



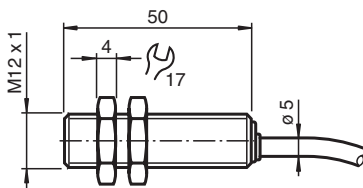
# Inductive analog sensor

## IA6-12GM50-IU-Y70109008

- 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
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	$\pm 0.32$ mm
Resolution		0 ... 1 $\mu$ m
No-load supply current	$I_0$	$\leq 10$ mA

#### Functional safety related parameters

MTTF <sub>d</sub>		551 a
Diagnostic Coverage (DC)		0 %

#### Analog output

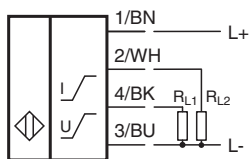
Output type		0 ... 5 V / 1 ... 5 mA
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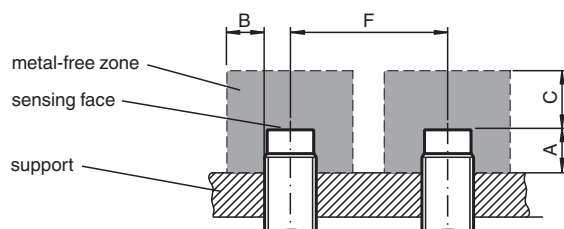
## Technical Data

Load resistor	Current output A2: 1 k $\Omega$ ( $U_B=10V$ ) / 5 k $\Omega$ ( $U_B=30V$ )	
Load current	Voltage output A1: $\leq 10$ mA	
Recovery time	20 ms	
Adjustment tolerance zero point	$\leq \pm 10$ % of full-scale value	
Temperature drift	$\pm 5$ % (0 ... 70 °C) $\pm 10$ % (-25 ... 0 °C)	
Residual ripple	20 %	
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards	EN IEC 60947-5-2	
<b>Approvals and certificates</b>		
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V	
<b>Ambient conditions</b>		
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)	
<b>Mechanical specifications</b>		
Connection type	cable	
Housing material	chromium plated brass	
Sensing face	PBT	
Degree of protection	IP67	
<b>Cable</b>		
Wire end ferrules	yes	
Material	PUR	
Color	grey	
Number of cores	3	
Length	L	2 m
Mass	27 g	
<b>Dimensions</b>		
Length	50 mm	
Diameter	12 mm	

## Connection

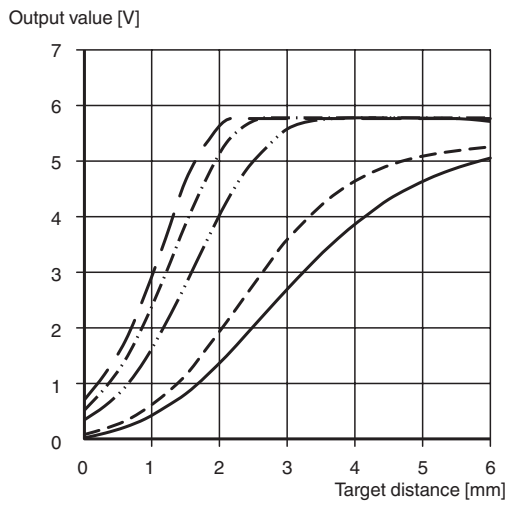


## Installation Conditions



**Characteristic Curve**

**Output characteristics**



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

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