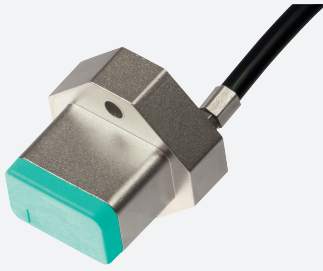


# Inductive positioning system

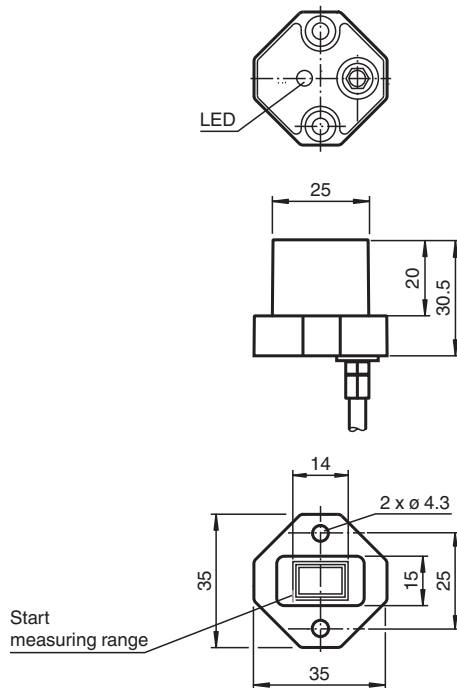
## PMI14V-F112-U-200MM-V3



- Analog output 0 ... 10 V
- Measuring range 0 ... 14 mm



### Dimensions



### 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		$\pm 0.3$ mm
Repeat accuracy	R	$\pm 0.05$ mm

Release date: 2023-10-16 Date of issue: 2023-10-16 Filename: 316175\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

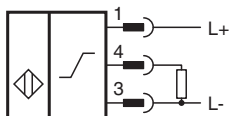
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

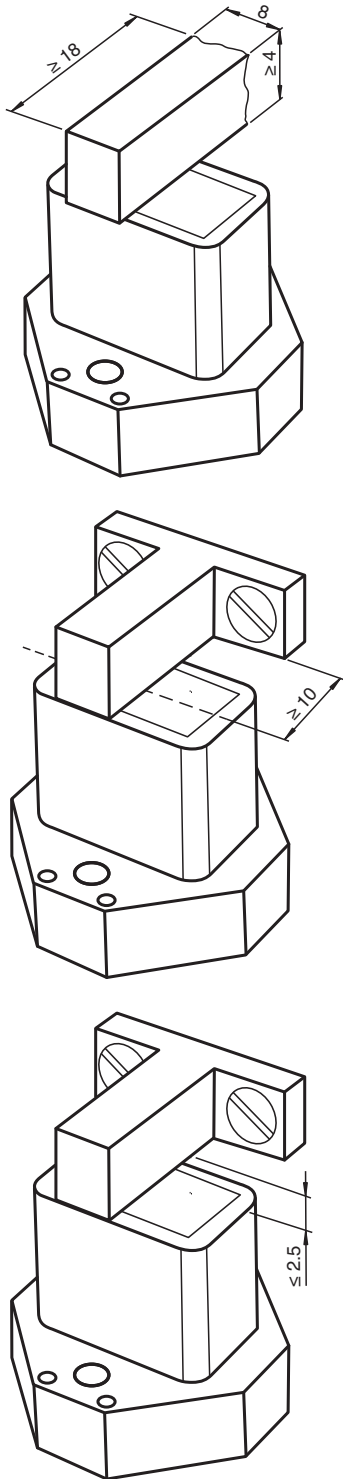
## Technical Data

Resolution		33 $\mu\text{m}$
Temperature drift		$\pm 0.5 \text{ mm}$
No-load supply current	$I_0$	$\leq 20 \text{ mA}$
Operating voltage indicator		LED yellow
<b>Analog output</b>		
Output type		voltage output 0 ... 10 V
Load resistor		$\geq 2000 \Omega$
Short-circuit protection		limited to 6 mA
<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 IEC 61131-9:2013
<b>Approvals and certificates</b>		
UL approval		cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval		CCC approval / marking not required for products rated $\leq 36 \text{ V}$
<b>Ambient conditions</b>		
Ambient temperature		$-25 \dots 70 \text{ }^\circ\text{C}$ ( $-13 \dots 158 \text{ }^\circ\text{F}$ )
<b>Mechanical specifications</b>		
Housing material		diecast zinc, not laquered or coated
Degree of protection		IP67
Material		
Target		mild steel, e. g. 1.0037, SR235JR (formerly St37-2)
Connector		
Threading		M8 x 1
Tightening torque		0.4 Nm
Number of pins		3
Cable		
Cable diameter		$2.9 \text{ mm} \pm 0.1 \text{ mm}$
Bending radius		$> 10 \times$ cable diameter
Material		PUR
Color		black
Number of cores		3
Core cross section		$0.14 \text{ mm}^2$
Length	L	0.2 m
Mass		56 g
Note		The data relating to accuracy only apply to a distance to the object to be detected of 1 ... 2.5 mm.

## Connection






**Installation Conditions**



Release date: 2023-10-16 Date of issue: 2023-10-16 Filename: 316175\_eng.pdf

**Accessories**

	<b>BT-F90-W</b>	Damping element for sensors of type F90, F112, and F166; side hole
	<b>BT-F90-G</b>	Damping element for sensors of type F90, F112, and F166; front hole
	<b>MH V3-SCREWDRIVER</b>	Torque screwdriver (0.4 Nm)

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

## Accessories



**MH V3-BIT M8**

plug-in cap for M8

Release date: 2023-10-16 Date of issue: 2023-10-16 Filename: 316175\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

## Installation

### 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.
- 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.

