Technical data sheet
Laser scanner
Part no.: 50153047
ROD 508

For Illustration purposes only

Contents

Technical data

Leuze

Basic data

Series	ROD 500
Application	Container checking
	Contour measurement
	Navigation

Functions

Functions	Output of distance value and signal amplitude per angle segment

Optical data

Operating range	0.08 ... 25 m
Light source	Laser, Infrared
Wavelength	905 nm
Laser class	1, IEC/EN 60825-1:2014
Angular resolution	0.025° at 10 Hz
	0.05° at 20 Hz
	0.1° at 40 Hz
	0.2° at 50 Hz
	0.2° at 80 Hz
Scanning angle	275 °

Measurement data

Detection range	0.08 ... 25 m, Diffuse reflection > 90% 7 m at 1.8 % reflection 15 m at 10 % reflection 25 m at 90 % reflection

Accuracy of measurement

Systematic error	±10 mm
Statistical error (1σ)	≤5 mm (0.08 – 7 m) ≤10 mm (7 – 15 m) ≤6 mm (0.08 – 25 m) for reflectors

Electrical data

Protective circuit	Cross circuit protection
	Overvoltage protection

Performance data

Supply voltage U_B	12 ... 24 V, DC, -10 ... 30 %

Time behavior

Response time	12.5 ... 100 ms

Service interface

Type	Ethernet

Ethernet

Function	Configuration/parametization
	Diagnosis
	Display of the measurement contour
Connection	M12 connector, 4-pin, D-coded

Connection

Number of connections	2 Piece(s)

Connection 1

Function	Machine interface
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	12 -pin
Encoding	A-coded

Connection 2

Function	Data interface
	Measurement value transmission via TCP/IP and UDP (signal strength, distance and process image)
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Mechanical data

Dimension (W x H x L)	80 mm x 80 mm x 85 mm
Housing material	Metal
	Plastic
Metal housing	Diecast zinc
Lens cover material	Plastic
Net weight	630 g
Housing color	Red, RAL 3000
	Silver
Type of fastening	Mounting plate
	Through-hole mounting
	Via optional mounting device

Operation and display

Note	For further details on the LED circuit segment assignment, see the operating instructions at www.leuze.com

Environmental data

Ambient temperature, operation	-30 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C
Relative humidity (non-condensing)	0 ... 95 %

Certifications

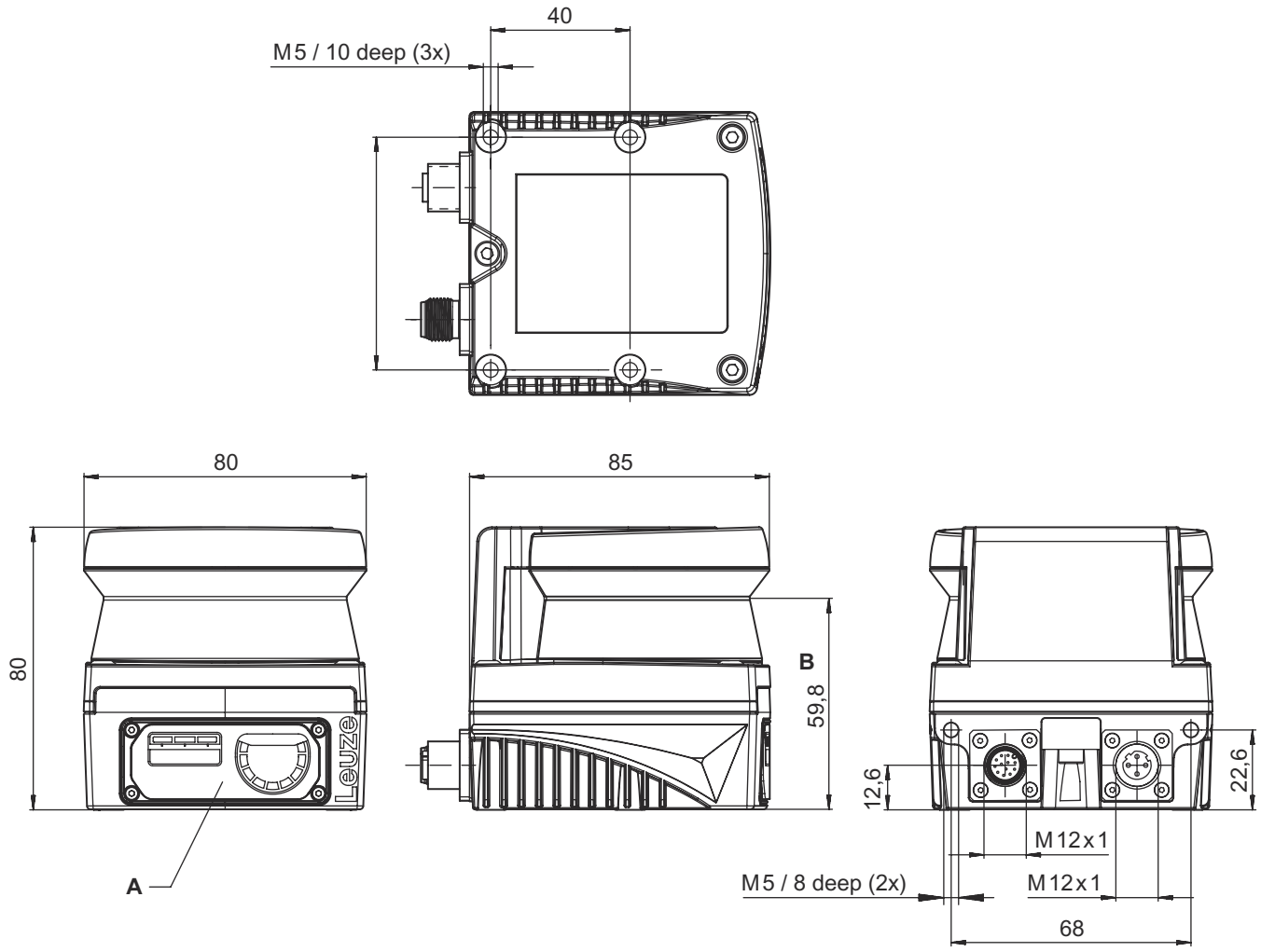
Degree of protection	IP 67
Protection class	III

Technical data

Customs tariff number	85365019
ECLASS 5.1.4	27270990
ECLASS 8.0	27270913
ECLASS 9.0	27270913
ECLASS 10.0	27270913
ECLASS 11.0	27270913
ECLASS 12.0	27270913
ECLASS 13.0	27270913
ECLASS 14.0	27270913
ECLASS 15.0	27270913
ECLASS 16.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
ETIM 9.0	EC002550
ETIM 10.0	EC002550
UNSPSC 26.08	39121528

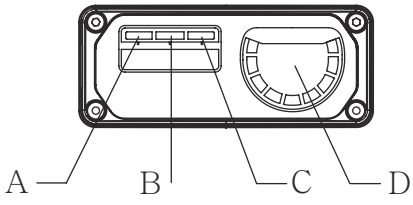
Dimensioned drawings

All dimensions in millimeters



A Status LEDs
B Scan level

Status LEDs



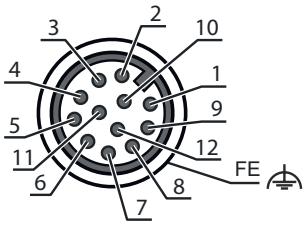
A Voltage supply
B Ethernet
C Error
D Contamination indicator

Electrical connection

Connection 1

Function	Machine interface
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	12 -pin
Encoding	A-coded
Connector housing	FE/SHIELD

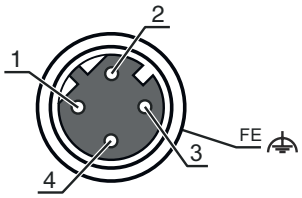
Pin	Pin assignment
1	OUT 1 WARNING
2	+24 V DC
3	n.c.
4	n.c.
5	OUT ERROR
6	n.c.
7	0 V DC
8	n.c.
9	n.c.
10	n.c.
11	n.c.
12	n.c.



Connection 2

Function	Data interface
	Measurement value transmission via TCP/IP and UDP (signal strength, distance and process image)
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded
Connector housing	FE/SHIELD

Pin	Pin assignment
1	TD+
2	RD+
3	TD-
4	RD-



Notes

Observe intended use!

- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

Notes

ATTENTION! INVISIBLE LASER RADIATION – CLASS 1 LASER PRODUCT
The device satisfies the requirements of IEC/EN 60825-1:2014 safety regulations for a product of **laser class 1** and complies with 21 CFR 1040.10 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019. ↳ Observe the applicable statutory and local laser protection regulations. ↳ The device must not be tampered with and must not be changed in any way. There are no user-serviceable parts inside the device. Repairs must only be performed by Leuze electronic GmbH + Co. KG.

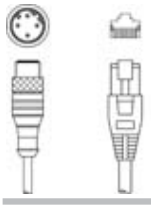
Downloads
You can find the applicable documents on the Internet at www.leuze.com. ↳ Call up the Leuze home page: www.leuze.com ↳ Enter the type designation or part number of the device as the search term. ↳ The applicable documents can be found on the product page for the device under the **Downloads** tab.

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130282	KD S-M12-CA-P1-050	Connection cable	Application: Oil and lubricant resistant Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50135081	KSS ET-M12-4A-RJ45-A-P7-050	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Connection technology - Adapters

	Part no.	Designation	Article	Description
	50149892	D U-M12-CA-K PWR27	Adapter	Number of connections: 2 Piece(s) Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Jack socket

Accessories

	Part no.	Designation	Article	Description
	50110748	NT 24-24W	Power supply unit	Type of power supply unit: Plug-in power supply unit Output: 24 V DC, 1 A Input: 110 ... 240 V AC, 50 ... 60 Hz

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50153212	BTU 510M-Set	Mounting system	Suitable for: Laser scanner ROD 300, ROD 500 Version: Mounting system, adjustability in 2 axes Type of fastening, at system: Through-hole mounting Type of fastening, at device: Screw type Swivel range: -5 ... 5 ° Material: Steel, galvanized

Note
A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.