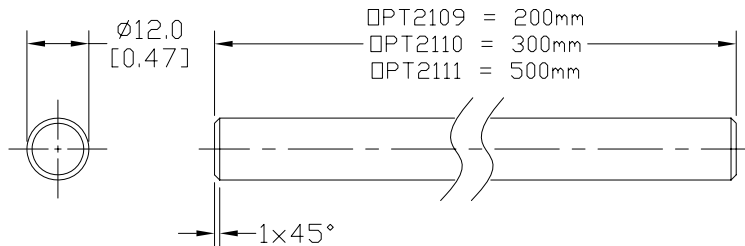
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
OPT2109	\$10.50	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
OPT2110	\$12.50	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
OPT2111	\$16.50	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	0.98



OPT2109, OPT2110, OPT2111

Dimensions

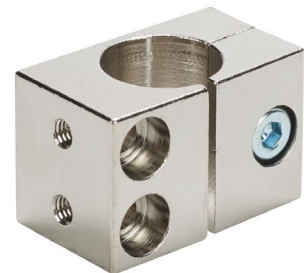
mm [inches]



Right-angle Mounting Bracket

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

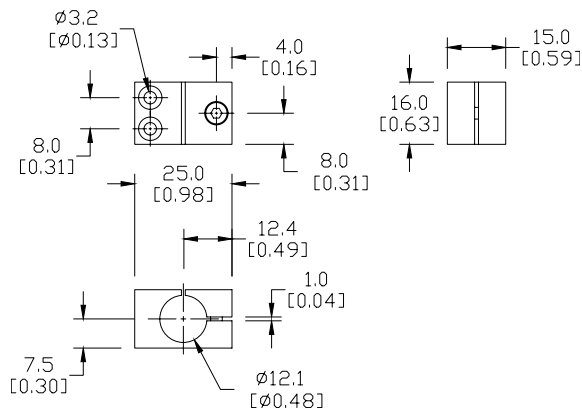
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
OPT2108	\$12.50	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



OPT2108

Dimensions

mm [inches]



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