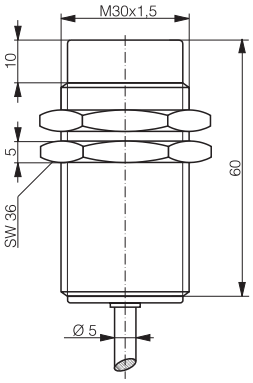
INDUCTIVE SENSOR

ANALOG OUTPUT

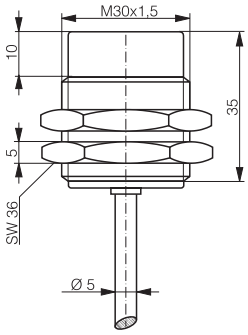
SPI-x-519-M30-3x0

HOUSING	OPERATING DISTANCE	MOUNTING
M30	40 mm	Non-embeddable

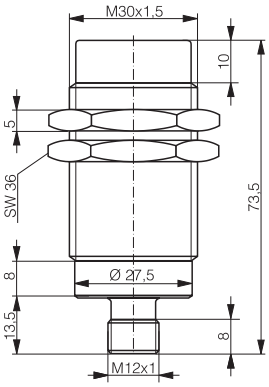
- ✓ Long sensing range
- ✓ Outstanding accuracy and temperature stability
- ✓ Resolution in µm range
- ✓ Exceptional price-performance ratio
- ✓ Current or voltage output
- ✓ IP67



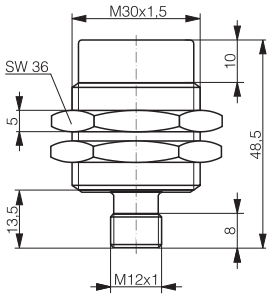
SPI-W-519-M30-390



SPI-W-519-M30-320



SPI-C-519-M30-390



SPI-C-519-M30-320

DETECTION DATA		INTERFACE	
Sensing distance (S_d)	40 mm	IO-Link	×
Repeat accuracy (IEC 60947-5-2)	± 0.35 mm	MTTF (@40°C)	546 y
Static resolution* (@0.67·S_d)	≤ 1.42 µm		
Dynamic resolution* (@0.67·S_d)	≤ 5.5 µm		
Temperature drift of S_d	≤ 5% (0... +70°C) ≤ 10% (-25... 0°C)		
Standard target	120 x 120 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)	15...30 VDC	Mounting	Non-embeddable
Residual ripple	≤ 20% U_B	Housing material	Chrome-plated brass
Power consumption (no-load)	≤ 12 mA	Sensing face material	PBTP
Max. load at voltage output	≤ 15 mA	Max tightening torque	70 Nm
Max. load at current output	0.4kΩ (Ub=15V) / 1kΩ (Ub=30V)	Ambient operating temperature	-25...+70°C
Bandwidth	100 Hz	Enclosure rating	IP67
Time delay before availability	20 ms	Weight (cable / connector)	see page 2
Recovery time	10 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.

INDUCTIVE SENSOR

ANALOG OUTPUT

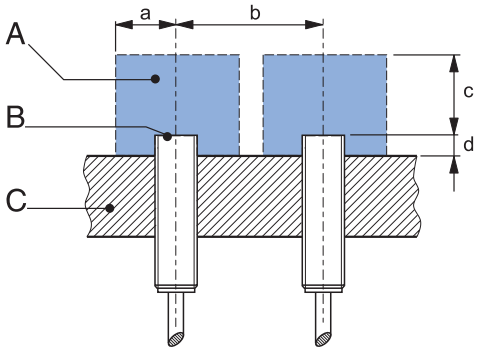
SPI-x-519-M30-3x0

CORRECTION FACTORS

Steel FE 360	1	Copper	0.4	Aluminum	0.44	Brass	0.49	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

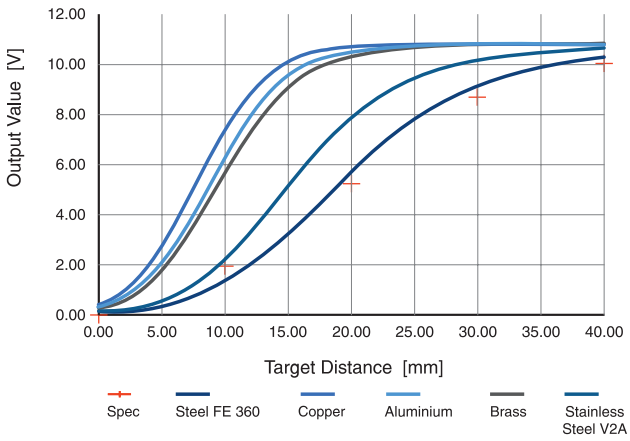


A : metal free zone
B : sensing face
C : support

a : 55 mm
b : 150 mm
c : 120 mm

d : steel 35 mm
alu 25 mm
brass 25 mm
stainless steel 20 mm

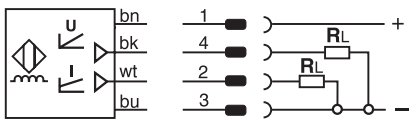
RESPONSE DIAGRAM



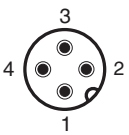
Output voltage	s = 0 mm	0 V / -0.0 +0.4 V
	s = S_d/2 mm	+5.2 V ± 0.4 V
	s = S_d mm	+10.0 V ± 0.4 V
	s > S_d mm	+10 … 12 V ± 0.4 V

Output current	s = 0 mm	4 mA ± 0.8 mA
	s = S_d/2 mm	12.3 mA ± 0.8 mA
	s = S_d mm	20 mA ± 0.8 mA
	s > S_d mm	+20 … 23 mA ± 0.8 mA

WIRING DIAGRAM



PIN ASSIGNMENT



M12

AVAILABLE TYPES

Part reference	Connection	Output on pin 2 / wh	Output on pin 4 / bk	Weight
SPI-W-519-M30-320	PUR, 2 m, 4 wire	4...20 mA	0...10 V	190 g
SPI-W-519-M30-390	PUR, 2 m, 4 wire	4...20 mA	0...10 V	215 g
SPI-C-519-M30-320	M12 4-pin	4...20 mA	0...10 V	135 g
SPI-C-519-M30-390	M12 4-pin	4...20 mA	0...10 V	155 g

Note: part reference may include additional suffix to indicate a revision version or special version. Further information is available on request.