MLSE-0200C2NUA

MLS

MAGNETIC SENSORS

SICK
Sensor Intelligence.

MLSE-0200C2NUA | MLS

MAGNETIC SENSORS

Ordering information

Type	part no.
MLSE-0200C2NUA	1113030

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

Detailed technical data

Features

Detection range typ.	200 mm
Operating height	10 mm ... 70 mm
Dimensions (W x H x D)	217 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
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, 4-wire, 3 m [1]
Connection type Detail	
Conductor cross section	0.08 mm²

[1] Do not bend below 0 °C.

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	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	Modbus
Communication Interface detail	RTU RS-485

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

ECLASS 5.0	27270104
ECLASS 5.1.4	27270104
ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
ECLASS 8.0	27270104
ECLASS 8.1	27270104
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Certificates

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

Connection diagram Cd-557

Pin	Wire	Signal
1	BN	+ (L+)
4	BK	RS-485_D- (inverted)
3	BU	- (M)
2	WH	RS-485_D+ (not inverted)
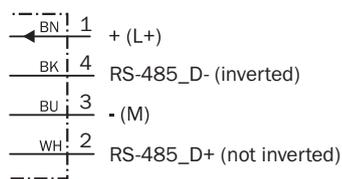
Dimensional drawing
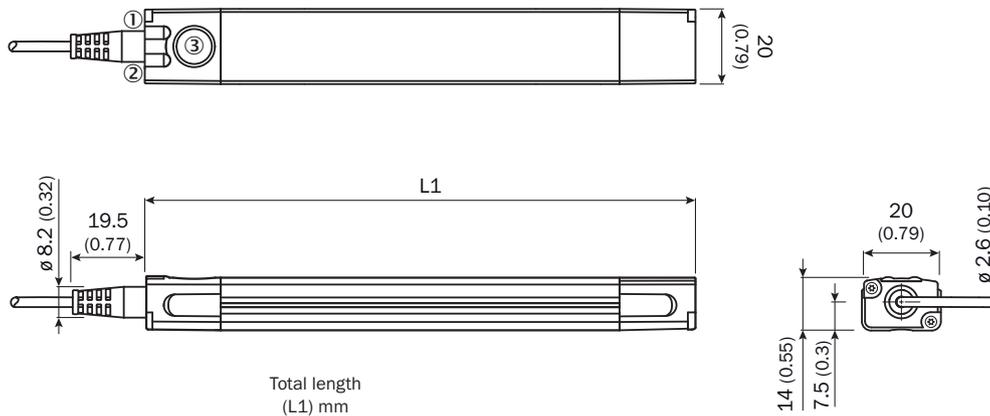
	Total length (L1) mm
MLSE-0200	217
MLSE-0300	325
MLSE-0400	397
MLSE-0500	505
MLSE-0600	613

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

Recommended accessories

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

Brief description	Type	part no.
Mounting systems		
• **Description:** Bracket for lateral mounting • **Material:** Stainless steel, brass • **Details:** Stainless steel V2A (bracket/mounting screw), Brass (fixing screw) • **Usable for:** MPA-107 mm … 251 mm (sensor measuring range), 2 (recommended number of brackets), MPA-287 mm … 431 mm (measuring range sensor), 3 (recommended number mounting brakets), MPA-467 mm … 647 mm (measuring range sensor), 4 (recommended number mounting brakets), MPA-683 mm … 791 mm (measuring range sensor), 5 (recommended number mounting brakets), MPA-827 mm … 1007 mm (measuring range sensor), 6 (recommended number mounting brakets)	BEF-WNZ01MPA	2065577
• **Description:** Bracket for low mounting • **Material:** Stainless steel, brass • **Details:** Stainless steel V2A (bracket/mounting screw), Brass (fixing screw) • **Usable for:** MPA-107 mm … 251 mm (sensor measuring range), 2 (recommended number of brackets), MPA-287 mm … 431 mm (measuring range sensor), 3 (recommended number mounting brakets), MPA-467 mm … 647 mm (measuring range sensor), 4 (recommended number mounting brakets), MPA-683 mm … 791 mm (measuring range sensor), 5 (recommended number mounting brakets), MPA-827 mm … 1007 mm (measuring range sensor), 6 (recommended number mounting brakets)	BEF-WNL01MPA	2065973

Brief description	Type	part no.
magnets		
• **Product segment:** Magnets • **Product:** Magnetic tapes • **Description:** Magnetic tape, North is top side, adhesive, width 25 mm, length 50 m	MAGNETIC TAPE	5337613
• **Product segment:** Magnets • **Product:** Magnetic tapes • **Description:** Magnetic tape, South is top side, adhesive, width 25 mm, length 50 m	MAGNETIC TAPE	5337614
• **Product segment:** Magnets • **Product:** Magnetic tapes • **Description:** 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
• **Product segment:** Magnets • **Product:** Magnetic tapes • **Description:** Magnetic tape, South is top side, adhesive, width 25 mm, length 50 m	MAGNETIC TAPE	5350884
• **Product segment:** Magnets • **Product:** Magnetic tapes • **Description:** Magnetic tape, North is top side, adhesive, width 25 mm, length 50 m	MAGNETBAND	5350883
Commissioning aids and test equipment		
• **Product:** Alignment aids • **Description:** Positioning device for magnetic markers (5337613, 5337614) for MLS	TEMPLATE	4097520
connectors and cables		
• **Connection type head A:** Male connector, M8, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323
• **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1204-G	6009932

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."

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