



# DW Series 12mm Quadruple Sensing Proximity Sensors



## M12 (12mm) chrome plated brass – DC

- 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 Proximity Selection Chart									
Part Number	Price	Size	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
<a href="#">DW-AD-521-M12</a>	\$90.00	M12	8mm [0.315 in]	Semi-flush	N.O.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 1
<a href="#">DW-AD-523-M12</a>	\$90.00				N.O.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 1
<a href="#">DW-AS-521-M12</a>	\$90.00				N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 2
<a href="#">DW-AS-523-M12</a>	\$90.00				N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 2
<a href="#">DW-AD-524-M12</a>	\$90.00				N.C.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 1
<a href="#">DW-AS-522-M12</a>	\$90.00				N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 2
<a href="#">DW-AS-524-M12</a>	\$90.00				N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 2

## Wiring Diagrams

Diagram 1

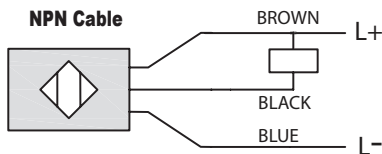
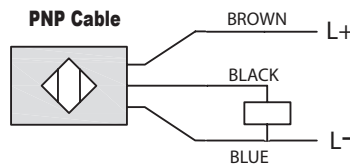


Diagram 2



## Connectors

M12 connector

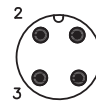


Diagram 3

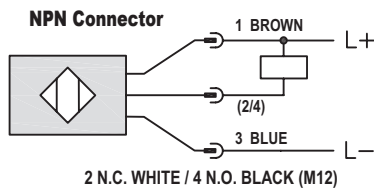
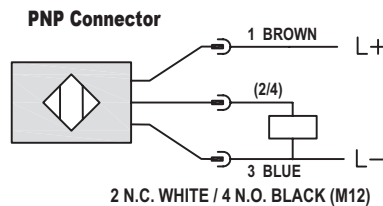


Diagram 4



# DW Series 12mm Quadruple Sensing Proximity Sensors

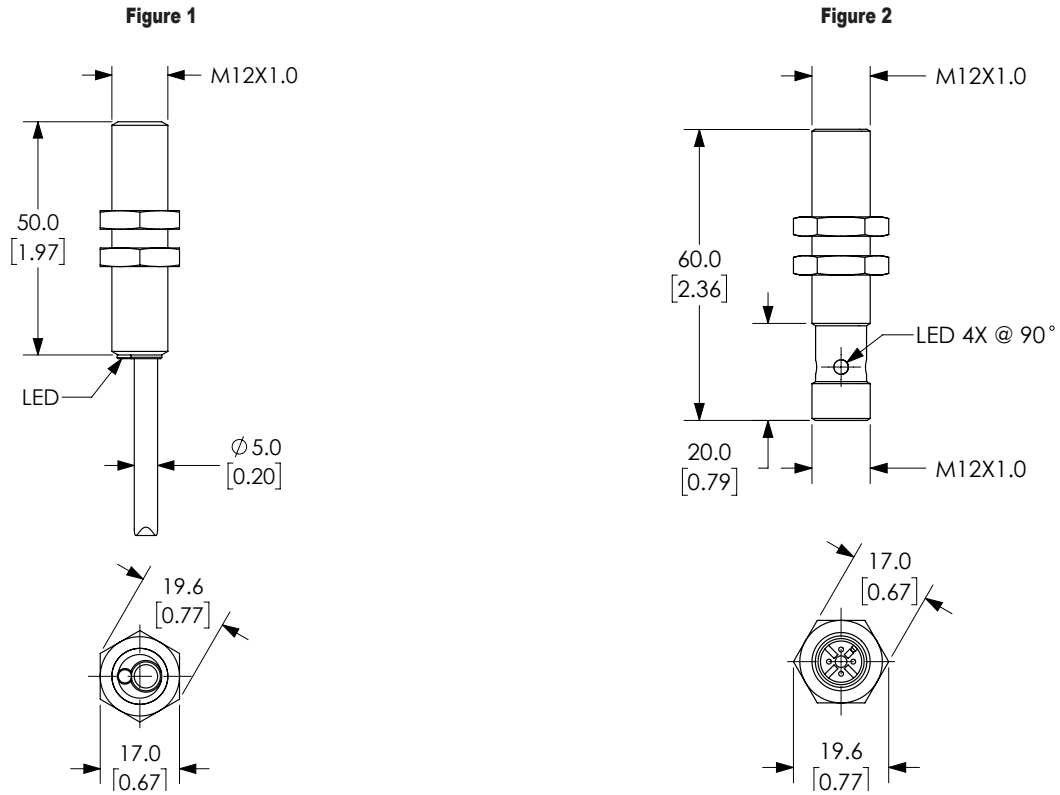
DW Series M12 Quadruple Distance Inductive Proximity Specifications	
	<i>DW-Ax-52x-M12</i>
<b>Mounting Type</b>	Semi-flush
<b>Nominal Sensing Distance</b>	8mm [0.315 in]
<b>Operating Distance</b>	–
<b>Material Correction Factors</b>	See the <a href="#">Material influence table</a>
<b>Output Type</b>	NPN or PNP, N.O. or N.C.
<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>	≤ 400Hz
<b>Differential Travel (% of Nominal Distance)</b>	≤ 10%
<b>Repeat Accuracy</b>	0.15 mm
<b>Ripple</b>	≤ 20%
<b>Time Delay Before Availability (tv)</b>	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 [LED on continuously - secured operating zone]
<b>Housing Material</b>	Chrome-plated brass
<b>Sensing Face Material</b>	Polybutylene terephthalate
<b>Shock/Vibration</b>	IEC 60947-5-2/7.4
<b>Tightening Torque</b>	20 N•m [177.02 lb•in] [5 N•m (44.25 lb•in) on 0.8 mm from head]
<b>Weight</b>	92g [3.25 oz] with cable, 26g [0.92 oz] without cable
<b>Connection</b>	2m [6.5 ft] cable (PVC [polyvinyl chloride] 3 x 0.14mm <sup>2</sup> ≈ approx 26 AWG) with M12 connection
<b>Minimum Mounting Distance (center to center)</b>	46.0 mm [1.81 in]
<b>IO-Link</b>	–
<b>Agency Approvals</b>	CE, cULus E239373

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

# DW Series 12mm Quadruple Sensing Proximity Sensors

## Dimensions

mm [inches]



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

# 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	Drawing Link	Weight lb [g]
<a href="#"><u>ST12A</u></a>	\$2.00	Micro Detectors mounting bracket, axial, zinc plated steel. For use with 12mm sensors.	<a href="#">PDF</a>	0.03 [13.6]
<a href="#"><u>ST12A7W</u></a>	\$7.25	Micro Detectors mounting bracket, axial, 316L stainless steel. For use with 12mm sensors.	<a href="#">PDF</a>	0.03 [13.6]



[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	Drawing Link	Weight lb [g]
<a href="#"><u>ST12C</u></a>	\$2.00	Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 12mm sensors.	<a href="#">PDF</a>	0.03 [13.6]
<a href="#"><u>ST12C7W</u></a>	\$7.25	Micro Detectors mounting bracket, right-angle, 316L stainless steel. For use with 12mm sensors.	<a href="#">PDF</a>	0.03 [13.6]



[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.



[OPT2102](#), [OPT2103](#)

Accessories for 12mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb [g]
<a href="#">OPT2102</a>	\$8.00	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors.	<a href="#">PDF</a>	0.05 [22.7]
<a href="#">OPT2103</a>	\$8.00	Wenglor mounting bracket, right-angle, plastic. For use with 12mm sensors.	<a href="#">PDF</a>	0.05 [22.7]

## 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.



[OPT2114](#), [OPT2115](#)

Accessories for 12mm Sensors						
Part Number	Price	Description	Mounting Head	Mounting Plate	Drawing Link	Weight lb [g]
<a href="#">OPT2114</a>	\$11.50	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 12mm sensors.	Aluminum	Stainless steel	<a href="#">PDF</a>	0.14 [63.5]
<a href="#">OPT2115</a>	\$21.00	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	<a href="#">PDF</a>	0.27 [122.5]

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)
<a href="#">OPT2109</a>	\$13.00	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	<a href="#">PDF</a>	0.41 [185.97]
<a href="#">OPT2110</a>	\$16.00	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	<a href="#">PDF</a>	0.60 [272.16]
<a href="#">OPT2111</a>	\$21.00	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	<a href="#">PDF</a>	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]
<a href="#">OPT2108</a>	\$16.00	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods <a href="#">OPT2109</a> , <a href="#">OPT2110</a> & <a href="#">OPT2111</a> .	<a href="#">PDF</a>	0.07 [31.8]

