



LMS511-20190

Bulkscan® LMS511

FLOW SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
LMS511-20190	1059529

Other models and accessories → www.sick.com/Bulkscan_LMS511

Detailed technical data

Features

Light source	Infrared (905 nm)
Laser class	1, eye-safe (IEC 60825-1 (2007-6))
Aperture angle	190°
Scanning frequency	35 Hz 50 Hz 75 Hz
Bandwidth	No limit
Heating	Yes
Operating range	0.5 m ... 20 m
Amount of evaluated echoes	5

Performance

Response time	13 ms, 20 ms, 28 ms
Average filter	0 s ... 3,600 s
Accuracy	± 3 %, under perfect conditions ≤ ± 5 %, depending on the profile
Max. conveyor speed	≤ 30 m/s

Interfaces

Auxiliary interface	Protocol	✓ USB 2.0
	Data transmission rate	≤ 500 kBaud
Serial host interface	Protocol	✓ RS-232/RS-422
	Data transmission rate	≤ 500 kBaud
Ethernet	Protocol	✓ TCP/IP
	Data transmission rate	100 Mbit/s

Switching inputs	2 (+ Encoder)
Switching outputs	6
Analog signals	Available with separate accessory BAM100
Communication interfaces	Auxiliary interface, 1, USB 2.0, 500 kBaud Serial host interface, 1, RS-232/RS-422, 500 kBaud Ethernet, 1, TCP/IP, 100 Mbit/s
Optical indicators	5 LEDs (Additional 7-segment display)

Mechanics/electronics

Electrical connection	5-pin M12 female device connector
Supply voltage scanner/heater	19.2 V ... 28.8 V
Prohibited residual ripple	± 5 %
Switch-on peak current	2 A
Operating current scanner	≤ 1.3 A
Power consumption	22 W, + 55 W heating (typical)
Housing color	Gray (RAL 7032)
Enclosure rating	IP 67 (EN 60529, Section 14.2.7)
Protection class	III
Weight	3.7 kg
Dimensions	160 mm x 155 mm x 185 mm
Distance of the sensor to the bulk solid	≥ 0.5 m
Switch-on time	≤ 60 s

Ambient data

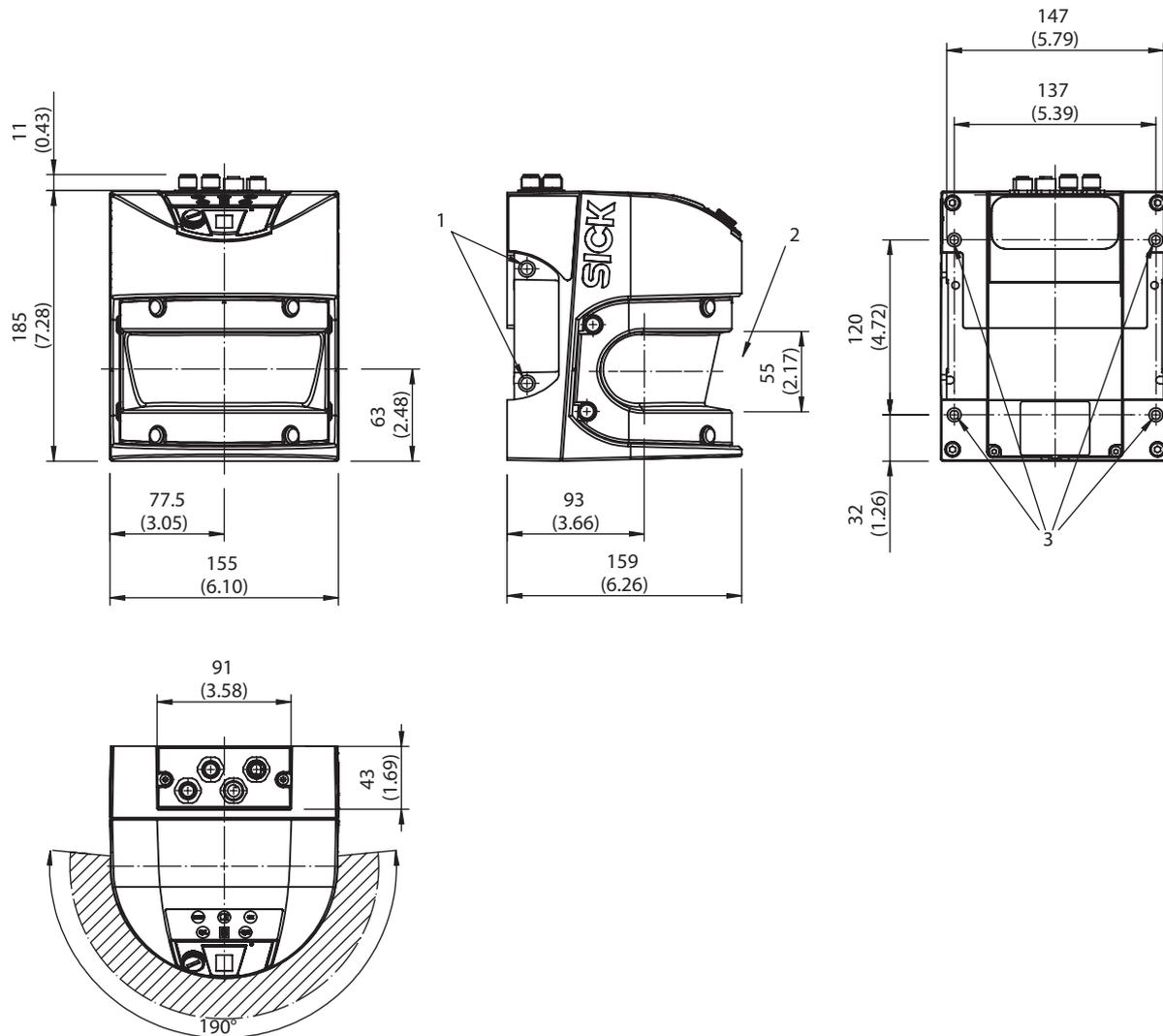
Electromagnetic compatibility (EMC)	EN 61000-6-2:2005 / EN 61000-6-3 / A1 2011
Ambient operating temperature	-40 °C ... +60 °C
Storage temperature	-40 °C ... +70 °C
Ambient light immunity	70,000 lx

Classifications

ECl@ss 5.0	27371815
ECl@ss 5.1.4	27371815
ECl@ss 6.0	27371815
ECl@ss 6.2	27371815
ECl@ss 7.0	27371815
ECl@ss 8.0	27371815
ECl@ss 8.1	27371815
ECl@ss 9.0	27371815
ETIM 5.0	EC002580
ETIM 6.0	EC002580
UNSPSC 16.0901	41112501

Dimensional drawing (Dimensions in mm (inch))

Bulkscan® LMS511



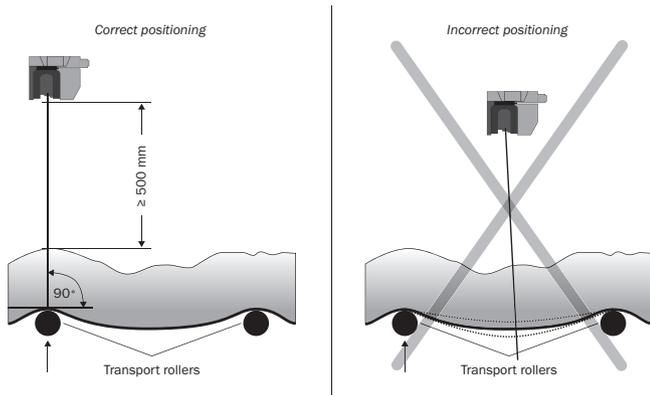
- ① 4 screw holes M8 x 9
- ② Do not block front screen
- ③ 4 screw holes M6 x 8

Application



Instruction for installation

Bulkscan® LMS511



Recommended accessories

Other models and accessories → www.sick.com/Bulkscan_LMS511

	Brief description	Type	Part no.
Mounting brackets and mounting plates			
	Spring arm / mounting arm for DFV60	DFV60 sprung arm	2056155
	Mounting bracket for LMS5xx (for retrofitting, if 2018303 is already in use)	Mounting bracket	2059271
	1 piece, mounting bracket for direct mounting, from the rear, on wall or machine, not adjustable	Mounting kit 1	2015623
	1 piece, mounting bracket for rear mounting on wall or machine, adjustable longitudinal and lateral axes, only in conjunction with mounting kit 1 (2015623)	Mounting kit 2	2015624
	1 piece, mounting bracket for rear mounting on wall, floor, or machine, adjustable longitudinal and lateral axes, only in conjunction with mounting kit 1 (2015623) and 2 (2015624)	Mounting kit 3	2015625
Other mounting accessories			
	Strap lock	Adjustable strap lock	5306221
	Strap for mast bracket (sold by meter)	Tension strap	5306222
Terminal and alignment brackets			
	Pole bracket requires additionally adapter bracket (2059271) or mounting set (2018303)	Alignment bracket	2018304

	Brief description	Type	Part no.
Power supply units and power cord connectors			
	Power supply DC 24 V / 4 A	Power supply unit	6010362
	Power supply DC 24 V / 10 A	Power supply unit	6020875
Modules and gateways			
	BAM100 analog module for Bulkscan, by Beckhoff, 24 V DC supply voltage (-15% / + 20%), rail mounting on 35 mm C rail, according to EN 50022 with interlocking, Ethernet TCP/IP interface (RJ45), CoLa communication, 3 x IN: 4 mA ... 20 mA, 4 x OUT: 4 mA ... 20 mA	BAM100-HE44K	2073296
Plug connectors and cables			
	Head A: female connector, M12, 12-pin, straight, A-coded Head B: cable Cable: shielded, 5 m	Connecting cable (female connector - open)	6042735
	Head A: female connector, M12, 12-pin, straight, A-coded Head B: cable Cable: RS-232, RS-422, shielded, 10 m	Connecting cable (female connector - open)	6042736
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: cable Cable: shielded, 5 m	Connecting cable (female connector - open)	6036159
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: cable Cable: shielded, 20 m	Connecting cable (female connector - open)	6042564
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: cable Cable: shielded, 10 m	Connecting cable (female connector - open)	6042565
	Head A: female connector, M12, 12-pin, straight, A-coded Head B: cable Cable: RS-232, RS-422, shielded, 20 m	Connecting cable (female connector - open)	6042737
	Head A: male connector, M12, 12-pin, straight, A-coded Head B: cable Cable: shielded, 5 m	Connecting cable (male connector-open)	6042732
	Head A: male connector, M12, 12-pin, straight, A-coded Head B: cable Cable: shielded, 10 m	Connecting cable (male connector-open)	6042733
	Head A: male connector, M12, 12-pin, straight, A-coded Head B: cable Cable: shielded, 20 m	Connecting cable (male connector-open)	6042734
	Head A: male connector, USB-A, straight Head B: male connector, Mini-USB, straight Cable: USB, shielded, 3 m For connecting the configuration connection to the USB interface on the PC	Connection cable (male connector-male connector)	6042517
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, drag chain use, PUR, shielded, 5 m	SSL-2J04-G05ME	6034415
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, drag chain use, PUR, shielded, 10 m	SSL-2J04-G10ME	6030928
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, drag chain use, PUR, shielded, 20 m	SSL-2J04-G20ME	6036158
Optics cloths			

	Brief description	Type	Part no.
	Cloth for cleaning the front screen	Lens cloth	4003353
Programming and configuration tools			
	Incremental measuring wheel encoder, electrical interface: 10...30 V HTL/Push Pull, universal bracket, measuring wheel circumference = 300 mm, O-ring surface, connection type: M12 male connector, 8 pin, number of lines: 1024, operating temperature range: -20 °C...+100 °C	DFV60E-22EC01024	1060308
	Incremental measuring wheel encoder, electrical interface: 10...30 V HTL/Push Pull, universal bracket, measuring wheel circumference = 300 mm, O-ring surface, connection type: 1.5 m cable, 8 pin, number of lines: 1024, operating temperature range: -20 °C...+100 °C	DFV60E-22EK01024	1060309
Test and monitoring tools			
	Scan finder, receiver to localize infrared scans	Scan-Finder LS-80A	6020756

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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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