



Magnetic Cylinder Sensors Analog positioning sensors

MPS-032TSTU0



Model Name > [MPS-032TSTU0](#)
Part No. > [1045667](#)



At a glance

- Analog positioning sensor for pneumatic and hydraulic cylinders with T-slot
- Measuring lengths from 32 mm to 256 mm in 32 mm steps
- Output signals 4 mA to 20 mA as well as 0 V to 10 V in a single sensor
- Superior precision: 0.05 mm resolution typ., 0.1 mm repeatability typ., 0.3 mm linearity typ., 1 ms measurement rate typ.
- Electric setting of zero point and end point via teach-in button (optional)

Your benefits

- Convenient installation and sensor replacement due to drop-in installation
- Maximum flexibility through measuring ranges from 32 mm to 256 mm
- Increased machine performance thanks to the sensor's minimal blind zone
- Easy analog output setup: adjustable zero and end point can be taught via single button
- Selectable installation direction to optimize cabling
- Simple commissioning due to "in-range" indicator
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link save time and money



Features

| | |
|------------------------------|--|
| Output function: | Analog |
| Electrical wiring: | DC 4-wire |
| Teach-in: | 1 |
| Cylinder type: | T-slot |
| Cylinder types with adapter: | Roundbody cylinder SMC rail cylinder CDQ2 SMC rail cylinder ECDQ2 Cylinders with dovetail slots |
| Measurement range: | 32 mm ¹⁾ |
| Housing length: | 45 mm |
| Analog output (voltage): | 0 V ... 10 V |
| Analog output (current): | 4 mA ... 20 mA |
| Enclosure rating: | IP 67 ²⁾ |

¹⁾ ± 1 mm ²⁾ According to EN 60529

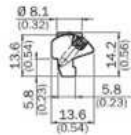
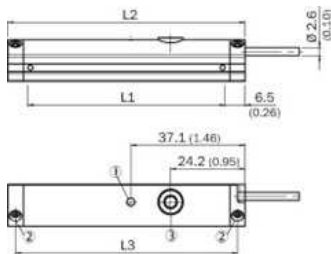
Mechanics/electronics

| | |
|-----------------------------------|---|
| Connection type: | Cable, 2 m ¹⁾ |
| Supply voltage: | 15 V DC ... 30 V DC |
| EMC: | According to EN 60947-5-2 ²⁾ |
| Load resistance, max.: | 500 Ω ³⁾ |
| Min. load resistance: | 2 kΩ ⁴⁾ |
| Cable material: | PUR |
| Conductor cross-section: | 0.14 mm ² |
| Reverse polarity protection: | ✓ |
| Short-circuit protection: | ✓ |
| Housing material: | Plastic |
| Output indicator: | ✓ |
| Linearity typ.: | 0.3 mm |
| Resolution typ.: | 0.03 % FSR (max. ≥ 0.05 mm) ⁵⁾ |
| Repeat accuracy typ.: | 0.06 % FSR (≥ 0.1 mm) ⁶⁾ |
| Shock and vibration resistance: | 30 g, 11 ms/10 ... 55 Hz, 1 mm |
| Ambient operating temperature: | -20 °C ... 70 °C |
| Protection class: | III |
| Magnetic field sensitivity, typ.: | 3 mT |
| Sampling rate typ.: | 1 ms |

¹⁾ Do not bend below 0 °C ²⁾ The analog measured value can deviate under transient conditions ³⁾ Power output ⁴⁾ Voltage output ^{5) 6)} FSR: Full Scale Range; max.

measuring range

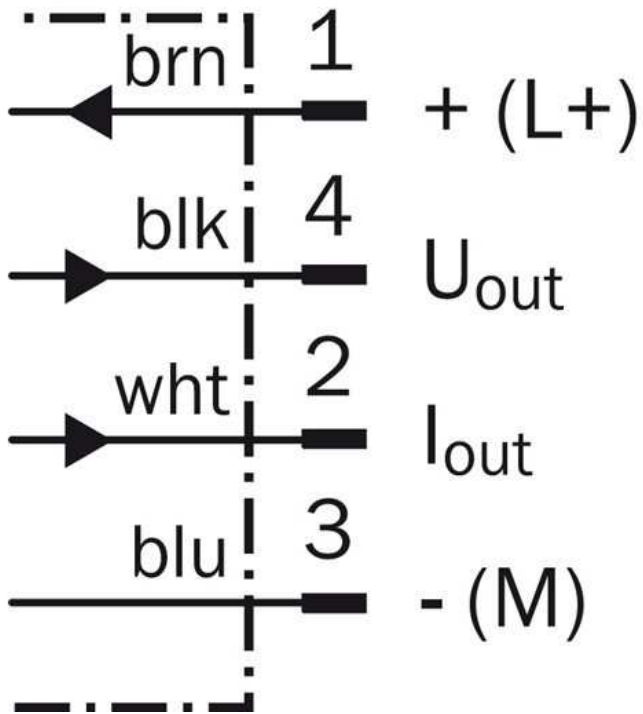
Dimensional drawing



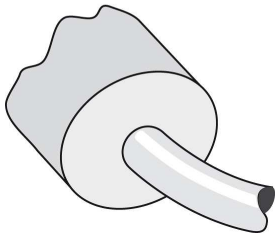
| | Total length (L1) mm | Measuring range (L2) mm | Distance mounting screws (L3) mm |
|----------------|----------------------|-------------------------|----------------------------------|
| MPS-32 | 45 | 32 | 40 |
| MPS-64 | 77 | 64 | 72 |
| MPS-96 | 109 | 96 | 104 |
| MPS-128 | 141 | 128 | 136 |
| MPS-160 | 173 | 160 | 168 |
| MPS-192 | 205 | 192 | 200 |
| MPS-224 | 237 | 224 | 232 |
| MPS-256 | 269 | 256 | 264 |

- |1| Function signal indicator
- |2| Fixing screw
- |3| Teach-in button

Connection diagram



Connection type



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