CONTRINEX

DW Series Chip Immune Proximity Sensors

DW-AS-711-M18-967

Overview

The Contrinex DW series Chip Immune proximity sensors are immune to the following metal chips:

- Steel
- Aluminum
- Copper
- Stainless steel
- Brass
- Titanium

M12, M18 and M30 – DC

- Chip immune (will not switch due to the presence of metallic chips on the face)
- IP68 and IP69K-rated
- Includes mounting hardware
- 304 stainless steel construction
- 10-30 VDC
- LED status indicator
- One-piece housing for harsh duty applications
- Lifetime warranty
- IO-Link v1.1 PNP models
- Purchase cable separately

CE   cULus   IO-Link   LIMITED LIFETIME WARRANTY

DW Series Chip Immune Proximity Sensors

Part Number	Price	Size	Sensing Distance	Mounting	Output State	Logic	Connection	Wiring	Drawing Link
DW-AS-711-M12-967	$05uy4:	M12	3mm [0.11 in]	Non-flush	N.O.	NPN	3-wire, 4-pin M12 quick-disconnect	Diagram 1	PDF
DW-AS-713-M12-967	$05uya:	M12	3mm [0.11 in]	Non-flush	N.O.	PNP	3-wire, 4-pin M12 quick-disconnect	Diagram 2	PDF
DW-AS-711-M18-967	$05uyg:	M18	5mm [0.19 in]	Non-flush	N.O.	NPN	3-wire, 4-pin M12 quick-disconnect	Diagram 1	PDF
DW-AS-713-M18-967	$05uyn:	M18	5mm [0.19 in]	Non-flush	N.O.	PNP	3-wire, 4-pin M12 quick-disconnect	Diagram 2	PDF
DW-AS-713-M30-967	$05uys:	M30	12mm [0.47 in]	Non-flush	N.O.	PNP	3-wire, 4-pin M12 quick-disconnect	Diagram 2	PDF

Wiring Diagrams

Diagram 1

NPN Connector

1 BROWN   L+
4 BLACK
3 BLUE   L−

Diagram 2
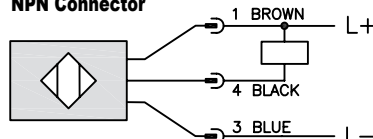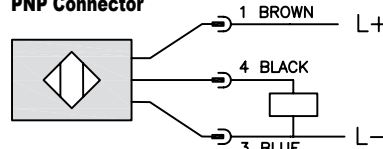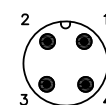
PNP Connector

1 BROWN   L+
4 BLACK
3 BLUE   L−

Connector

M12 connector

2   1
3   4

DW Series Chip Immune Proximity Sensors Specifications

DW Series Chip Immune Proximity Sensors Specifications			
Sensor	*DW-AS-71x-M12-967*	*DW-AS-71x-M18-967*	*DW-AS-713-M30-967*
Assured Operating Distance	2.43 mm [0.09 in]	4.05 mm [0.15 in]	9.72 mm [0.38 in]
Rated Operating Distance	3mm [0.11 in]	5mm [0.19 in]	12mm [0.47 in]
Material Correction Factors	See the Material influence table		
Output Type	NPN or PNP, N.O.		PNP, N.O.
Operating Voltage	10 to 30 VDC		
No-load Supply Current	≤ 10mA		
Operating (Load) Current	≤ 200mA		
Off-state (Leakage) Current	≤ 0.1 mA		
Voltage Drop	≤ 2.0 VDC		
Switching Frequency	≤ 400Hz	≤ 200Hz	≤ 90Hz
Differential Travel (% of Nominal Distance)	3% Sr ≤ Hyst ≤ 15% Sr		
Repeat Accuracy	≤ 0.2 mm	≤ 0.35 mm	≤ 0.8 mm
Ripple	≤ 20%		
Reverse Polarity Protection	Yes		
Short-Circuit Protection	Yes		
Operating Temperature	-25 to 85°C [-13 to 185°F]		
Protection Degree (DIN 40050)	IP68, IP69K		
Indication/Switch Status	Yellow LED		
Housing Material	304 Stainless steel		
Sensing Face Material	304 Stainless steel		
Shock/Vibration	IEC 60947-5-2/7.4		
Tightening Torque	20 N•m max	50 N•m max	150 N•m max
Weight	25g [0.88 oz]	53g [1.86 oz]	137g [4.83 oz]
Connection	3-wire, 4-pin M12 quick-disconnect		
IO-Link	v1.1 PNP models		
Agency Approvals	CE, cULus E239373		

Note: To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.

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	$-1nlq:	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors.	PDF	0.05 [22.7]
OPT2103	$-1nls:	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	$;-1nl[:	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	$-1nl_:	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).
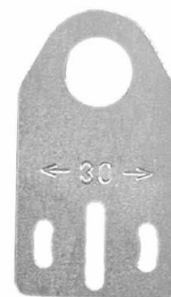
OPT2114, OPT2115

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	$97_:	Micro Detectors mounting bracket, axial, zinc plated steel. For use with 12mm sensors.	PDF	0.03 [13.6]
ST12A7W	$97#:	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	$;97!:	Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 12mm sensors.	PDF	0.03 [13.6]
ST12C7W	$97?:	Micro Detectors mounting bracket, right-angle, 316L stainless steel. For use with 12mm sensors.	PDF	0.03 [13.6]

ST12C

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	$;-1nlt:	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	PDF	0.06 [27.2]
OPT2105	$-1nlu:	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	$-1nl#:	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	$;-1nl!:	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]

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).

OPT2116, OPT2117

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.
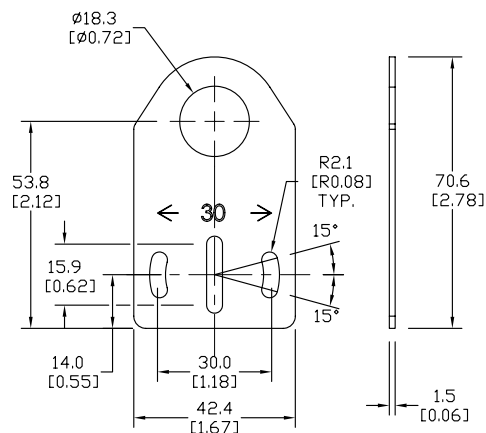

ST18A

Accessories for 18mm Sensors			
Part Number	**Price**	**Description**	**Weight lb [g]**
ST18A	$;97,:	Micro Detectors mounting bracket, axial, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]
ST18A7W	$980:	Micro Detectors 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	$981:	Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]
ST18C7W	$982:	Micro Detectors mounting bracket, right-angle, 316L stainless steel. For use with 18mm sensors.	0.06 [27.2]

Dimensions

mm [inches]

Sensor Accessories   tSEN-483