

DW Series 12mm Quadruple Sensing Proximity Sensors



M12 (12mm) chrome plated nickel silver – DC

- Seven models available
- 12mm threaded Quadruple Distance proximity sensor
- 8mm sensing
- Complete overload protection
- IP67 rated
- Chrome plated brass construction
- LED status indicator
- Lifetime warranty



DW Series M12 Quadruple Distance Inductive Prox Selection Chart									
Part Number	Price	Size	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
<i>Quadruple Distance</i>									
DW-AD-521-M12		M12	8mm (0.315 in)	Semi-flush	N.O.	NPN	2m (6.5 ft) axial cable	Diagram 1	Figure 1
DW-AD-523-M12		M12	8mm (0.315 in)	Semi-flush	N.O.	PNP	2m (6.5 ft) axial cable	Diagram 2	Figure 1
DW-AS-521-M12		M12	8mm (0.315 in)	Semi-flush	N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 2
DW-AS-523-M12		M12	8mm (0.315 in)	Semi-flush	N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 2
DW-AD-524-M12		M12	8mm (0.315 in)	Semi-flush	N.C.	PNP	2m (6.5 ft) axial cable	Diagram 2	Figure 1
DW-AS-522-M12		M12	8mm (0.315 in)	Semi-flush	N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 2
DW-AS-524-M12		M12	8mm (0.315 in)	Semi-flush	N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 2

DW Series 12mm Quadruple Sensing Proximity Sensors

DW Series M12 Specifications	
	DW-Ax-52x-M12
Mounting Type	Semi-flush
Nominal Sensing Distance	8mm (0.315 in)
Operating Distance	–
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	≤ 400Hz
Differential Travel (% of Nominal Distance)	≤ 10%
Repeat Accuracy	0.15 mm
Ripple	≤ 20%
Time Delay Before Availability (tv)	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 (LED on continuously - secured operating zone)
Housing Material	Chrome-plated brass
Sensing Face Material	Polybutylene terephthalate
Shock/Vibration	IEC 60947-5-2/7.4
Tightening Torque	20 N•m (177.02 lb•in) [5 N•m (44.25 lb•in) on 0.8 mm from head]
Weight	92g (3.25 oz) with cable, 26g (0.92 oz) without cable
Connection	2m cable (PVC [polyvinyl chloride] 3 x 0.14mm ² ≈ approx 26 AWG) with M12 connection
Minimum Mounting Distance (center to center)	46.0 mm (1.81 in)
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.

Wiring diagrams

Diagram 1

NPN Cable

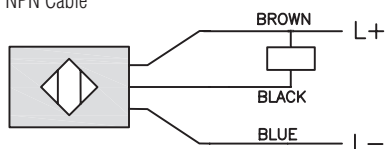
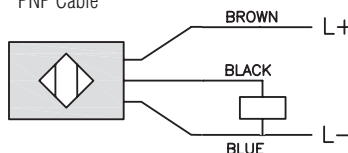


Diagram 2

PNP Cable



Connectors

M12 connector

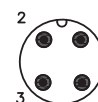


Diagram 3

NPN Connector

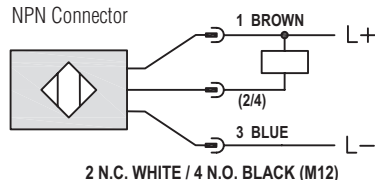
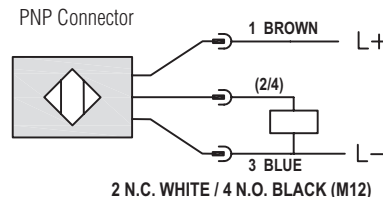


Diagram 4

PNP Connector



DW Series 12mm Quadruple Sensing Proximity Sensors

Dimensions

mm [inches]

Figure 1

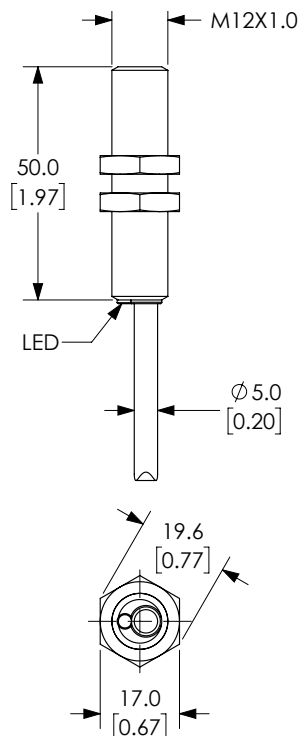
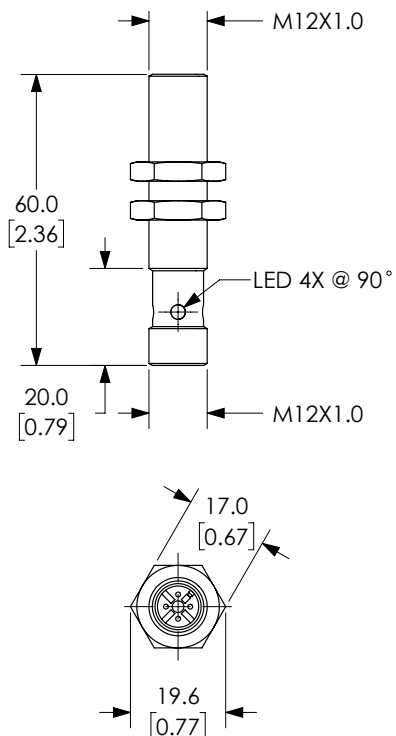


Figure 2



Accessories for 12mm Sensors

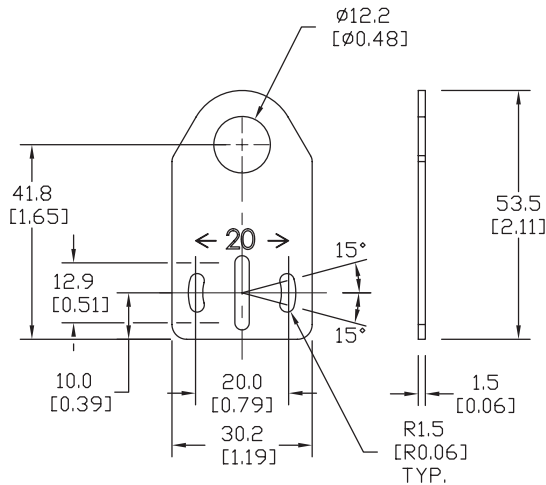
Axial Mounting Bracket

Mounting bracket, axial, available in zinc-plated steel or 316L stainless steel. For use with 12mm sensors. Has two mounting holes (use 3mm screws) and allows the rotation of an optical axis for right-angle adapter sensors. Hexagonal nuts not included.

Accessories for 12mm Sensors			
Part Number	Price	Description	Weight lb (g)
ST12A		Mounting bracket, axial, zinc plated steel. For use with 12mm sensors.	0.03
ST12A7W		Mounting bracket, axial, 316L stainless steel. For use with 12mm sensors.	0.03

Dimensions

mm [inches]



ST12A

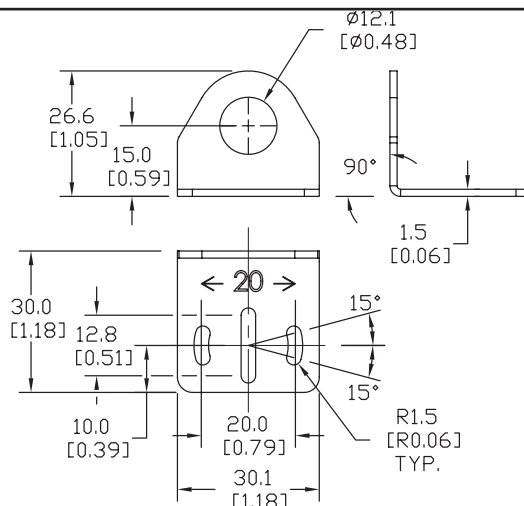
Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel or 316L stainless steel. For use with 12mm sensors. Has two mounting holes (use 3mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal screws not included.

Accessories for 12mm Sensors			
Part Number	Price	Description	Weight lb (g)
ST12C		Mounting bracket, right-angle, zinc plated steel. For use with 12mm sensors.	0.03 (13.6)
ST12C7W		Mounting bracket, right-angle, 316L stainless steel. For use with 12mm sensors.	0.03 (13.6)

Dimensions

mm [inches]



ST12C

Accessories for 12mm Sensors

Right-angle Mounting Brackets

Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors. Available with or without fixed insertion stop.

Accessories for 12mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb (g)
OPT2102		Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors.	PDF	0.05 (22.7)
OPT2103		Wenglor mounting bracket, right-angle, plastic. For use with 12mm sensors.	PDF	0.05 (22.7)



OPT2102, OPT2103

Right-angle Swivel Mounting Systems

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

Accessories for 12mm Sensors						
Part Number	Price	Description	Mounting Head	Mounting Plate	Drawing Link	Weight lb (g)
OPT2114		Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 12mm sensors.	Aluminum	Stainless steel	PDF	0.14 (63.5)
OPT2115		Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 12mm sensors.	304 Stainless steel	304 Stainless steel	PDF	0.27 (122.5)



OPT2114, OPT2115

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

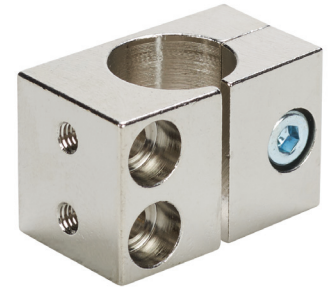
304 Stainless steel rods for mounting swivel brackets OPT2112 - OPT2127. Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.



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)