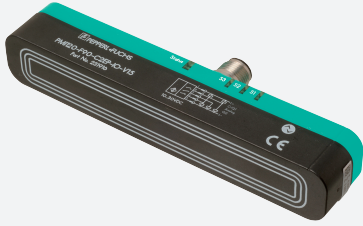


Inductive positioning system

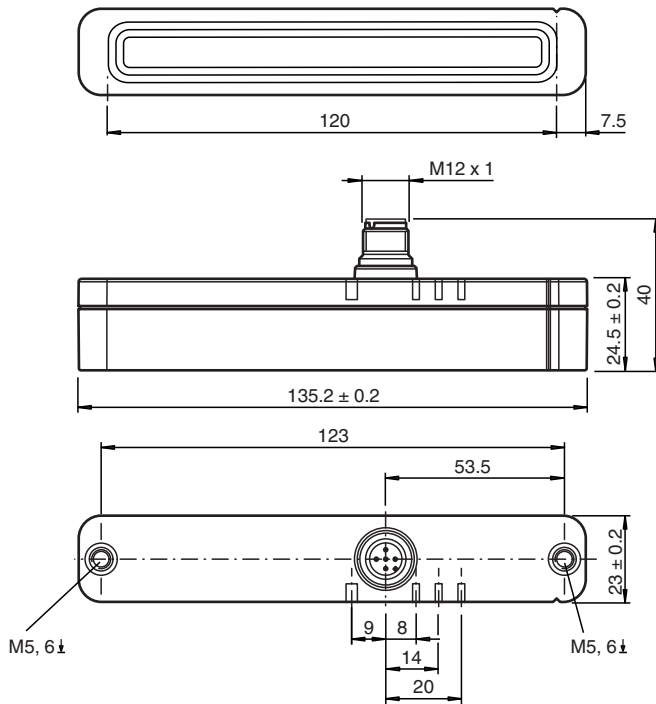
PMI120-F90-IU2EP-IO-V15



- Parameterization and diagnosis via IO-Link
- Measuring range 0 ... 120 mm
- Parameterisable measuring range
- Analog current or voltage output, programmable
- 2 Push-pull outputs
- Switch points programmable via IO-Link



Dimensions



Technical Data

General specifications

| | | |
|----------------------------|--|--|
| Switching element function | Analog current or voltage output, programmable 2 switch outputs, programmable | |
| Object distance | 0.5 ... 3 mm , recommended: 1.5 mm | |
| Measurement range | 0 ... 120 mm | |
| Linearity range | 1 ... 119 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 | |

Release date: 2022-05-17 Date of issue: 2022-05-17 Filename: 315196_eng.pdf

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

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PEPPERL+FUCHS

Technical Data

| | | |
|---|-------|--|
| 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 | | 271 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 | | 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) |
| IO-Link revision | | 1.1 |
| Device profile | | Smart Sensor |
| Device ID | | 0x200403 (2098179) |
| Transfer rate | | COM2 (38.4 kBaud) |
| Value range | | 0000h ... 9600h |
| Min. cycle time | | 2.3 ms |
| Process data width | | Process data input: 16 Bit Process data output: none |
| SIO mode support | | yes |
| Compatible master port type | | A |
| Switching output | | |
| Output type | | 2 push-pull outputs (can be parameterized), short-circuit-proof, reverse polarity protection, surge-proof |
| Operating current | I_L | ≤ 100 mA / Output |
| Switching window | | ± 1 mm |
| Switching hysteresis | | 0.2 mm |
| Voltage drop | | ≤ 3 V |
| Short-circuit protection | | pulsing |
| Analog output | | |
| Output type | | 1 current output: 4 ... 20 mA or 1 voltage output: 0 ... 10 V, programmable |
| Load resistor | | current output: ≤ 400 Ω voltage output: ≥ 1000 Ω |
| Short-circuit protection | | voltage output: current limit |
| 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 |
| Marine approval | | DNVGL TAA00001V2 |
| Ambient conditions | | |
| Ambient temperature | | -25 ... 85 °C (-13 ... 185 °F) |

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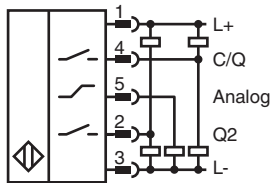
 **PEPPERL+FUCHS**

Technical Data

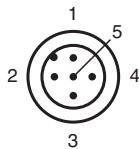
Mechanical specifications

| | |
|----------------------|---|
| 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 | 113 g |

Connection



Connection Assignment

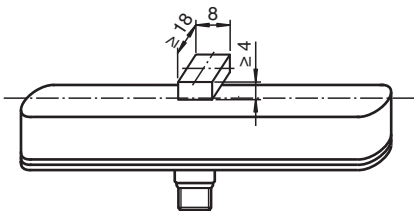


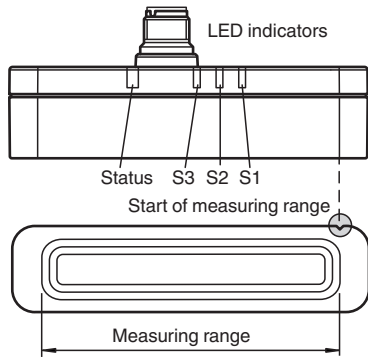
Wire colors in accordance with EN 60947-5-2

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










Application

dimensions for the target object:





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 single-ended M12 straight A-coded, 5-pin, PVC cable grey |
|  | V15-W-2M-PVC | Female cordset single-ended M12 angled A-coded, 5-pin, PVC cable grey |
|  | ICE2-8IOL-K45S-RJ45 | EtherNet/IP IO-Link master with 8 inputs/outputs, DIN rail, screw terminal |
|  | ICE3-8IOL-K45P-RJ45 | PROFINET IO IO-Link master with 8 inputs/outputs, DIN rail, push-in terminals |
|  | ICE3-8IOL-K45S-RJ45 | PROFINET IO IO-Link master with 8 inputs/outputs, DIN rail, screw terminal |
|  | IO-Link-Master02-USB | IO-Link master, supply via USB port or separate power supply, LED indicators, M12 plug for sensor connection |
|  | ICE2-8IOL-K45P-RJ45 | EtherNet/IP IO-Link master with 8 inputs/outputs, DIN rail, push-in connectors |

Operation

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.