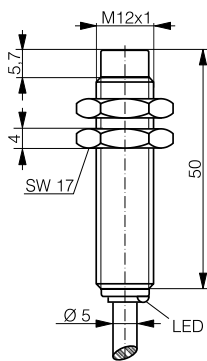
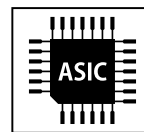
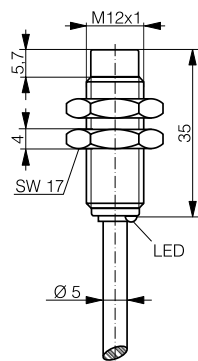


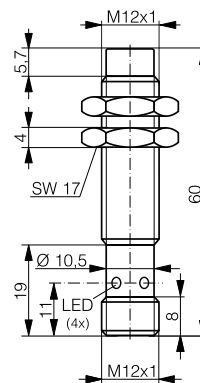
HOUSING	OPERATING DISTANCE	MOUNTING	✓ Long operating distance ✓ Exceptional price-performance ratio ✓ Excellent accuracy	✓ IP 67 ✓ IO-Link v1.1
M12	10 mm	Non-embeddable		



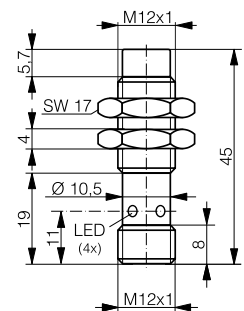
DW-AD-51x-M12



DW-AD-51x-M12-120



DW-AS-51x-M12



DW-AS-51x-M12-120

DETECTION DATA		INTERFACE	
Rated operating distance (S_n)	10 mm	Indicator LED, yellow	Sensing state ($0 \leq s \leq 0.8 S_r$)
Assured operating distance (S_a)	$\leq (0.81 \times S_n)$ mm	Indicator LED, yellow, blinking	Sensing state ($0.8 S_r < s \leq S_r$)
Repeat accuracy	≤ 0.3 mm	IO-Link	✓
Hysteresis	$3\% S_r < \text{Hyst} \leq 15\% S_r$	MTTF (@40°C)	1073 y
Temperature drift	$\leq 10\% S_r$		
Standard target	30 x 30 x 1 mm ³ , FE360		

Note: $0.9S_n \leq S_a \leq 1.1S_n$.

ELECTRICAL DATA		MECHANICAL DATA	
Supply voltage range (U_B)	10...30 VDC	Mounting	Non-embeddable
Residual ripple	$\leq 20\% U_B$	Housing material	Chrome-plated brass
Output current	≤ 200 mA	Sensing face material	PBTP
Output voltage drop	≤ 2.0 VDC	Max tightening torque	10 Nm
Power consumption (no-load)	≤ 10 mA	Ambient operating temperature	-25...+70°C ¹
Residual current	≤ 0.1 mA	Enclosure rating	IP 67
Switching frequency	≤ 400 Hz	Weight (cable / connector)	see page 2
Short-circuit protection	✓	Shock and vibration	IEC 60947-5-2 / 7.4
Voltage reversal protection	✓		
Cable length max.	≤ 300 m		

¹Maximum temperature according to UL: 70°C.

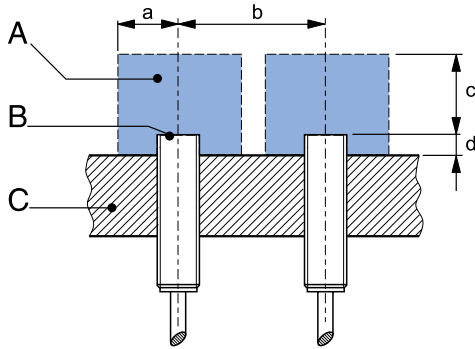
Note: all data measured according to IEC 60947-5-2 standard with $U_B=20...30$ VDC, $T_A=23$ °C \pm 5 °C.

CORRECTION FACTORS

Steel FE 360	1	Copper	0.45	Aluminum	0.49	Brass	0.56	Stainless S. V2A 1 / 2 mm	0.77
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Note: the operating distance of the sensor must be multiplied by the correction factor of the material. For example, the operating distance on Aluminum is $S_{n,Al} = S_n \times CF_{Al}$. In case of embeddable mounting, the distance is multiplied by the additional correction factor of the support, thus $S_{n,Al} = S_n \times CF_{Al} \times CF_{emb,Al}$.

INSTALLATION CONDITIONS



A : metal free zone a : 16 mm d : steel 13 mm
 B : sensing face b : 45 mm
 C : support c : 30 mm

Note: additional installation information can be found in the glossary of the Contrinex General Catalog.

IO-LINK FUNCTIONALITIES

IO-Link version	1.1
SIO mode	Supported
Process data	7-bit input
Baudrate	COM2 (38.4 kBaud)
Minimum cycle time	10.4 ms
ISDU	Not supported



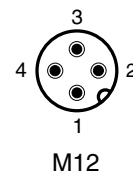
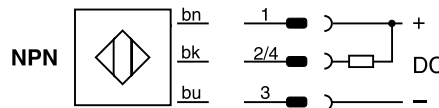
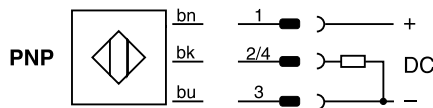
IO-Link files may be downloaded from

www.contrinex.com/product-range/inductive-sensors/.

Select the product name to display the product page with corresponding downloads.

Alternatively, just click/scan the QR code on the left.

WIRING DIAGRAM



PIN ASSIGNMENT

AVAILABLE TYPES

Part number	Part reference	Polarity	Connection	Output on pin 2	Output on pin 4 / bk	Weight
330-020-133	DW-AD-511-M12	NPN	PVC, 2 m, 3 wire	-	Normally open (NO)	92 g
330-020-135	DW-AD-512-M12	NPN	PVC, 2 m, 3 wire	-	Normally close (NC)	92 g
330-020-136	DW-AD-511-M12-120	NPN	PVC, 2 m, 3 wire	-	Normally open (NO)	87 g
330-020-137	DW-AD-512-M12-120	NPN	PVC, 2 m, 3 wire	-	Normally close (NC)	87 g
330-020-138	DW-AD-513-M12	PNP	PVC, 2 m, 3 wire	-	Normally open (NO) / IO-Link	92 g
330-020-142	DW-AD-514-M12	PNP	PVC, 2 m, 3 wire	-	Normally close (NC)	92 g
330-020-143	DW-AD-513-M12-120	PNP	PVC, 2 m, 3 wire	-	Normally open (NO) / IO-Link	87 g
330-020-145	DW-AD-514-M12-120	PNP	PVC, 2 m, 3 wire	-	Normally close (NC)	87 g
330-020-162	DW-AS-511-M12	NPN	M12 4-pin	-	Normally open (NO)	27 g
330-020-163	DW-AS-511-M12-120	NPN	M12 4-pin	-	Normally open (NO)	23 g
330-020-164	DW-AS-512-M12	NPN	M12 4-pin	Normally close (NC)	-	27 g
330-020-165	DW-AS-512-M12-120	NPN	M12 4-pin	Normally close (NC)	-	23 g
330-020-166	DW-AS-513-M12	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	27 g
330-020-167	DW-AS-513-M12-120	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	23 g
330-020-169	DW-AS-514-M12	PNP	M12 4-pin	Normally close (NC)	-	27 g
330-020-170	DW-AS-514-M12-120	PNP	M12 4-pin	Normally close (NC)	-	23 g

Note: part reference may include additional suffix to indicate a revision version or special version. Further information is available on request.

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