

# **DW Series 18mm Triple Sensing Proximity Sensors**



### M18 (18mm) Chrome Plated Brass - DC

- 18mm threaded triple distance proximity sensor
- 12mm and 20mm sensing
- Complete overload protection
- IP67 rated

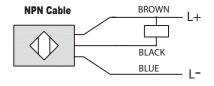
- Two M18 lock nuts included
- Chrome plated brass construction
- LED status indicator
- · Lifetime warranty



DW Series 18mm Triple Distance Inductive Proximity Selection Chart									
Part Number	Price	Size	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
Triple Distance Semi-flush									
DW-AD-501-M18	\$66.00		3 12mm [0.472 in]		N.O.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 1
DW-AD-503-M18	\$66.00				N.O.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 1
DW-AS-501-M18-002	\$66.00				N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 3
DW-AS-503-M18-002	\$66.00	M18		Semi-flush	N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 3
DW-AD-504-M18	\$66.00				N.C.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 1
DW-AS-502-M18-002	\$66.00				N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 3
DW-AS-504-M18-002	\$66.00				N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 3
Triple Distance Non-flush									
DW-AD-511-M18	\$71.00				N.O.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 2
DW-AD-513-M18	\$71.00			Non-flush	N.O.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 2
DW-AS-511-M18-002	\$71.00		20mm [0.787 in]		N.O.	NPN	M12 quick-disconnect	Diagram 3	Figure 4
DW-AS-513-M18-002	\$71.00	M18			N.O.	PNP	M12 quick-disconnect	Diagram 4	Figure 4
<u>DW-AD-514-M18</u>	\$71.00				N.C.	PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 2
DW-AS-512-M18-002	\$71.00				N.C.	NPN	M12 quick-disconnect	Diagram 3	Figure 4
DW-AS-514-M18-002	\$71.00				N.C.	PNP	M12 quick-disconnect	Diagram 4	Figure 4

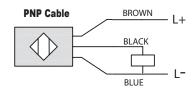
### **Wiring Diagrams**

#### Diagram 1

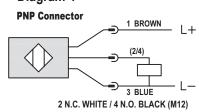


# Diagram 3 NPN Connector 1 BROWN (2/4) 2 N.C. WHITE / 4 N.O. BLACK (M12)

#### Diagram 2



#### Diagram 4



#### **Connectors**

M12 connector



# **DW Series 18mm Triple Sensing Proximity Sensors**

DW Series 18mm Triple Distance Inductive Proximity Specifications							
Specification	DW-Ax-50x-M18	DW-Ax-51x-M18					
Mounting Type	Semi-flush	Non-flush					
Nominal Sensing Distance	12mm [0.472 in]	20mm [0.787 in]					
Operating Distance	N/	A					
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	≤ 10	mA					
Operating (Load) Current	≤ 200	)mA					
Off-state (Leakage) Current	≤ 0.1	mA					
Voltage Drop	≤ 2	V					
Switching Frequency	≤ 600Hz	≤ 500Hz					
Differential Travel (% of Nominal Distance)	≤1(	)%					
Repeat Accuracy	0.60 mm	1.0 mm					
Ripple	≤ 20	)%					
Time Delay Before Availability (tv)	≤ 40ms	≤ 50ms					
Reverse Polarity Protection	Ye	Yes					
Short-Circuit Protection	Ye	S					
Operating Temperature	-25 to 70°C [-	13 to 158°F]					
Protection Degree (DIN 40050)	IP6	57					
Indication/Switch Status	Yellow	LED					
Housing Material	Chrome pla	ated brass					
Sensing Face Material	PBT [Polybutylen	e terephthalate]					
Shock/Vibration	IEC 6094	7-5-2/7.4					
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 [6.5 ft] 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.

www.automationdirect.com

# **DW Series 18mm Triple Sensing Proximity Sensors**

#### **Dimensions**

mm [inches]

Figure 1

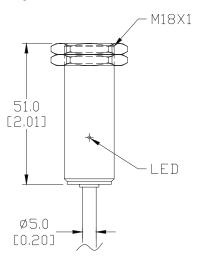


Figure 2

M18X1.0

51.0

[2.01]

Figure 3

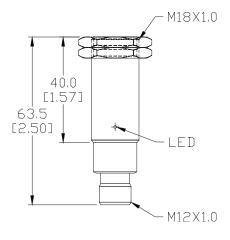
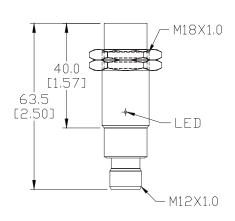


Figure 4

Ø5.0 [0.20]



# **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-adapter sensors. Hexagonal nuts not included. For use with 18mm sensors.

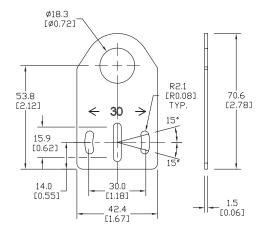
Accessories for 18mm Sensors						
Part Number	Part Number Price Description					
<u>ST18A</u>	\$2.00	Micro Detectors mounting bracket, axial, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]			
<u>ST18A7W</u>	\$7.25	Micro Detectors mounting bracket, axial, 316L stainless steel. For use with 18mm sensors.	0.06 [27.2]			



**ST18A** 

#### **Dimensions**

mm [inches]



#### **Right-angle Mounting Bracket**

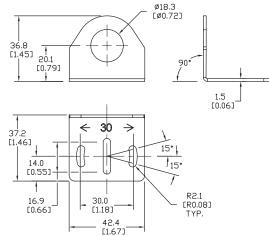
Right-angle mounting bracket for use with 18mm sensors. Has two mounting holes (use 4mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

Accessories for 18mm Sensors						
Part Number	Part Number Price Description					
<u>ST18C</u>	\$2.00	Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]			
<u>ST18C7W</u>	\$7.25	Micro Detectors 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]			
<u>OPT2104</u>	\$10.50	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	PDF	0.06 [27.2]			
<u>OPT2105</u>	\$10.50	Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors.	<u>PDF</u>	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]			
<u>OPT2116</u>	\$11.50	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	<u>PDF</u>	0.15 [68.0]			
<u>OPT2117</u>	\$21.00	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	<u>PDF</u>	0.28 [127.0]			



Note: 304 Stainless steel mounting rods sold separately: <u>OPT2109</u> (200mm [7.87 in] length), <u>OPT2110</u> (300mm [11.81 in] length), and <u>OPT2111</u> (500mm [19.69 in] length).

www.automationdirect.com

# **Mounting Rods and Brackets**

#### **Mounting Rods**

304 Stainless steel rods for mounting swivel brackets <u>OPT2112</u> - <u>OPT2127</u> 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)			
<u>OPT2109</u>	\$13.00	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	PDF	0.41 [185.97]			
<u>OPT2110</u>	\$16.00	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	PDF	0.60 [272.16]			
<u>OPT2111</u>	\$21.00	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	<u>PDF</u>	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 Ib [g]				
<u>OPT2108</u>	\$16.00	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	<u>PDF</u>	0.07 [31.8]			



www.automationdirect.com Sensor A