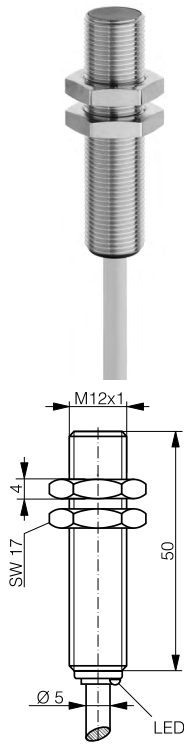
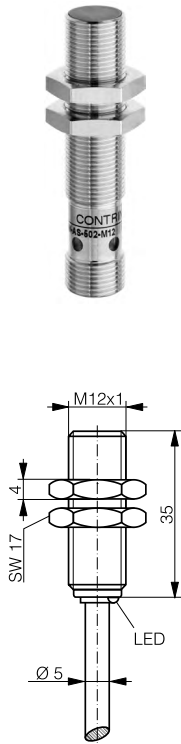


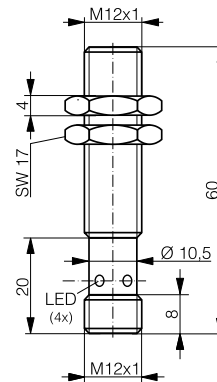
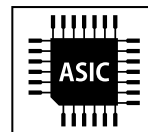
HOUSING	OPERATING DISTANCE	MOUNTING	<ul style="list-style-type: none"> <li>✓ Long operating distance</li> <li>✓ Exceptional price-performance ratio</li> <li>✓ Excellent accuracy</li> </ul>	<ul style="list-style-type: none"> <li>✓ IP 67</li> <li>✓ IO-Link v1.1</li> </ul>
M12	6 mm	Quasi-embeddable		



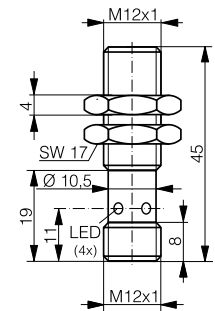
DW-AD-50x-M12



DW-AD-50x-M12-120



DW-AS-50x-M12



DW-AS-50x-M12-120

DETECTION DATA		INTERFACE	
Rated operating distance ( $S_n$ )	6 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	18 x 18 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	Quasi-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 (6 Nm first 10 mm)
Power consumption (no-load)	$\leq 10$ mA	Ambient operating temperature	-25...+70°C <sup>1</sup>
Residual current	$\leq 0.1$ mA	Enclosure rating	IP 67
Switching frequency	$\leq 800$ 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		

<sup>1</sup>Maximum temperature according to UL: 70°C.

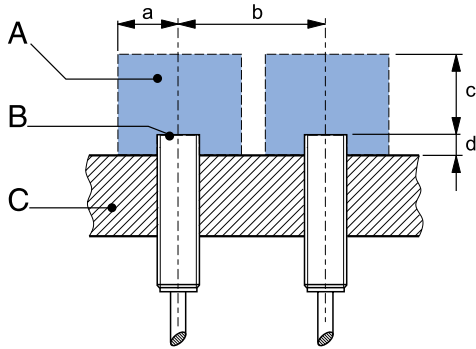
Note: all data measured according to IEC 60947-5-2 standard with  $U_B=20 \dots 30$ VDC,  $T_A=23^\circ\text{C} \pm 5^\circ\text{C}$ .

## CORRECTION FACTORS

Steel FE 360	1	Copper	0.25	Aluminum	0.3	Brass	0.4	Stainless S. V2A 1 / 2 mm	0.7
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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 : 12 mm      d : steel 2 mm  
 B : sensing face      b : 30 mm  
 C : support      c : 18 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

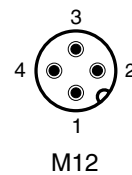
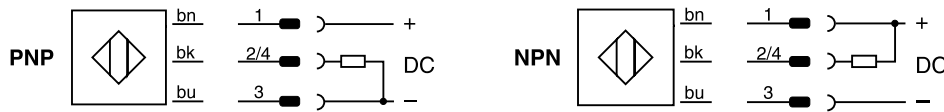
[www.contrinex.com/product-range/inductive-sensors/](http://www.contrinex.com/product-range/inductive-sensors/).

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
330-020-107	DW-AD-501-M12	NPN	PVC, 2 m, 3 wire	-	Normally open (NO)	92 g
330-020-109	DW-AD-502-M12	NPN	PVC, 2 m, 3 wire	-	Normally close (NC)	92 g
330-020-110	DW-AD-503-M12	PNP	PVC, 2 m, 3 wire	-	Normally open (NO) / IO-Link	92 g
330-020-115	DW-AD-504-M12	PNP	PVC, 2 m, 3 wire	-	Normally close (NC)	92 g
330-020-116	DW-AD-501-M12-120	NPN	PVC, 2 m, 3 wire	-	Normally open (NO)	87 g
330-020-117	DW-AD-502-M12-120	NPN	PVC, 2 m, 3 wire	-	Normally close (NC)	87 g
330-020-118	DW-AD-503-M12-120	PNP	PVC, 2 m, 3 wire	-	Normally open (NO) / IO-Link	87 g
330-020-124	DW-AD-504-M12-120	PNP	PVC, 2 m, 3 wire	-	Normally close (NC)	87 g
330-020-146	DW-AS-501-M12	NPN	M12 4-pin	-	Normally open (NO)	27 g
330-020-147	DW-AS-501-M12-120	NPN	M12 4-pin	-	Normally open (NO)	23 g
330-020-148	DW-AS-502-M12	NPN	M12 4-pin	Normally close (NC)	-	27 g
330-020-149	DW-AS-502-M12-120	NPN	M12 4-pin	Normally close (NC)	-	23 g
330-020-150	DW-AS-503-M12	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	27 g
330-020-151	DW-AS-503-M12-120	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	23 g
330-020-152	DW-AS-504-M12	PNP	M12 4-pin	Normally close (NC)	-	27 g
330-020-153	DW-AS-504-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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