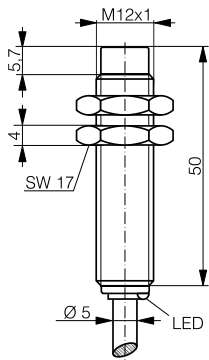
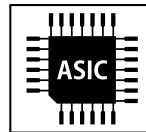
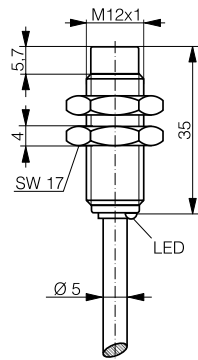


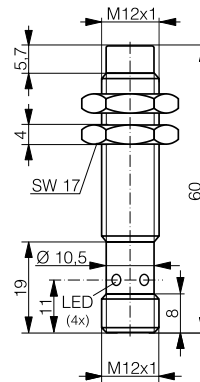
HOUSING	OPERATING DISTANCE	MOUNTING	✓ Long operating distance ✓ Exceptional price-performance ratio ✓ Excellent accuracy	✓ IP 67 ✓ IO-Link v1.1
M12	10 mm	Non-embeddable		



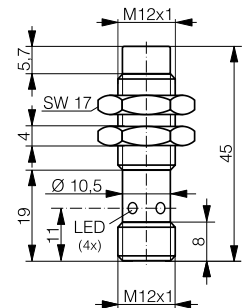
DW-AD-51x-M12



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	$\leq 0.3$ 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 <sup>3</sup> , 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	$\leq 200$ mA	Sensing face material	PBTP
Output voltage drop	$\leq 2.0$ VDC	Max tightening torque	10 Nm
Power consumption (no-load)	$\leq 10$ mA	Ambient operating temperature	-25...+70°C
Residual current	$\leq 0.1$ mA	Enclosure rating	IP 67
Switching frequency	$\leq 400$ Hz	Weight (cable / connector)	see page 2
Short-circuit protection	✓	Shock and vibration	IEC 60947-5-2
Voltage reversal protection	✓		
Cable length max.	$\leq 300$ m		

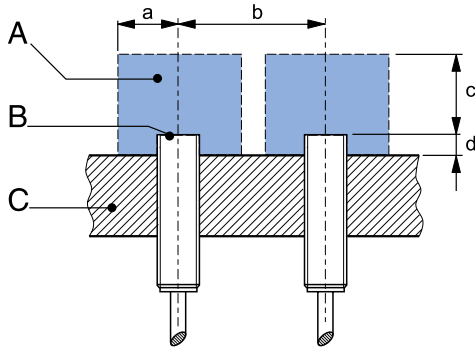
Note: all data measured according to IEC 60947-5-2 standard with  $U_B=20...30$ VDC,  $T_A=23 \text{ °C} \pm 5 \text{ °C}$ .

## 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



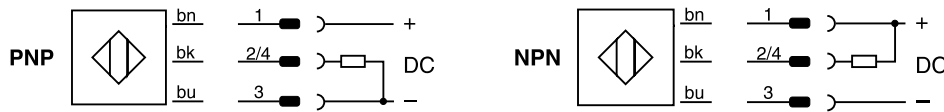
IO-Link files may be downloaded from

[www.contrinex.com/product-range/inductive-sensors/](http://www.contrinex.com/product-range/inductive-sensors/).

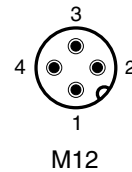
Select the product name to display the product page with corresponding downloads.

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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