

# Inductive analog sensor

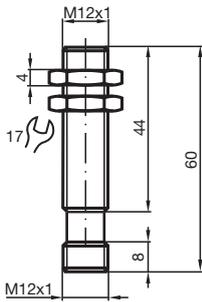
## IA6-12GM50-IU-V1-Y70109009



- Inductive analog
- 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
Measurement range	0 ... 6 mm
Output type	4-wire
<b>Nominal ratings</b>	
Installation conditions	

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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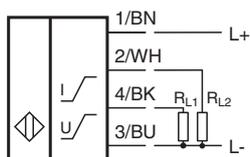
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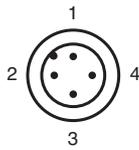
## Technical Data

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
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		551 a
Diagnostic Coverage (DC)		0 %
<b>Analog output</b>		
Output type		0 ... 5 V / 1 ... 5 mA
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 60947-5-2:2007 IEC 60947-5-2:2007 EN 60947-5-7:2003 IEC 60947-5-7:2003
<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		Connector plug M12 x 1 , 4-pin
Housing material		chromium plated brass
Sensing face		PBT
Degree of protection		IP67
Mass		27 g

## Connection



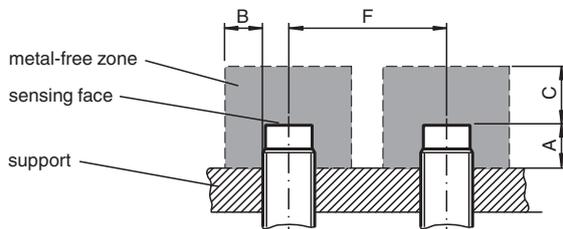
## Connection Assignment



Wire colors in accordance with EN 60947-5-2

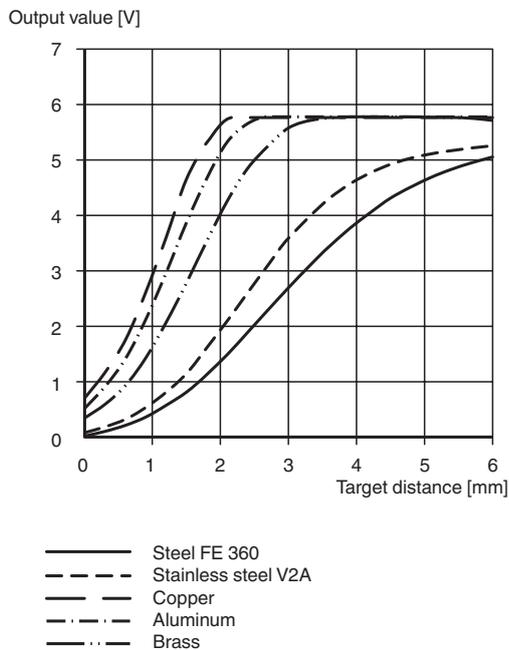
1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

## Installation



## Characteristic Curve

### Output characteristics



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## Accessories

	<b>BF 12</b>	Mounting flange, 12 mm
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**Accessories**

	<p><b>V1-G-2M-PUR</b></p>	<p>Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey</p>
	<p><b>V1-W-2M-PUR</b></p>	<p>Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey</p>

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