



Model Number

PMI80-F90-3EP-IO-V15

Features

- Parameterization and diagnosis via IO-Link
- Measuring range 0 ... 80 mm
- Parameterisable measuring range
- 3 Push-pull outputs
- Switch points programmable via IO-Link

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 | 3 switch outputs, 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 |
| Reverse polarity protection | | reverse polarity protected |
| Linearity error | | within measuring range: ± 0.8 mm within linearity range: ± 0.4 mm |
| Repeat accuracy | R | ± 0.1 mm |
| Resolution | | 50 μ m |
| Temperature drift | | ± 0.5 mm (-25 °C ... 70 °C) |
| No-load supply current | I_0 | ≤ 40 mA |
| Operating voltage indicator | | LED green |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 311 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|------------|--|
| LED S1 | switching state Switching output 1 |
| LED S2 | switching state Switching output 2 |
| LED S3 | switching state, Switching output 3 |
| 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 | 0x200302 (2097922) |
| Compatible master port type | A |

Switching output

| | |
|--------------------------|---|
| Output type | 3 push-pull outputs (can be parameterized), short-circuit-proof, reverse polarity protection, overvoltage protected |
| Operating current | I_L ≤ 100 mA / output |
| Switching window | ± 1 mm |
| Switching hysteresis | 0.2 mm |
| Voltage drop | ≤ 3 V |
| Short-circuit protection | pulsing |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 85 °C (-13 ... 185 °F) |
|---------------------|--------------------------------|

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 |

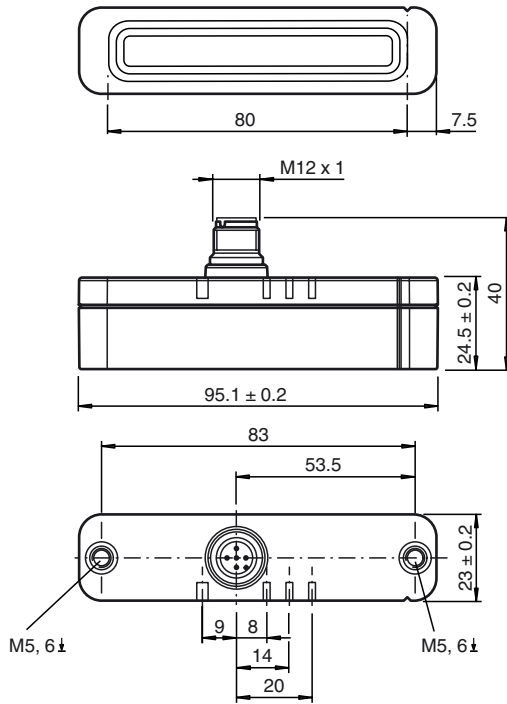
Compliance with standards and directives

| | |
|---------------------|--|
| 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 IEC 61131-9:2013 EN 61131-9:2013 |

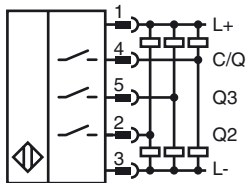
Approvals and certificates

| | |
|-------------|--|
| UL approval | cULus Listed, Class 2 Power Source, Type 1 enclosure |
|-------------|--|

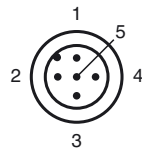
Dimensions



Electrical Connection



Pinout

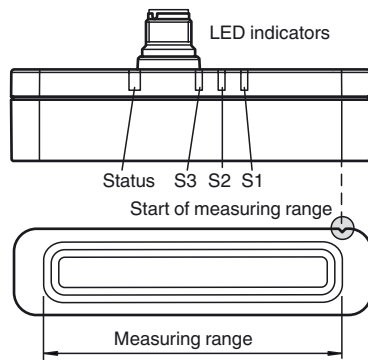
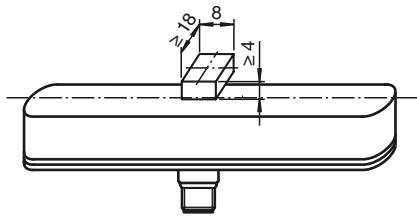


Wire colors in accordance with EN 60947-5-2

| | | |
|---|----|---------|
| 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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