Model Number

PMI14V-F112-U-V3

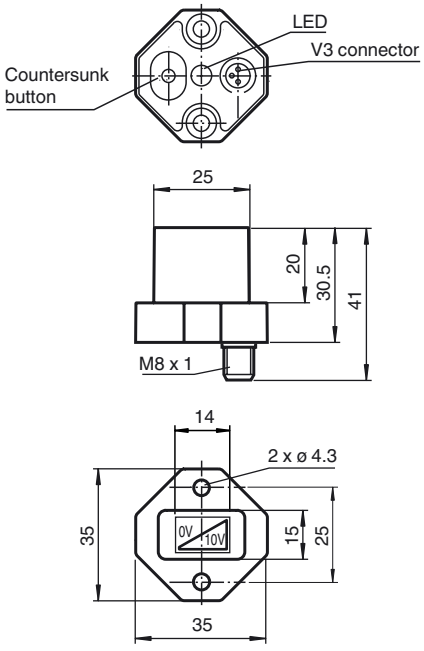
Features

- **Analog output 0 ... 10 V**
- **Scaleable measurement range, programmable via key**
- **Measuring range 0 ... 14 mm**

Technical data

General specifications	
Switching element function	Analog voltage output
Installation	flush
Object distance	max. 2.5 mm
Measurement range	0 ... 14 mm
Nominal ratings	
Operating voltage U_B	18 ... 30 V DC
Reverse polarity protection	reverse polarity protected
Linearity error	± 0.3 mm
Repeat accuracy R	± 0.05 mm
Resolution	33 µm
Temperature drift	± 0.4 mm
No-load supply current I_0	≤ 20 mA
Operating voltage indicator	LED
Functional safety related parameters	
$MTTF_d$	490 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %
Analog output	
Output type	1 voltage output: 0 ... 10 V
Load resistor	≥ 2000 Ω
Short-circuit protection	limited to 6 mA
Ambient conditions	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications	
Connection type	M8 x 1 connector, 3-pin
Housing material	diecast zinc, not laquered or coated
Degree of protection	IP67
Material	
Target	mild steel, e. g. 1.0037, SR235JR (formerly St37-2)
Note	The data relating to accuracy only apply to a distance to the object to be detected of 1 ... 2.5 mm.
Compliance with standards and directives	
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
Approvals and certificates	
UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

Dimensions



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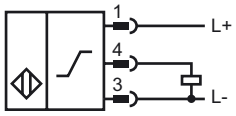
Electrical Connection



Pinout

Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
3	BU	(blue)
4	BK	(black)

Accessories

BT-F90-W
Damping element for sensors of type F90, F112, and F166; side hole

V3-WM-2M-PUR
Cable socket, M8, 3-pin, PUR cable

Information on Installation and Operation

Safety Information

STOP
Warnung

This product must not be used in applications in which the safety of persons depends on the function of the device.

This product is not a safety component as specified in the EU Machinery Directive.

Actuator

The linear position measurement system is optimally aligned to the geometry of Pepperl+Fuchs actuators.

Using Your Own Actuators

Generally speaking, it is possible for you to use your own actuators. The specified measurement accuracy of the sensor will be achieved only if the actuator has the following properties:

- Material: construction steel such as S235JR+AR (previously St37)
- Dimensions (L x W x H): ≥ 18 mm x 8 mm x ≥ 4 mm
- The active surface of the actuator must protrude across the entire sensor width.

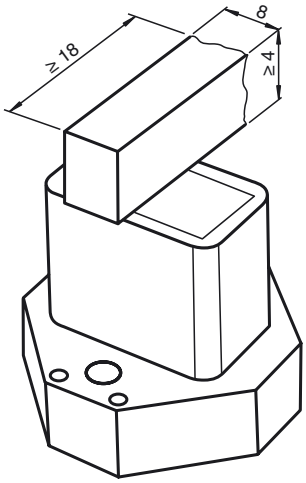
Note:

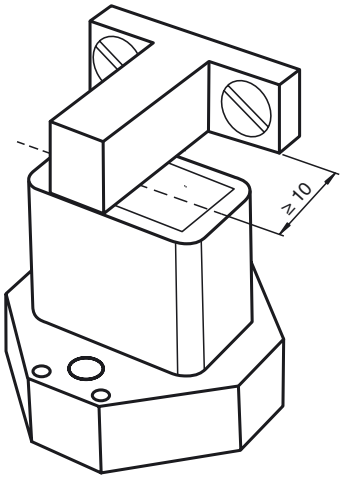
The width of the actuator must be precisely 8 mm. If the width of the actuator deviates from this value, the position values will differ.

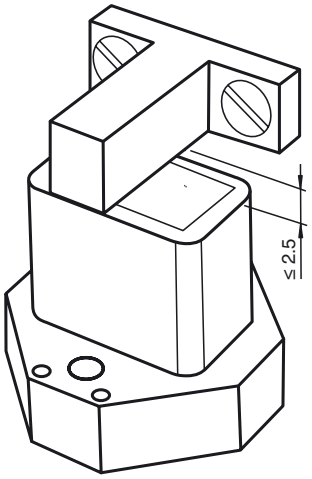
Installation

- It is possible to flush mount the device.
- The distance between the center of the measurement field (framed area on the front

Additional Information







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panel of the sensor) and the fixing base or fixing elements (e.g., protruding screw heads) of the actuator must be at least 10 mm.

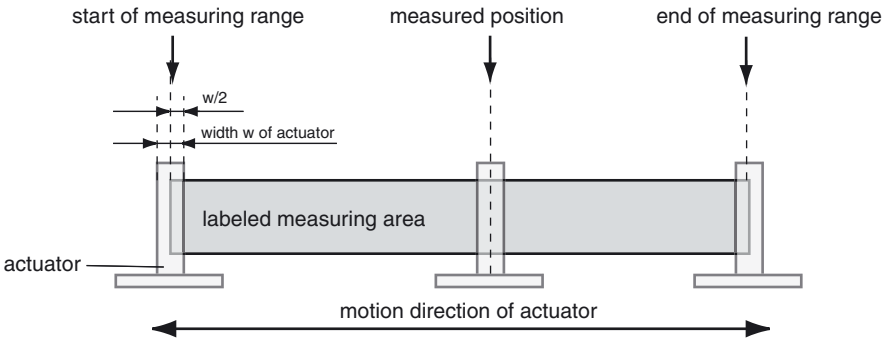
Operating Instructions

The specified measurement accuracy is achieved if the distance of the actuator from the sensor surface is max. 2.5 mm.

Definition of the Measuring Range/Measured Position

The measured position of the actuator is based on half of the width (center of the actuator).

The measuring range starts and ends when the actuator covers the measurement field marked on the sensor with half of its width in the course of its longitudinal movement.



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