CONTRINEX

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
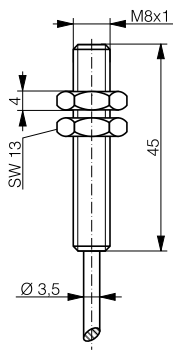
DW-AD-509-M8-390
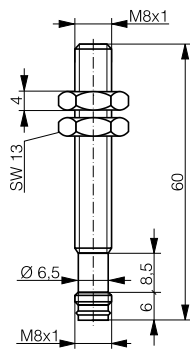
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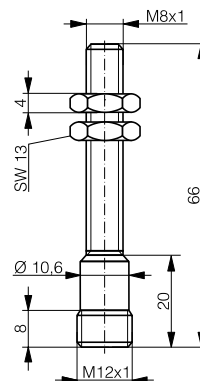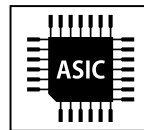
DW-AS-509-M8-393

DETECTION DATA

Sensing distance (S_d)	4 mm
Repeat accuracy (IEC 60947-5-2)	± 0.2 mm
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 the sensor bandwidth limit.

INTERFACE

IO-Link	✗
MTTF (@40°C)	732 y

ELECTRICAL DATA

Supply voltage range (U_B)	15...30 VDC
Residual ripple	≤ 20% U_B
Power consumption (no-load)	≤ 10 mA
Max. load at voltage output	≤ 15 mA
Max. load at current output	0.4kΩ (Ub=15V) / 1kΩ (Ub=30V)
Bandwidth	1600 Hz
Time delay before availability	20 ms
Recovery time	20 ms
Short-circuit protection	✓
Voltage reversal protection	✓
Cable length max.	≤ 300 m

MECHANICAL DATA

Mounting	Quasi-embeddable
Housing material	Chrome-plated brass
Sensing face material	PBTP
Max tightening torque	8 Nm (2.5 Nm first 7 mm)
Ambient operating temperature	-25...+70°C[1]
Enclosure rating	IP 67
Weight (cable / connector)	see page 2
Shock and vibration	IEC 60947-5-2 / 7.4

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.

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 $S_{n, Al} = S_n \times CF_{Al} \times CF_{emb, Al}$.
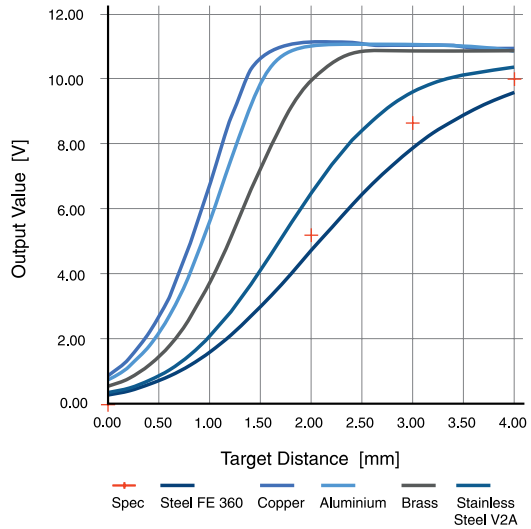
INSTALLATION CONDITIONS
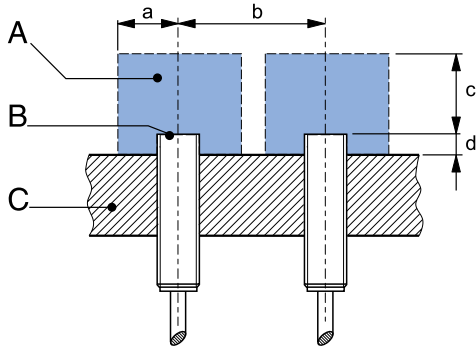
A : metal free zone
B : sensing face
C : support

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.
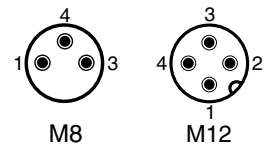
RESPONSE DIAGRAM

Legend: Spec, Steel FE 360, Copper, Aluminium, Brass, Stainless Steel V2A

Output voltage	s = 0 mm	0 V / -0.0 + 0.4 V
	s = S_d/2 mm	5.2 V ± 0.4 V
	s = S_d mm	10.0 V ± 0.4 V
	s > S_d mm	10…12 V ± 0.4 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   M12
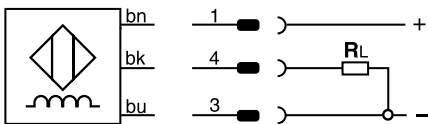
AVAILABLE TYPES

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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