

# Inductive positioning system

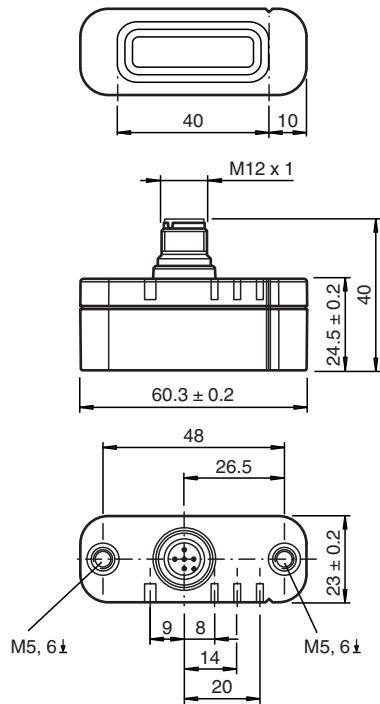
## PMI40-F90-U-V15



- Measuring range 0 ... 40 mm
- Analog output 0 ... 10 V DC



### Dimensions



### Technical Data

#### General specifications

Switching element function	analog voltage output
Object distance	0.5 ... 3 mm , recommended: 1.5 mm
Measurement range	0 ... 40 mm
Linearity range	1 ... 39 mm

#### Nominal ratings

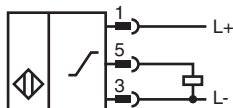
Operating voltage	$U_B$	12 ... 30 V DC
Reverse polarity protection		reverse polarity protected
Linearity error		within measuring range: $\pm 0.8$ mm within linearity range: $\pm 0.4$ mm

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## Technical Data

Repeat accuracy	R	± 0.1 mm
Resolution		50 µm
Temperature drift		± 0.5 mm (-25 °C ... 70 °C)
No-load supply current	$I_0$	≤ 40 mA
Operating voltage indicator		LED green
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		365 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
LED S3		Damping element in the configured analog measuring range
LED STATUS		LED, green/red
<b>Analog output</b>		
Output type		voltage output 0 ... 10 V DC
Load resistor		voltage output ≥ 1000 Ω
Short-circuit protection		voltage output: current limit
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012 EN 60947-5-7:2003 IEC 60947-5-7:2003
<b>Approvals and certificates</b>		
UL approval		cULus Listed, Class 2 Power Source, Type 1 enclosure
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		5-pin, M12 x 1 connector
Degree of protection		IP67 / IP69K
<b>Material</b>		
Housing		PBT, stainless steel 1.4571 , brass, nickel-plated
Target		mild steel, e. g. 1.0037, SR235JR (formerly St37-2)
Mass		56 g

## Connection



## Connection Assignment

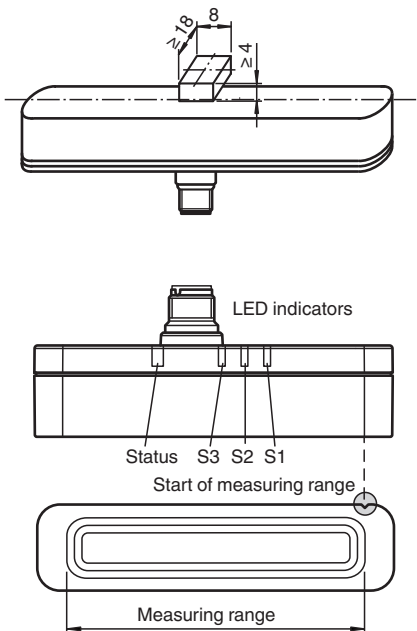


Wire colors in accordance with EN 60947-5-2

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

## Application

dimensions for the target object:



## Accessories

	<b>BT-F90-W</b>	Damping element for sensors of type F90, F112, and F166; side hole
	<b>MH-F90</b>	Mounting bracket for mounting of F90 sensors
	<b>V15-G-2M-PVC</b>	Female cordset single-ended M12 straight A-coded, 5-pin, PVC cable grey
	<b>V15-W-2M-PVC</b>	Female cordset single-ended M12 angled A-coded, 5-pin, PVC cable grey

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