



### Model Number

PMI80-F90-IU-IO-V15

### Features

- Parameterization and diagnosis via IO-Link
- Measuring range 0 ... 80 mm
- Parameterisable measuring range
- Analog current or voltage output, programmable

### Application

#### Attention!

If the sensor is supplied via an IO-Link-Master, ensure that the sum of the no-load supply current and operating currents of all sensor outputs does not exceed the maximum current the IO-Link-Master can supply.

### Accessories

#### BT-F90-W

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

#### MH-F90

Mounting bracket for mounting of F90 sensors

#### V15-G-2M-PVC

Female cordset, M12, 5-pin, PVC cable

#### V15-W-2M-PVC

Female cordset, M12, 5-pin, PVC cable

## Technical Data

### General specifications

Switching element function	Analog current or voltage output, programmable
Object distance	0.5 ... 3 mm, recommended: 1.5 mm
Measurement range	0 ... 80 mm
Linearity range	1 ... 79 mm

### Nominal ratings

Operating voltage	$U_B$	12 ... 30 V DC (13 ... 30 V when analog voltage output is parameterized)
Reverse polarity protection		reverse polarity protected
Linearity error		within measuring range: $\pm 0.8$ mm within linearity range: $\pm 0.4$ mm
Repeat accuracy	R	$\pm 0.1$ mm
Resolution		50 $\mu$ m
Temperature drift		$\pm 0.5$ mm (-25 °C ... 70 °C)
No-load supply current	$I_0$	$\leq 40$ mA
Operating voltage indicator		LED green

### Functional safety related parameters

MTTF <sub>d</sub>	311 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Indicators/operating means

LED S3	Damping element in the configured analog measuring range
LED STATUS	Status display LED, green/red (Power on, communication/error, missing damping element)

### Interface

Interface type	IO-Link (via C/Q = Pin 4)
Device profile	Smart Sensor
Transfer rate	COM 2 (38.4 kBaud)
Value range	0000h ... 6400h
IO-Link Revision	1.1
Min. cycle time	2.3 ms
Process data width	Process data input: 16 Bit Process data output: none
SIO mode support	yes
Device ID	0x200301 (2097921)
Compatible master port type	A

### Analog output

Output type	current output 4-20 mA voltage output 0 - 5 V DC 0 ... 10 V DC, programmable
Load resistor	current output: $\leq 400 \Omega$ voltage output: $\geq 1000 \Omega$ voltage output: current limit

### Short-circuit protection

voltage output: current limit

### Ambient conditions

Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
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### Mechanical specifications

Connection type	5-pin, M12 x 1 connector
Degree of protection	IP67 / IP69K
Material	
Housing	PBT, stainless steel 1.4571, brass, nickel-plated
Target	mild steel, e. g. 1.0037, SR235JR (formerly St37-2)
Mass	83 g

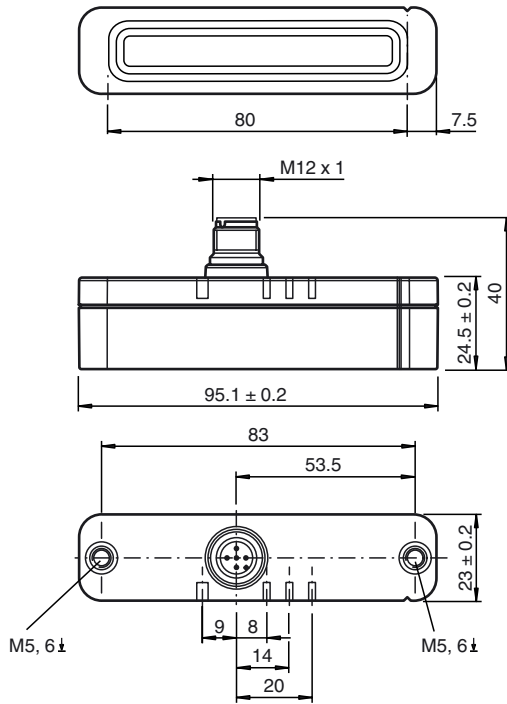
### Compliance with standards and directives

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 EN 60947-5-7:2003 EN61131-9:2013 IEC 60947-5-7:2003 IEC 61131-9:2013

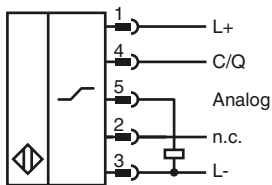
### Approvals and certificates

UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
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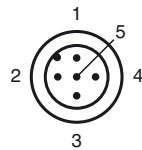
**Dimensions**



**Electrical Connection**



**Pinout**

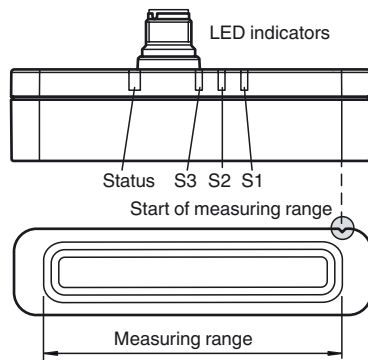
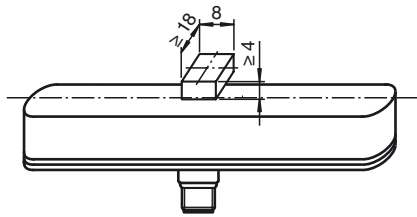


Wire colors in accordance with EN 60947-5-2

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

**Additional Information**

dimensions for the target object:



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

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