

Inductive analog sensor

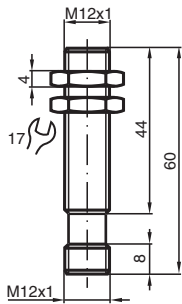
IA6-12GM50-IU-V1-Y70109009



- Inductive analog sensor
- Analog output 1 mA ... 5 mA/ 0 V ... 5 V
- 0...6 mm quasi flush



Dimensions



Technical Data

General specifications

Output type	Analog current output or analog voltage output
Installation	quasi flush
Output polarity	DC
Actuating element	mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 18 mm x 18 mm x 1 mm
Reduction factor r_{Al}	0.33
Reduction factor r_{Cu}	0.28
Reduction factor r_{304}	0.8
Reduction factor r_{Brass}	0.43
Measuring range	0 ... 6 mm
Output type	4-wire

Nominal ratings

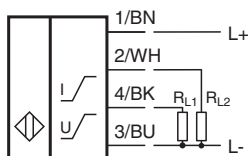
Installation conditions	
A	2 mm
B	12 mm
C	18 mm

Release date: 2025-03-12 Date of issue: 2025-03-12 Filename: 70109009_eng.pdf

Technical Data

F		14 mm
Operating voltage	U_B	10 ... 30 V , residual ripple 20 % U_B
Limit frequency (3dB)		1000 Hz
Reverse polarity protection		yes
Short-circuit protection		yes
Repeat accuracy	R	± 0.32 mm
Resolution		0 ... 1 μm
No-load supply current	I_0	≤ 10 mA
Functional safety related parameters		
MTTF _d		551 a
Diagnostic Coverage (DC)		0 %
Analog output		
Output type		0 ... 5 V / 1 ... 5 mA
Load resistor		Current output A2: 1 k Ω ($U_B=10\text{V}$) / 5 k Ω ($U_B=30\text{V}$)
Load current		Voltage output A1: ≤ 10 mA
Recovery time		20 ms
Adjustment tolerance zero point		$\leq \pm 10$ % of full-scale value
Temperature drift		± 5 % (0 ... 70 °C) ± 10 % (-25 ... 0 °C)
Residual ripple		20 %
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
CCC approval		CCC approval / marking not required for products rated ≤ 36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
Connection type		Connector plug
Housing material		chromium plated brass
Sensing face		PBT
Degree of protection		IP67
Connector		
Threading		M12 x 1
Number of pins		4
Mass		27 g
Dimensions		
Length		60 mm
Diameter		12 mm

Connection



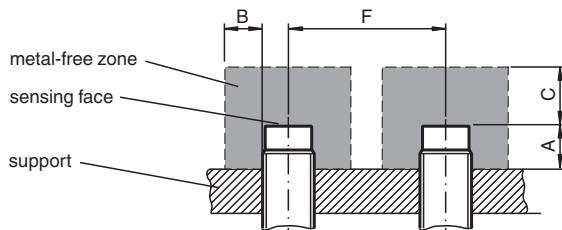
Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

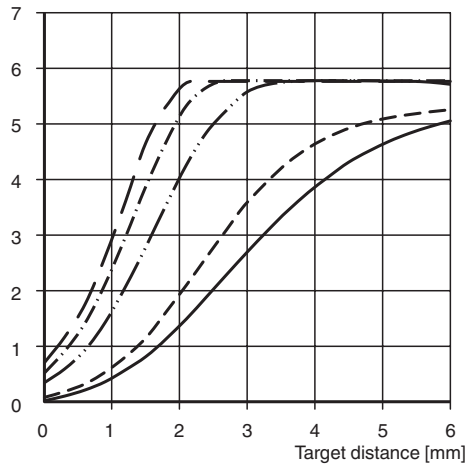
Installation Conditions



Characteristic Curve

Output characteristics

Output value [V]



- Steel FE 360
- - - Stainless steel V2A
- Copper
- · - Aluminum
- · · Brass

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