



Magnetic Cylinder Sensors Analog positioning sensors

MPS-128TSTP0



Model Name > [MPS-128TSTP0](#)
Part No. > [1045672](#)



At a glance

- Magnetic position sensor for pneumatic and hydraulic cylinders with T-slot
- Output signal: analog, 4 - 20 mA current and 0 -10 V (in one sensor)
- Superior precision: 0.05 mm resolution, 0.1 mm repeatability, 0.3 mm linearity, 1 ms measurement rate
- Electric setting of zero point and end point via teach-in button (optional)
- Various lengths available from 32 - 256 mm
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link

Your benefits

- Maximum flexibility with several different measuring ranges from 32 to 256 mm
- Easy analog output setup: adjustable zero and end point can be taught via single button
- Drop-in T-slot mounting from above makes assembly easy
- Selectable installation direction to optimize cabling
- Efficient measurement of stroke due to minimal blind zones, increasing machine throughput
- Simple commissioning due to "in-range" indicator
- IO-Link provides easy data access from the PLC
- Quick and easy configuration



Features

Output function:	Analog
Electrical wiring:	DC 4-wire
Enclosure rating:	IP 67
Cylinder types with adapter:	Roundbody cylinder Dove-tail groove cylinder SMC rail cylinder CDQ2 (C-Slot) SMC rail cylinder ECDQ2 (C-Slot)
Teach-in:	1
Analog output (voltage):	0 V ... 10 V
Analog output (current):	4 mA ... 20 mA
Housing length:	141 mm
Measuring range:	128 mm ¹⁾
Cylinder type:	T-slot

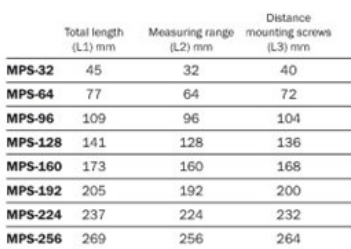
¹⁾ ± 1 mm

Mechanics/electronics

Connection type:	Cable with connector M8, 4-pin, 300 mm ¹⁾
Supply voltage:	15 V DC ... 30 V DC
EMC:	According to EN 60947-5-7 ²⁾
Cable material:	PUR
Conductor cross-section:	0.14 mm ²
Reverse polarity protection:	✓
Short-circuit protection:	✓
Housing material:	Plastic
Housing cap material:	PA, strengthened
Sensing face material:	Plastic
Ambient operating temperature:	-20 °C ... 70 °C
Load resistance, max.:	500 Ω ³⁾
Min. load resistance:	2 kΩ ⁴⁾
Magnetic field sensitivity, min.:	3 mT
Output indicator:	✓
Linearity typ.:	0.3 mm
Protection class:	III
Resolution typ.:	0.03 % FSR (max. ≥ 0.05 mm) ⁵⁾
Repeat accuracy typ:	0.06 % FSR (≥ 0.1 mm) ⁶⁾
Shock/vibration:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Sampling rate:	1 ms

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

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



The diagram illustrates a four-layer neural network structure. The layers are labeled on the left as 'brn' (brown), 'blk' (black), 'wht' (white), and 'blu' (blue). The corresponding output values are listed on the right as 1, 4, 2, and 3. The network is connected to a central vertical dashed line, which is further connected to a horizontal dashed line at the bottom. The output values are also associated with specific labels: 1 is labeled '+ (L+)', 4 is labeled 'U_{out}', 2 is labeled 'I_{out}', and 3 is labeled '- (M)'.

Connection type



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