CONTRINEX

DW Series 12mm Triple Sensing Proximity Sensors

M12 chrome plated brass – DC

- 12mm threaded triple distance proximity sensor
- 6mm and 10mm sensing
- Complete overload protection
- IP67 rated
- Two M12 lock nuts included
- Chrome plated brass construction
- LED status indicator
- Lifetime warranty

NEED CABLES?

DW Series M12 Triple Distance Inductive Proximity Selection Chart									
Part Number	Price	Size	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
Triple Distance Semi-flush									
DW-AD-501-M12		M12	6mm [0.236 in]	Semi-flush	N.O.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 1
DW-AD-503-M12					N.O.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 1
DW-AS-501-M12					N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 3
DW-AS-503-M12					N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 3
DW-AD-502-M12					N.C.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 1
DW-AD-504-M12					N.C.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 1
DW-AS-502-M12					N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 3
DW-AS-504-M12					N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 3
Triple Distance Non-flush									
DW-AD-511-M12		M12	10mm [0.393 in]	Non-flush	N.O.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 2
DW-AD-513-M12					N.O.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 2
DW-AS-511-M12					N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 4
DW-AS-513-M12					N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 4
DW-AD-512-M12					N.C.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 2
DW-AD-514-M12					N.C.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 2
DW-AS-512-M12					N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 4
DW-AS-514-M12					N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 4

Wiring diagrams

Diagram 1

NPN Cable

BROWN — L+
BLACK
BLUE — L-

Diagram 2

PNP Cable

BROWN — L+
BLACK
BLUE — L-
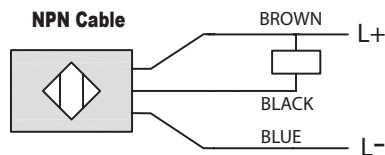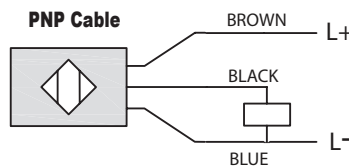
Connectors

M12 connector

2 1
3 4

Diagram 3

NPN Connector

1 BROWN — L+
4 BLACK
3 BLUE — L−

Diagram 4

PNP Connector

1 BROWN — L+
4 BLACK
3 BLUE — L−
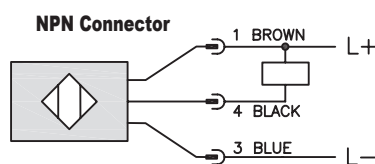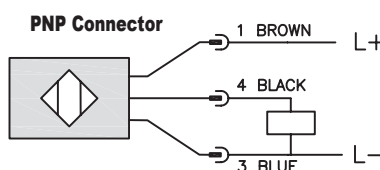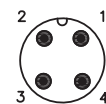
DW Series 12mm Triple Sensing Proximity Sensors

DW Series M12 Triple Distance Inductive Proximity Specifications		
Specifications	*DW-Ax-50x-M12*	*DW-Ax-51x-M12*
Mounting Type	Semi-flush	Non-flush
Nominal Sensing Distance	6mm	10mm
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	≤ 800Hz	≤ 400Hz
Differential Travel (% of Nominal Distance)	≤ 10%	
Repeat Accuracy	0.15 mm	0.30 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	
Housing Material	Chrome-plated brass	
Sensing Face Material	PPS [Polyphenylene sulfide]	
Shock/Vibration	IEC 60947-5-2/7.4	
Tightening Torque	–	
Weight	92g [3.25 oz], 26g [0.92 oz]	90g [3.17 oz], 25g [0.88 oz]
Connection	2m [6.5 ft] cable, M12 connection	
IO-Link	–	
Agency Approvals	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.
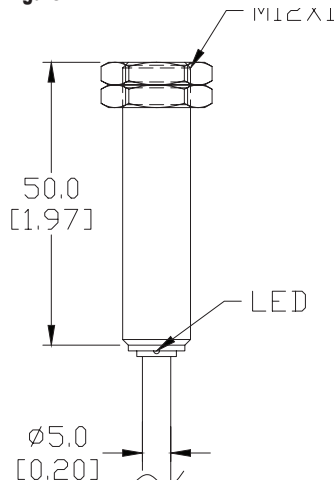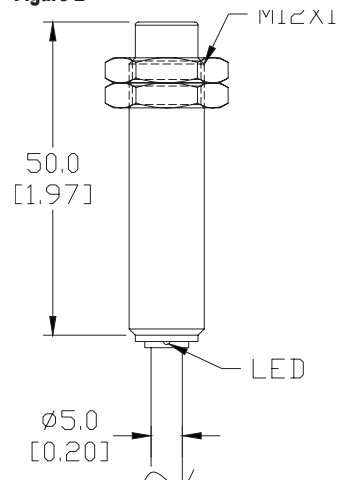
Dimensions

mm [inches]

Figure 1

M12X1

50.0
[1.97]

LED

ø5.0
[0.20]

Figure 2

M12X1

50.0
[1.97]

LED

ø5.0
[0.20]

See our website www.AutomationDirect.com for complete engineering drawings.

DW Series 12mm Triple Sensing Proximity Sensors

Dimensions

mm [inches]

Figure 3

M12X1

40.0
[1.57]

60.0
[2.36]

LED

M12X1

Figure 4
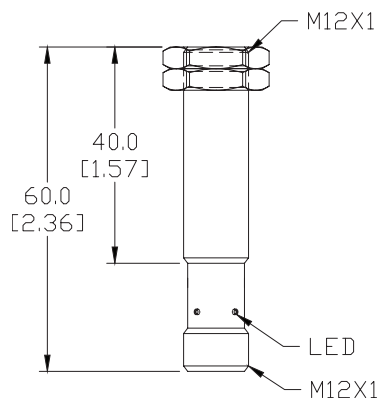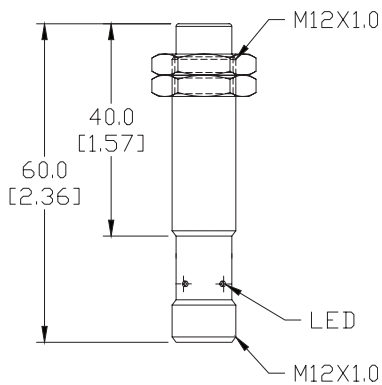


M12X1.0

40.0
[1.57]

60.0
[2.36]

LED

M12X1.0

See our website 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]
ST12A		Micro Detectors mounting bracket, axial, zinc plated steel. For use with 12mm sensors.	PDF	0.03 [13.6]
ST12A7W		Micro Detectors mounting bracket, axial, 316L stainless steel. For use with 12mm sensors.	PDF	0.03 [13.6]
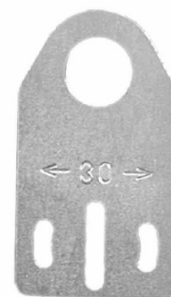
ST12A

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]
ST12C		Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 12mm sensors.	PDF	0.03 [13.6]
ST12C7W		Micro Detectors mounting bracket, right-angle, 316L stainless steel. For use with 12mm sensors.	PDF	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]*
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]

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]*
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]

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]