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DATA SHEET

MPS-224TSNP0

MPS-T
Cylinder sensors

SICK

Sensor Intelligence



CYLINDER SENSORS

MPS-224TSNP0

ORDERING INFORMATION

Type	part no.
MPS-224TSNP0	1053841

Further device versions and accessories at www.sick.com/MPS-T



DETAILED TECHNICAL DATA

FEATURES

Cylinder type	T-slot
Cylinder types with adapter	Round body cylinder Profile cylinders and tie-rod cylinders Dovetail groove cylinder
Measuring range	224 mm ¹⁾
Housing length	237 mm
Output function	Analog
Electrical wiring	DC 4-wire
Analog output (voltage)	0 V ... 10 V ²⁾
Analog output (current)	4 mA ... 20 mA ²⁾
Enclosure rating	IP67 ³⁾

¹⁾ ± 1 mm.

²⁾ The sensor only activates the wired output.

³⁾ According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	15 V DC ... 30 V DC
Power consumption	22 mA, without load
Max. load resistance	≤ 500 Ω Power Output, at 24 V

¹⁾ Voltage output.

²⁾ FSR: Full Scale Range; max. measuring range.

³⁾ At 25 ° C, linearity error (maximum deviation) depending on response curve and minimal deviation function.

⁴⁾ At 25 ° C, repeatability magnet movement in one direction.

⁵⁾ Only in standard mode, not in IO-Link mode.

⁶⁾ The analog measured value can deviate for up to 100 ms under transient conditions.

Min. load resistance	$\geq 2 \text{ k}\Omega$ ¹⁾
Protection class	III
Time delay before availability	1.5 s
Required magnetic field sensitivity, typ.	4 mT ... 30 mT
Resolution, typ.	0.03 % FSR (max. $\geq 0.05 \text{ mm}$) ²⁾
Linearity error, typ.	0.3 mm ³⁾
Repeat accuracy, typ.	0.06 % FSR ($\geq 0.1 \text{ mm}$) ⁴⁾
Sampling rate, typ.	1 ms ⁵⁾
Reverse polarity protection	Yes
Short-circuit protection	Yes
Status indicator LED	Yes
Teach-in	No
Ambient operating temperature	-20 °C ... +70 °C
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-7 ⁶⁾
Connection type	Cable with M8 male connector, 4-pin, 0.3 m
Connection type Detail	
Deep-freeze property	Do not bend below 0 °C
Conductor cross section	0.08 mm ²
Cable diameter	Ø 2.6 mm
Bending radius	With fixed installation > 5 x cable diameter For flexible use > 10 x cable diameter
Cable outlet	Axial
Material	
Housing	Plastic
Cable	PUR
UL File No.	NRKH.E181493 & NRKH7.E181493

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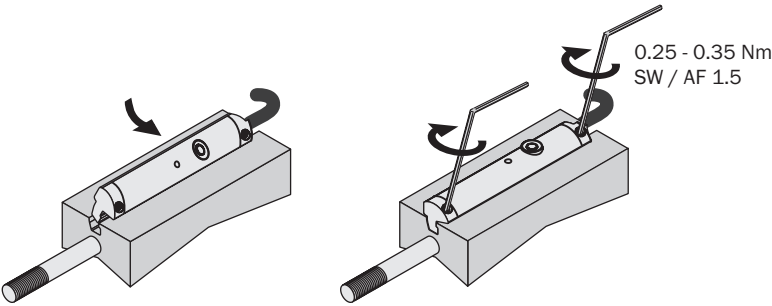
SAFETY-RELATED PARAMETERS

MTTF _D	198 years
DC _{avg}	0 %
T _M (mission time)	20 years

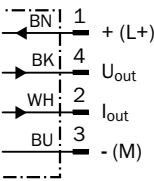
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

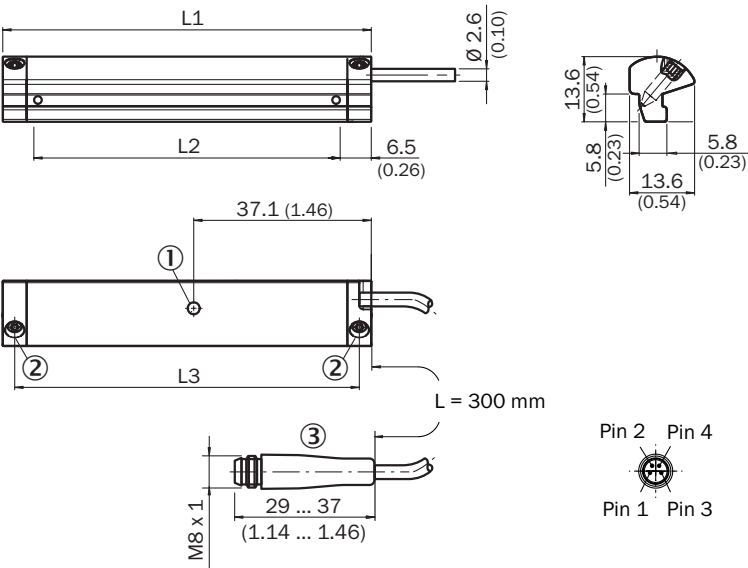
INSTALLATION NOTE



CONNECTION DIAGRAM CD-034



DIMENSIONAL DRAWING CABLE WITH CONNECTOR M8



	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

Dimensions in mm (inch)

- ① function indicator
- ② Fixing screw SW 1.5
- ③ Connection

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1053841



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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