

ONLINE DATA SHEET
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Magnetic Cylinder Sensors
Analog positioning sensors

MPS-096TSTP0



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Analog positioning sensors

Model Name > MPS-096TSTP0
Part No. > 1045670



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:	96 mm [1]
Housing length:	109 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

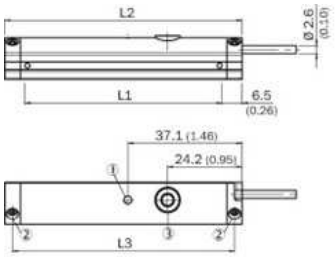
Mechanics/electronics

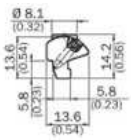
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Connection type:	Cable with connector M8, 4-pin, 0.3 m [1]
Supply voltage:	15 V DC ... 30 V DC
EMC:	According to EN 60947-5-2 [2]
Load resistance, max.:	500 Ω [3]
Min. load resistance:	2 kΩ [4]
Cable material:	PUR
Conductor cross-section:	0.14 mm²
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



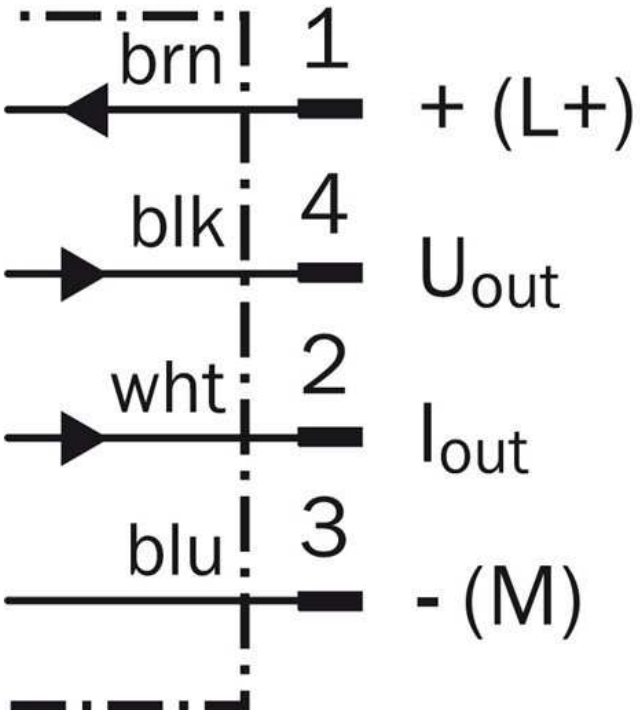


	Total length (L1) mm	Measuring range (L2) mm	Distance mounting screws (L3) mm
MPS-32	45	32	40
MPS-64	77	64	72
MPS-96	109	96	104
MPS-128	141	128	136
MPS-160	173	160	168
MPS-192	205	192	200
MPS-224	237	224	232
MPS-256	269	256	264

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

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Connection diagram



Connection type



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