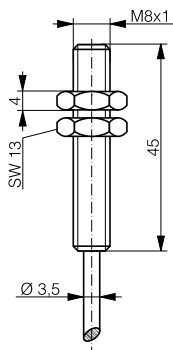
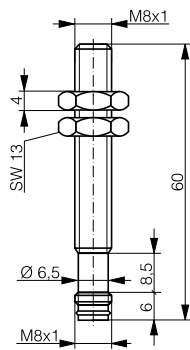


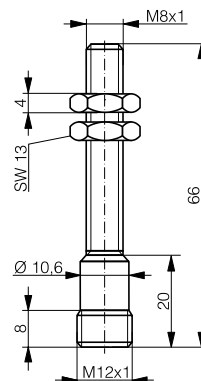
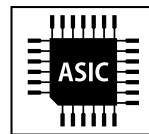
HOUSING	OPERATING DISTANCE	MOUNTING	✓ Long sensing range	✓ Exceptional price-performance ratio
M8	4 mm	Quasi-embeddable	✓ Outstanding accuracy and temperature stability	✓ IP67
			✓ Resolution in μm range	



DW-AD-509-M8-390



DW-AS-509-M8-390



DW-AS-509-M8-393

DETECTION DATA		INTERFACE	
Sensing distance (S_d)	4 mm	IO-Link	✗
Repeat accuracy (IEC 60947-5-2)	± 0.2 mm	MTTF (@40°C)	732 y
Static resolution* (@0.67· S_d)	≤ 0.1 μm		
Dynamic resolution* (@0.67· S_d)	≤ 0.52 μm		
Temperature drift of S_d	$\leq 5\%$ (0... +70°C) $\leq 10\%$ (-25... 0°C)		
Standard target	12 x 12 x 1 mm ³ , FE360		

*Static resolution is measured when the target is moving at 20 Hz. Dynamic resolution when the target is moving at 1 kHz.

ELECTRICAL DATA		MECHANICAL DATA	
Supply voltage range (U_B)	15...30 VDC	Mounting	Quasi-embeddable
Residual ripple	$\leq 20\%$ U_B	Housing material	Chrome-plated brass
Power consumption (no-load)	≤ 10 mA	Sensing face material	PBTP
Max. load at voltage output	≤ 15 mA	Max tightening torque	8 Nm (2.5 Nm first 7 mm)
Max. load at current output	N/A	Ambient operating temperature	-25...+70°C ¹
Bandwidth	1600 Hz	Enclosure rating	IP 67
Time delay before availability	20 ms	Weight (cable / connector)	see page 2
Recovery time	20 ms	Shock and vibration	IEC 60947-5-2 / 7.4
Short-circuit protection	✓		
Voltage reversal protection	✓		
Cable length max.	≤ 300 m		

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

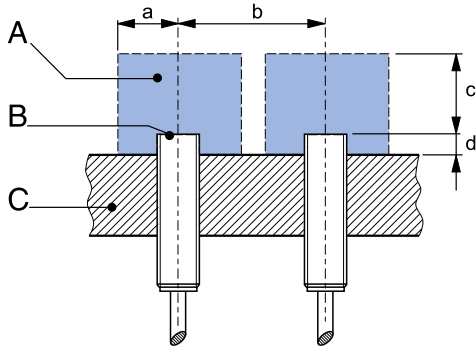
¹Maximum temperature according to UL: 70°C.

CORRECTION FACTORS

Steel FE 360	1	Copper	0.34	Aluminum	0.4	Brass	0.5	Stainless S. V2A 1 / 2 mm	0.76
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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 $S_{n,Al} = S_n \times CF_{Al} \times CF_{emb,Al}$.

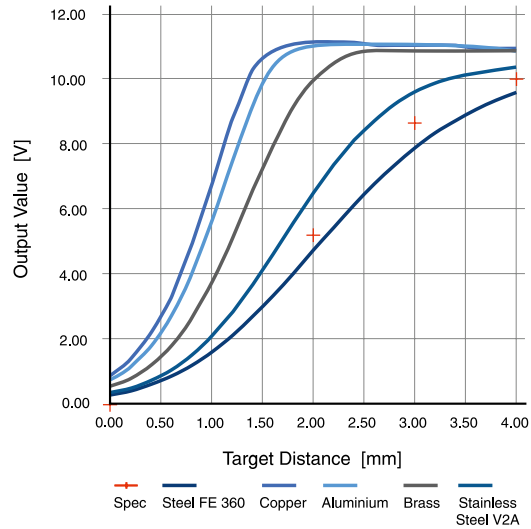
INSTALLATION CONDITIONS



A : metal free zone	a : 8 mm
B : sensing face	b : 12 mm
C : support	c : 12 mm
	d : steel 1 mm

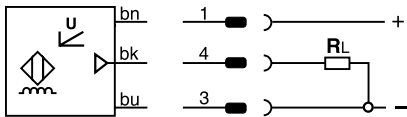
Note: additional installation information can be found in the glossary of the Contrinex General Catalog.

RESPONSE DIAGRAM

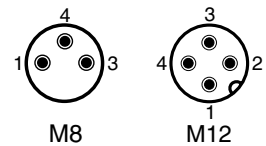


Output voltage	$s = 0 \text{ mm}$	$0 \text{ V} / -0.0 + 0.4 \text{ V}$	Output current	$s = 0 \text{ mm}$	N/A
	$s = S_d / 2 \text{ mm}$	$5.2 \text{ V} \pm 0.4 \text{ V}$		$s = S_d / 2 \text{ mm}$	N/A
	$s = S_d \text{ mm}$	$10.0 \text{ V} \pm 0.4 \text{ V}$		$s = S_d \text{ mm}$	N/A
	$s > S_d \text{ mm}$	$10 \dots 12 \text{ V} \pm 0.4 \text{ V}$		$s > S_d \text{ mm}$	N/A

WIRING DIAGRAM



PIN ASSIGNMENT



AVAILABLE TYPES

Part number	Part reference	Connection	Output on pin 2 / wh	Output on pin 4 / bk	Weight
330-020-357	DW-AD-509-M8-390	PUR, 2 m, 3 wire	-	0...10 V	45 g
330-020-359	DW-AS-509-M8-390	M8 3-pin	-	0...10 V	17 g
330-020-361	DW-AS-509-M8-393	M12 4-pin	-	0...10 V	20 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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