



DATA SHEET

MLSE-0300A2NP0

MLS
Magnetic sensors

SICK

Sensor Intelligence



MAGNETIC SENSORS

MLSE-0300A2NP0

ORDERING INFORMATION

Type	part no.
MLSE-0300A2NP0	1090688

Further device versions and accessories at www.sick.com/MLS



DETAILED TECHNICAL DATA

FEATURES

Detection range typ.	300 mm
Operating height	10 mm ... 70 mm
Dimensions (W x H x D)	325 mm x 14 mm x 20 mm
Electrical wiring	DC 4-wire
Enclosure rating	IP65 ¹⁾ IP67 IP68

¹⁾ According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	9 V DC ... 30 V DC
Terminal resistor	No internal terminator
Protection class	III
Power consumption	600 mW
Resolution, typ.	1 mm
Repeat accuracy, typ.	1 mm
Update rate	100 Hz
Teach-in	✓
Reverse polarity protection	Yes
Short-circuit protection	Yes
Ambient operating temperature	-20 °C ... +70 °C

¹⁾ Do not bend below 0 °C.

Shock and vibration resistance	30 g, 11 ms/10 Hz ... 55 Hz, 1 mm
EMC	EN 61000-6-2, EN 61000-6-4
Connection type	Cable with M8 male connector, 4-pin, 0.3 m ¹⁾
Connection type Detail	
Conductor cross section	0.08 mm ²
Material	
Housing	Aluminum, plastic
Cable	PUR
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ Do not bend below 0 °C.

SAFETY-RELATED PARAMETERS

MTTF _D	125 years
DC _{avg}	0 %
T _M (mission time)	20 years

COMMUNICATION INTERFACE

Communication interface	CANopen
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DIAGNOSIS

Orientation	
Number of axis	3
Roll Euler angle measuring range	± 180°
Pitch Euler angle measuring range	± 90°
Yaw Euler angle measuring range	± 180°
Resolution	0.02°
Roll repeatability	± 1°
Pitch repeatability	± 1°
Yaw repeatability	± 1° ¹⁾
Maximum rotation rate	2,000 °/s
Quaternion w measuring range	0 ... + 1
Quaternion x measuring range	-1 ... 1
Quaternion y measuring range	-1 ... 1
Quaternion z measuring range	-1 ... 1
Update rate	100 Hz
Limit frequency	100 Hz
Initialization time	640 ms
Sampling rate	200 Hz ²⁾
Acceleration measuring range	± 16 g ²⁾
Rotation rate measuring range	± 2,000 °/s ²⁾

¹⁾ Not long-term stable.

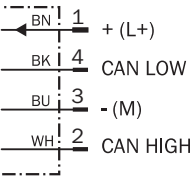
²⁾ Raw data.

CERTIFICATES

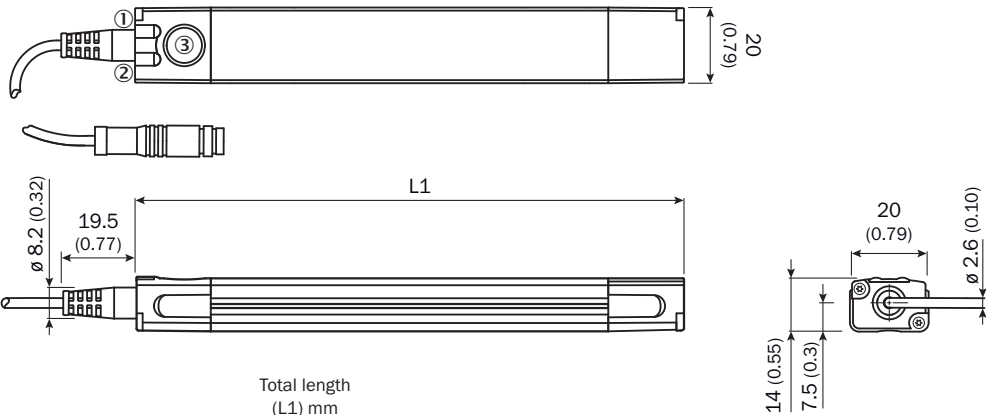
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓
CANopen certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

CONNECTION DIAGRAM CD-396



DIMENSIONAL DRAWING



	Total length (L1) mm
MLSE-0200	217
MLSE-0300	325
MLSE-0400	397
MLSE-0500	505
MLSE-0600	613

- Dimensions in mm (inch)
- ① Function signal indicator 1
 - ② Function signal indicator 2
 - ③ Teach-Pad

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/1090688



SICK AG
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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

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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