CONTRINEX

INDUCTIVE SENSOR
ANALOG OUTPUT
DW-Ax-509-C8-39x

HOUSING	OPERATING DISTANCE	MOUNTING	
8 x 8 (C8)	**4 mm**	**Quasi-embeddable**	✓ Long sensing range ✓ Outstanding accuracy and temperature stability ✓ Resolution in µm range ✓ Exceptional price-performance ratio ✓ IP67

CE   IP67   UL LISTED c US   ASIC
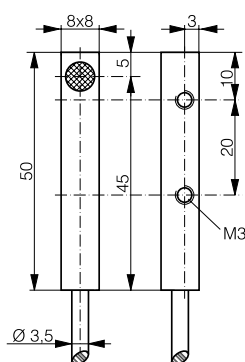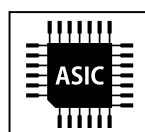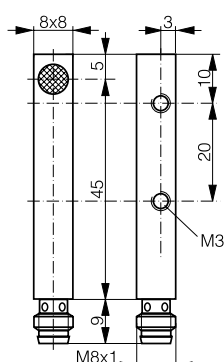
DW-AD-509-C8-390   **DW-AS-509-C8-390**

DETECTION DATA

Sensing distance (S$_d$)	4 mm
Repeat accuracy*	± 0.13 mm
Static resolution** (@0.67·S$_d$)	≤ 0.18 µm
Dynamic resolution* (@0.67·S$_d$)	≤ 0.57 µm
Temperature drift on output signal***	≤ ± 10%
Standard target	12 x 12 x 1 mm^3, FE360

INTERFACE

IO-Link	✗
MTTF @40°C	732 y

*Measured under 3σ confidence level (99.7%) at 0.67 Sd, constant temperature and constant voltage supply.
**Static resolution is measured filtering the signal at 20 Hz. Dynamic resolution is measured filtering the signal at 1 kHz.
***Over time a temperature drift of up to 10% can occur on the sensor, so regular calibration is recommended, depending on the application.

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	N/A
Bandwidth	1600 Hz
Time delay before availability	20 ms
Recovery time	50 ms
Warm-up time (temperature stability)	5 min
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	1 Nm
Ambient operating temperature	-25...+70°C[1]
Enclosure rating	IP 67
Weight (cable / connector)	see page 2
Shock and vibration	IEC 60947-5-7

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	0.44	Aluminum	0.58	Brass	0.47	Stainless S. V2A 1 / 2 mm	0.83

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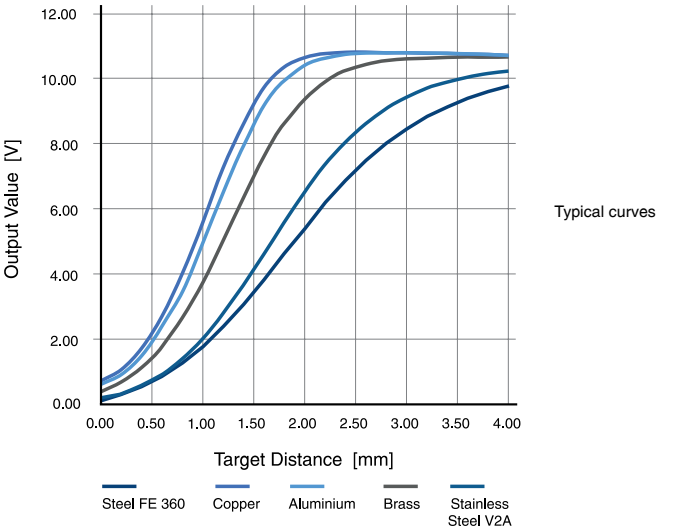
INSTALLATION CONDITIONS
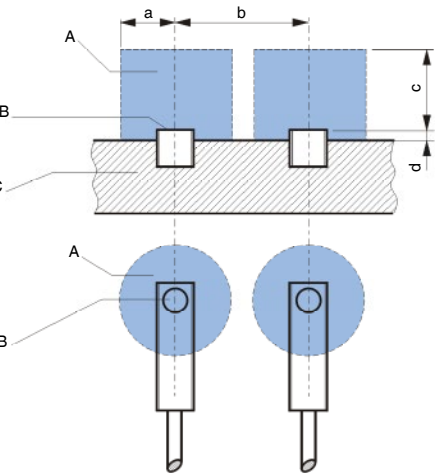
A : metal free zone
B : sensing face
C : support

a : 8 mm
b : 16 mm
c : 12 mm

d : steel   1 mm
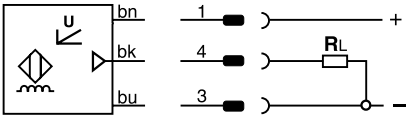
Note: additional installation information can be found in the glossary of the Contrinex General Catalog.
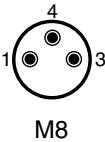
RESPONSE DIAGRAM

Typical curves

	Steel FE 360	Copper	Aluminium	Brass	Stainless Steel V2A

Output voltage	s = 0	0 V / -0.0 + 0.4 V
	s = S_d/2	5.2 V ± 0.4 V
	s = S_d	10.0 V ± 0.4 V
	s > 3*S_d	10.7 V ± 0.5 V

Output current	s = 0	N/A
	s = S_d/2	N/A
	s = S_d	N/A
	s > 3*S_d	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
330-020-350	DW-AD-509-C8-390	PUR, 2 m, 3 wire	-	0...10 V	42 g
330-020-355	DW-AS-509-C8-390	M8 3-pin	-	0...10 V	14 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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