



Model Number

PMI14V-F112-U-V3

Features

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

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	± 0.05 mm
Resolution	33 μ m
Temperature drift	± 0.4 mm
No-load supply current I_0	≤ 20 mA
Operating voltage indicator	LED

Functional safety related parameters

MTTF _d	650 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Analog output

Output type	1 voltage output: 0 ... 10 V
Load resistor	$\geq 1000 \Omega$
Short-circuit protection	pulsing

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
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Mechanical specifications

Connection type	M8 x 1 connector, 3-pin
Protection degree	IP67

Material

Housing PA 6

Note

The data relating to accuracy only apply to a distance to the object to be detected of 1 ... 2.5 mm.

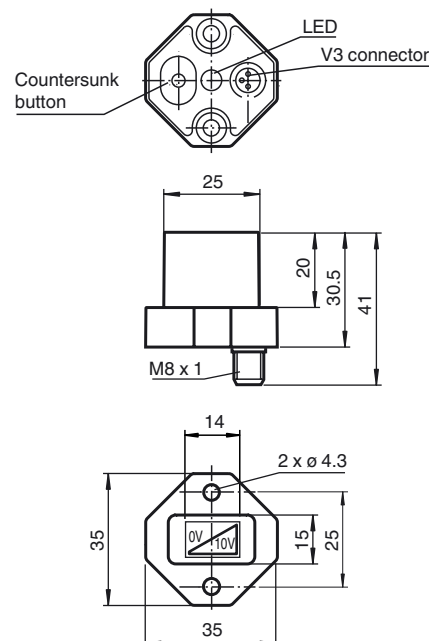
Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

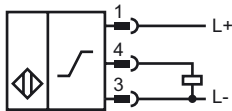
Approvals and certificates

UL approval	cULus Listed, General Purpose, Class 2 Power Source
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

Dimensions



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; lateral screw holes

V3-GM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

V3-WM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

Information on Installation and Operation

Safety Information



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): $\geq 18 \text{ mm} \times 8 \text{ mm} \times \geq 4 \text{ mm}$
- The active surface of the actuator must protrude across the entire sensor width.

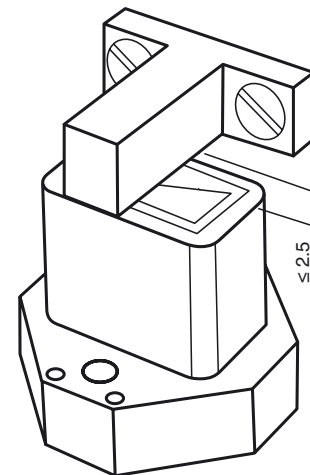
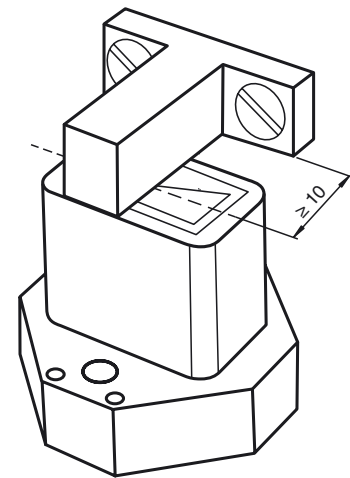
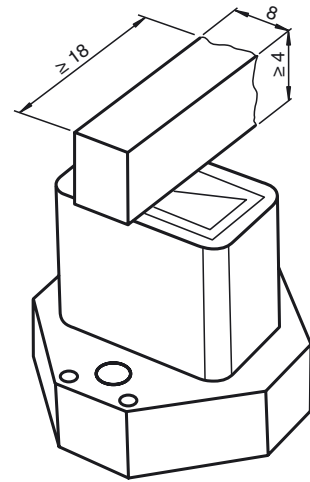
Note:

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.

Additional Information



Release date: 2014-02-10 10:17 Date of issue: 2014-02-10 193152_eng.xml

- The distance between the center of the measurement field (framed area on the front 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.

