

# 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
<b>Triple Distance Shielded</b>									
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
<b>Triple Distance Unshielded</b>									
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

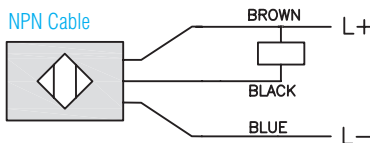


Diagram 2

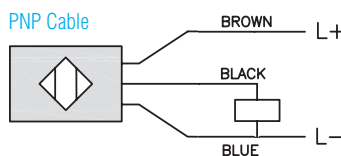


Diagram 3

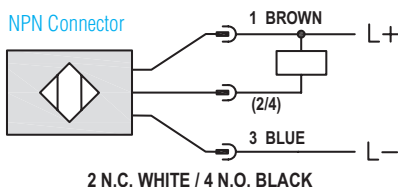
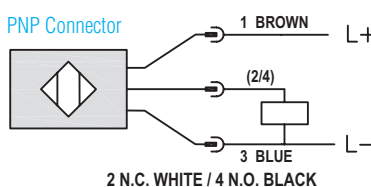
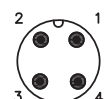


Diagram 4



## Connectors

M12 connector



# DW Series 18mm Triple Sensing Proximity Sensors

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

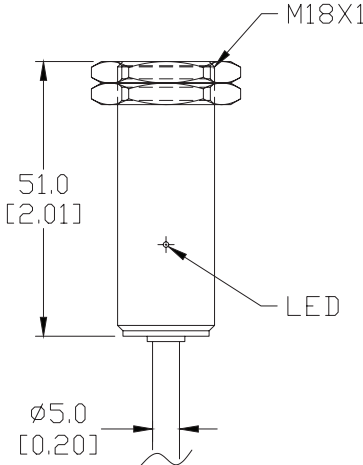


Figure 2

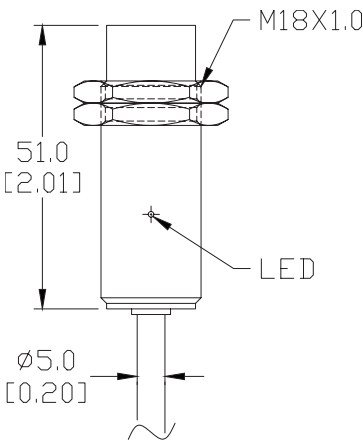


Figure 3

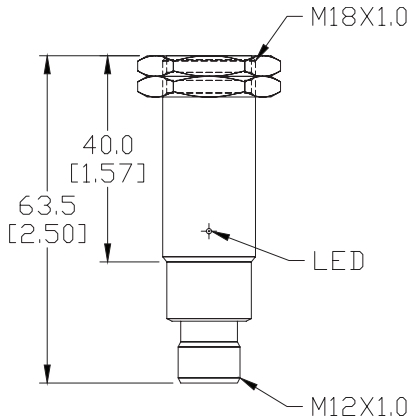
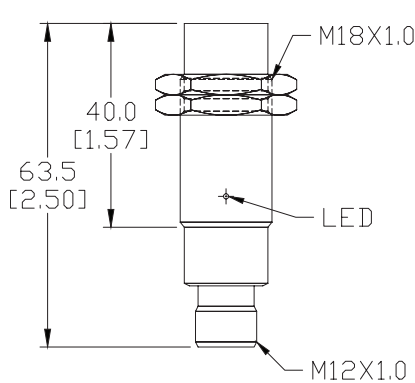


Figure 4



# Accessories for 18mm Sensors

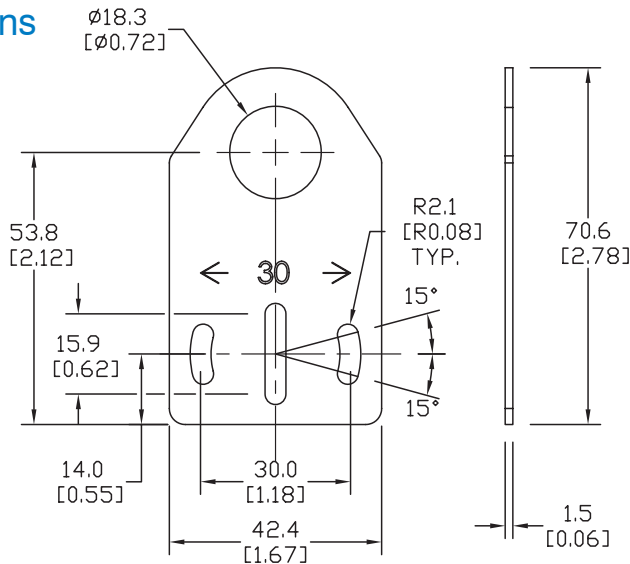
## Axial Mounting Bracket

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	\$1.25	Mounting bracket, axial, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06
ST18A7W	\$6.00	Mounting bracket, axial, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06

### Dimensions

mm [inches]



ST18A

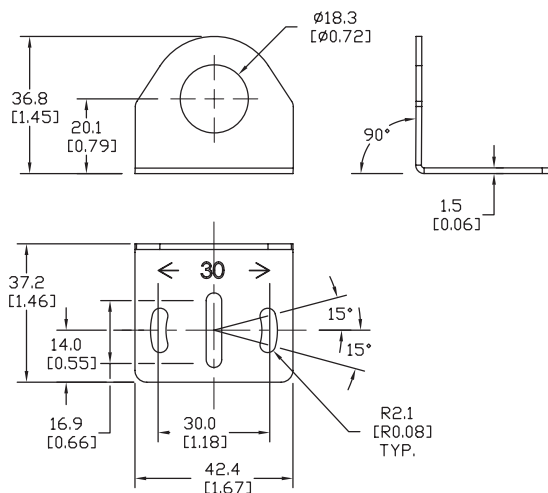
## Right-angle Mounting Bracket

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	\$1.25	Mounting bracket, right angle, zinc-plated steel. For use with 18mm sensors. 1/pk.	0.06
ST18C7W	\$6.00	Mounting bracket, right angle, 316L stainless steel. For use with 18mm sensors. 1/pk.	0.06

### Dimensions

mm [inches]



ST18C

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings

# 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.

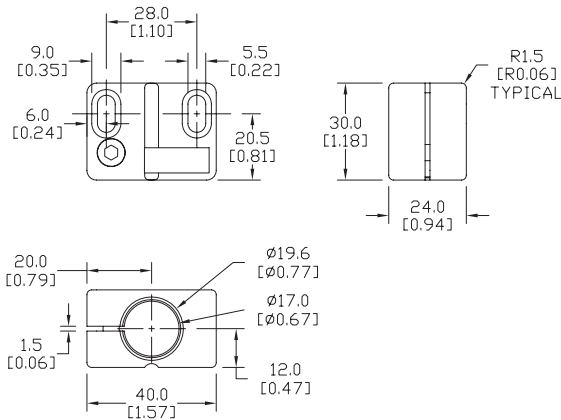
Accessories for 18mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
OPT2104	\$8.00	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	Aluminum	304 Stainless Steel	0.06
OPT2105	\$8.00	Mounting bracket, right-angle, plastic. For use with 18mm sensors.	304 Stainless Steel	304 Stainless Steel	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	\$9.00	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	\$16.00	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

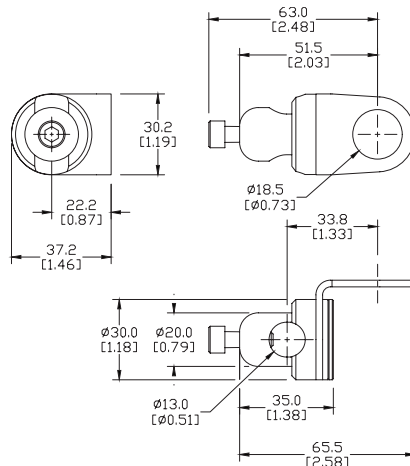


OPT2116, OPT2117

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

## Dimensions

mm [inches]



See our website: [www.AutomationDirect.com](http://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.

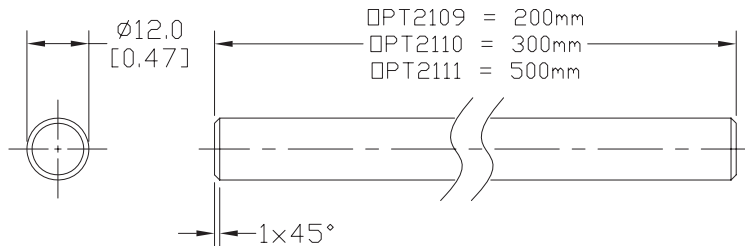
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
<b>OPT2109</b>	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
<b>OPT2110</b>	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
<b>OPT2111</b>	\$16.00	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	0.98



**OPT2109, OPT2110, OPT2111**

## Dimensions

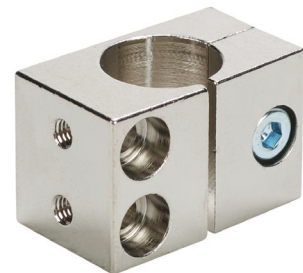
mm [inches]



## Right-angle Mounting Bracket

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

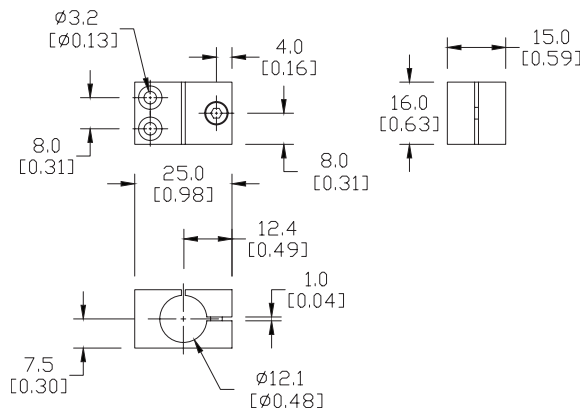
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
<b>OPT2108</b>	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



**OPT2108**

## Dimensions

mm [inches]



See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings