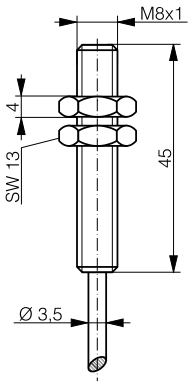
CONTRINEX

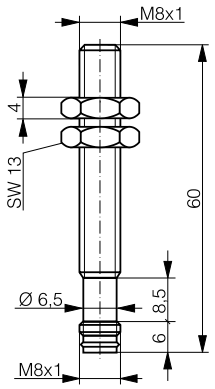
INDUCTIVE SENSOR
ANALOG OUTPUT
DW-Ax-509-M8

HOUSING	OPERATING DISTANCE	MOUNTING
M8	4 mm	Quasi-embeddable

- ✓ Long sensing range
- ✓ Outstanding accuracy and temperature stability
- ✓ Resolution in µm range
- ✓ Exceptional price-performance ratio
- ✓ IP67



DW-AD-509-M8



DW-AS-509-M8-001

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	≤ 5% (0... +70°C) ≤ 10% (-25... 0°C)		
Standard target	12 x 12 x 1 mm³, 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)	10...30 VDC	Mounting	Quasi-embeddable
Residual ripple	≤ 20% U_B	Housing material	Chrome-plated brass
Power consumption (no-load)	≤ 10 mA	Sensing face material	PBTP
Max. load at voltage output	≤ 10 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…30VDC, T_A= 23°C ± 5°C.

[1]Maximum temperature according to UL: 70°C.

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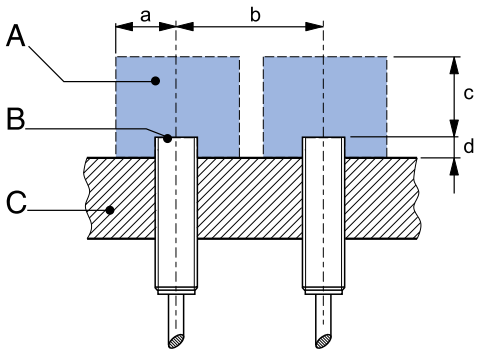
CORRECTION FACTORS

Steel FE 360	**1**	Copper	**0.34**	Aluminum	**0.4**	Brass	**0.5**	Stainless S. V2A 1 / 2 mm	**0.76**

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



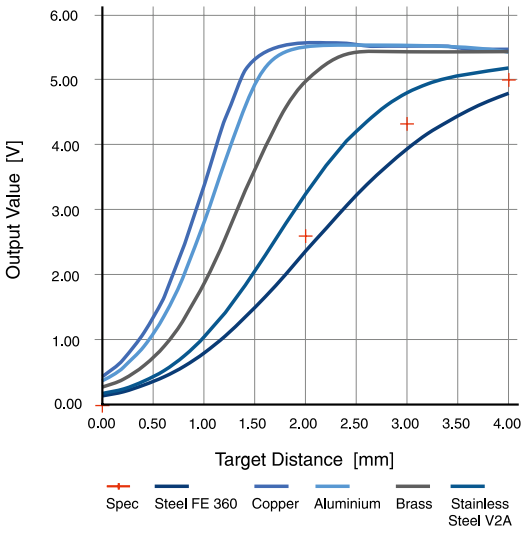
A : metal free zone
B : sensing face
C : support

a : 8 mm
b : 12 mm
c : 12 mm

d : steel 1 mm

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

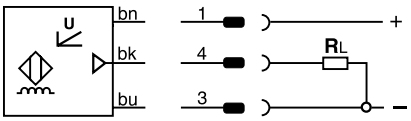
RESPONSE DIAGRAM



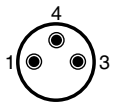
Output voltage	s = 0 mm	0 V / -0.0 + 0.2 V
	s = S_d/2 mm	2.6 V ± 0.2 V
	s = S_d mm	5.0 V ± 0.2 V
	s > S_d mm	5…6 V ± 0.2 V

Output current	s = 0 mm	N/A
	s = S_d/2 mm	N/A
	s = S_d mm	N/A
	s > S_d mm	N/A

WIRING DIAGRAM



PIN ASSIGNMENT



M8

AVAILABLE TYPES

Part number	Part reference	Connection	Output on pin 2 / wh	Output on pin 4 / bk	Weight
330-020-356	DW-AD-509-M8	PUR, 2 m, 3 wire	-	0...5 V	45 g
330-020-358	DW-AS-509-M8-001	M8 3-pin	-	0...5 V	17 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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