



MLSE-0200A2NP0

MLS

MAGNETIC SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|----------------|----------|
| MLSE-0200A2NP0 | 1090687 |

Other models and accessories → www.sick.com/MLS



Detailed technical data

Features

| | |
|-----------------------------|------------------------------------|
| Detection range typ. | 200 mm |
| Operating height | 10 mm ... 70 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 | ✓ |
| Short-circuit protection | ✓ |
| Ambient operating temperature | -20 °C ... +70 °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 | |

¹⁾ Do not bend below 0 °C.

| | | |
|--------------------|------------------------------|------------------------------|
| | Housing | Metal Aluminum Plastic |
| | Cable | PUR |
| UL File No. | NRKH.E181493 & NRKH7.E181493 | |

¹⁾ Do not bend below 0 °C.

Safety-related parameters

| | |
|-------------------------------------|-----------|
| MTTF_D | 143 years |
| DC_{avg} | 0 % |
| T_M (mission time) | 20 years |

Communication interface

| | |
|--------------------------------|---------|
| Communication interface | CANopen |
|--------------------------------|---------|

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.

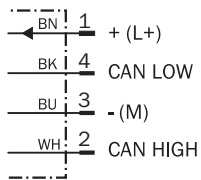
Classifications

| | |
|---------------------|----------|
| eCI@ss 5.0 | 27270104 |
| eCI@ss 5.1.4 | 27270104 |
| eCI@ss 6.0 | 27270104 |
| eCI@ss 6.2 | 27270104 |
| eCI@ss 7.0 | 27270104 |

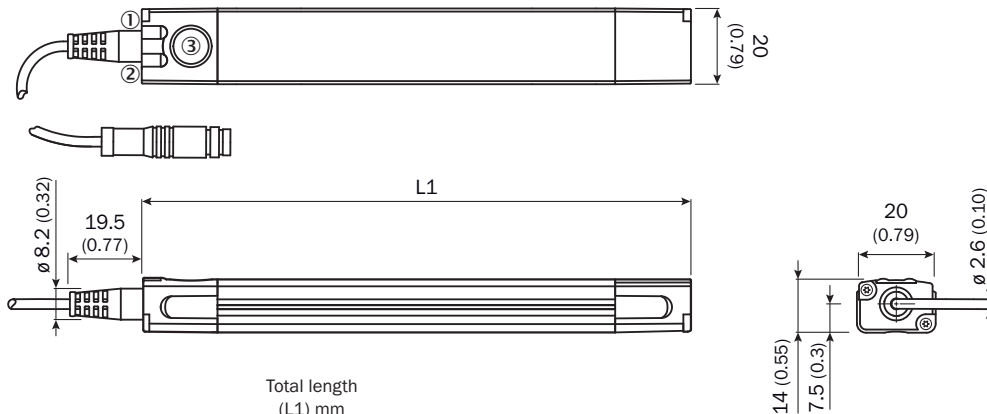
| | |
|-----------------------|----------|
| eCl@ss 8.0 | 27270104 |
| eCl@ss 8.1 | 27270104 |
| eCl@ss 9.0 | 27270104 |
| eCl@ss 10.0 | 27270104 |
| eCl@ss 11.0 | 27270104 |
| eCl@ss 12.0 | 27274301 |
| ETIM 5.0 | EC002544 |
| ETIM 6.0 | EC002544 |
| ETIM 7.0 | EC002544 |
| ETIM 8.0 | EC002544 |
| UNSPSC 16.0901 | 39122230 |

Connection diagram

Cd-396



Dimensional drawing (Dimensions in mm (inch))



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

- ① Function signal indicator 1
- ② Function signal indicator 2
- ③ Teach-Pad

Recommended accessories

Other models and accessories → www.sick.com/MLS

| | Brief description | Type | Part no. |
|---|--|-----------------------|----------|
| Bus adapter | | | |
|  | CAN-USB Adapter to connect MLS with a PC | AKA-NXL1BXB12KX | 6067651 |
| Magnets | | | |
|  | Magnetic tape, North is top side, adhesive, width 25 mm, length 50 m | MAGNETIC TAPE | 5337613 |
| | Magnetic tape, South is top side, adhesive, width 25 mm, length 50 m | MAGNETIC TAPE | 5337614 |
|  | Magnetic tape, north pole on top, self-adhesive, width = 25mm, external length = 524 mm, internal length = 511 mm, radius = 1000 mm, 30° section | Magnetic tape, curved | 5344198 |
|  | Positioning device for magnetic markers (5337613, 5337614) for MLS | TEMPLATE | 4097520 |
| Distributors | | | |
|  | YF8U14-011VA3FYDN2 | YF8U14-011VA3FYDN2 | 2098412 |
| Mounting brackets and plates | | | |
|  | Bracket for low mounting, Stainless steel V2A (bracket/mounting screw), Brass (fixing screw) | BEF-WNLO1MPA | 2065973 |
|  | Bracket for lateral mounting, Stainless steel V2A (bracket/mounting screw), Brass (fixing screw) | BEF-WNZ01MPA | 2065577 |
| Plug connectors and cables | | | |
|  | Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF8U14-020UA3XLEAX | 2094791 |
| | Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YF8U14-050UA3XLEAX | 2094792 |
|  | Head A: female connector, M8, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YG8U14-020UA3XLEAX | 2095589 |
| | Head A: female connector, M8, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YG8U14-050UA3XLEAX | 2095590 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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