

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	Mounting	Output State	Logic	Connection	Wiring	Dimensions
Triple Distance Semi-flush									
DW-AD-501-M18		M18	12mm (0.472 in)	Semi-flush	N.O.	NPN	2m (6.5 ft) axial cable	Diagram 1	Figure 1
DW-AD-503-M18		M18	12mm (0.472 in)	Semi-flush	N.O.	PNP	2m (6.5 ft) axial cable	Diagram 2	Figure 1
DW-AS-501-M18-002		M18	12mm (0.472 in)	Semi-flush	N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 3
DW-AS-503-M18-002		M18	12mm (0.472 in)	Semi-flush	N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 3
DW-AD-502-M18		M18	12mm (0.472 in)	Semi-flush	N.C.	NPN	2m (6.5') axial cable	Diagram 1	Figure 1
DW-AD-504-M18		M18	12mm (0.472 in)	Semi-flush	N.C.	PNP	2m (6.5 ft) axial cable	Diagram 2	Figure 1
DW-AS-502-M18-002		M18	12mm (0.472 in)	Semi-flush	N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 3
DW-AS-504-M18-002		M18	12mm (0.472 in)	Semi-flush	N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 3
Triple Distance Non-flush									
DW-AD-511-M18		M18	20mm (0.787 in)	Non-flush	N.O.	NPN	2m (6.5 ft) axial cable	Diagram 1	Figure 2
DW-AD-513-M18		M18	20mm (0.787 in)	Non-flush	N.O.	PNP	2m (6.5 ft) axial cable	Diagram 2	Figure 2
DW-AS-511-M18-002		M18	20mm (0.787 in)	Non-flush	N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 4
DW-AS-513-M18-002		M18	20mm (0.787 in)	Non-flush	N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 4
DW-AD-512-M18		M18	20mm (0.787 in)	Non-flush	N.C.	NPN	2m (6.5 ft) axial cable	Diagram 1	Figure 2
DW-AD-514-M18		M18	20mm (0.787 in)	Non-flush	N.C.	PNP	2m (6.5 ft) axial cable	Diagram 2	Figure 2
DW-AS-512-M18-002		M18	20mm (0.787 in)	Non-flush	N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 4
DW-AS-514-M18-002		M18	20mm (0.787 in)	Non-flush	N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 4

Wiring diagrams

Diagram 1

NPN Cable

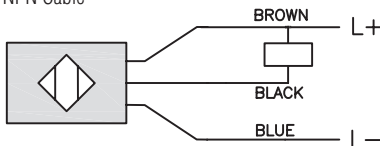
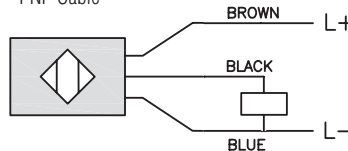


Diagram 2

PNP Cable



Connectors

M12 connector

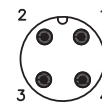


Diagram 3

NPN Connector

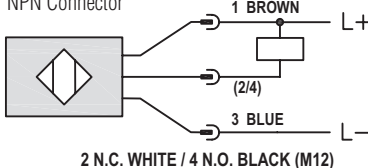
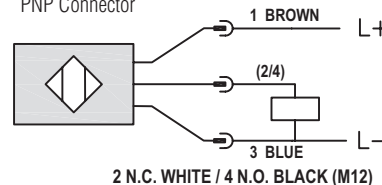


Diagram 4

PNP Connector



DW Series 18mm Triple Sensing Proximity Sensors

DW Series Specifications		
	<i>DW-Ax-50x-M18</i>	<i>DW-Ax-51x-M18</i>
Mounting Type	Semi-flush	Non-flush
Nominal Sensing Distance	12mm	20mm
Operating Distance	NA	
Material Correction Factors	See the Material influence table	
Output Type	NPN or PNP, N.O. or N.C.	
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	≤ 600Hz	≤ 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

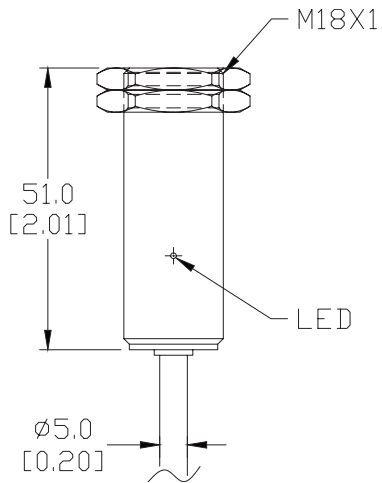


Figure 2

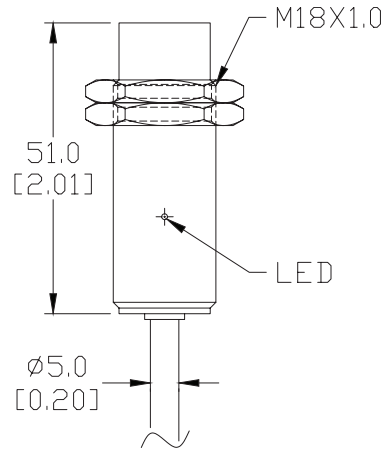


Figure 3

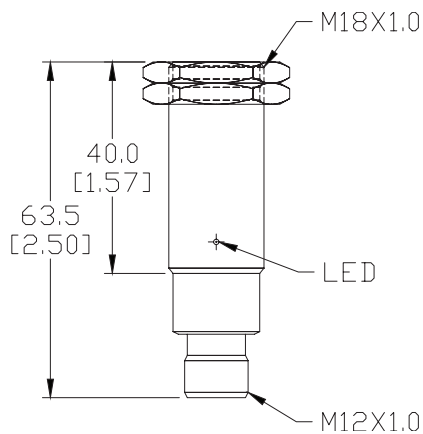
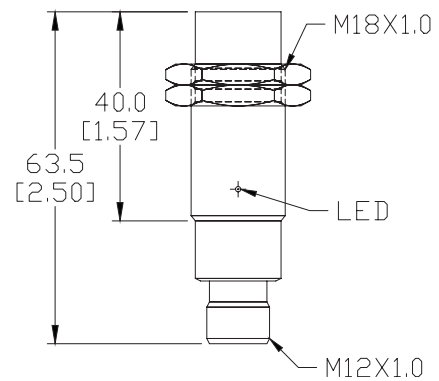


Figure 4



See our website for complete engineering drawings.

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-adaptor sensors. Hexagonal nuts not included. For use with 18mm sensors.

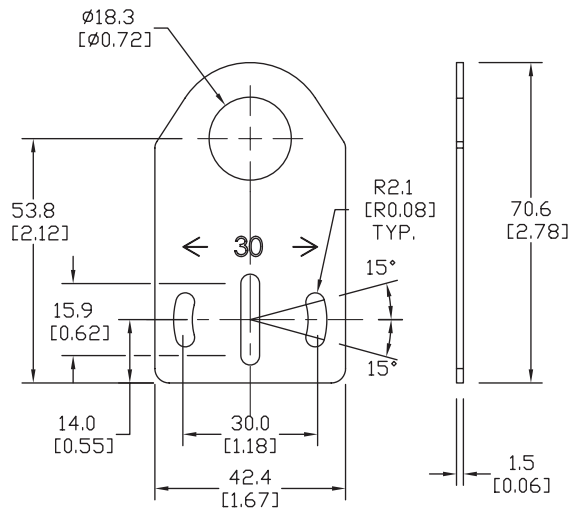


ST18A

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)

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.

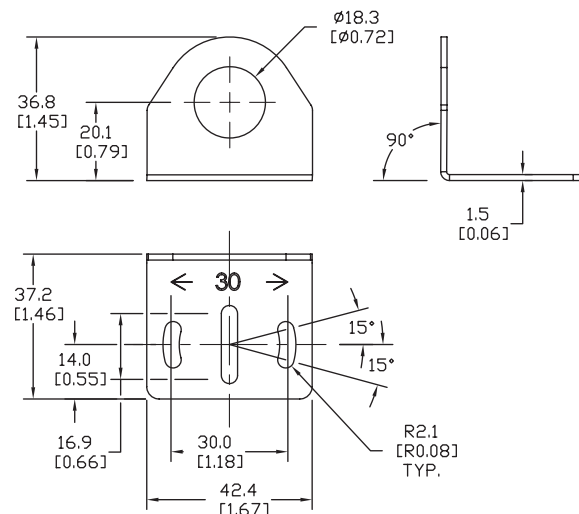


ST18C

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)

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)



OPT2116, OPT2117

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).

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)