

Technical data sheet

Laser scanner

Part no.: 50153045

ROD 108

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Notes
- Accessories



For illustration purposes only



Technical data

Basic data

Series	ROD 100
Application	Collision avoidance Completeness check Overhang control

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	0.2° 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
Number of field sets	16 field triple zones can be configured

Accuracy of measurement

Systematic error	± 10 mm
Statistical error (1 σ)	≤ 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 %
-------------------------------	-------------------------------

Inputs

Number of digital switching inputs	4 Piece(s)
------------------------------------	------------

Switching inputs

Type	Digital switching input
Switching voltage, type.	24 V
Voltage type	DC
Switching current, type.	3.5 mA
Switching principle	PNP

Outputs

Number of digital switching outputs	5 Piece(s)
-------------------------------------	------------

Switching outputs

Type	Digital switching output
Voltage type	DC
Switching current, max.	50 mA
Switching voltage	Max. 30 V DC

Switching output 1

Switching element	Transistor, PNP
Function	Warning output

Switching output 2

Switching element	Transistor, PNP
-------------------	-----------------

Switching output 3

Switching element	Transistor, PNP
-------------------	-----------------

Switching output 4

Switching element	Transistor, PNP
Function	"Error" signal output

Switching output 5

Switching element	Transistor, PNP
-------------------	-----------------

Time behavior

Response time	12.5 ms, 1 scan
Inputs response time	10 ms
Outputs response time	35 ms

Service interface

Type	USB 2.0
------	---------

USB

Function	Configuration/parametization Diagnosis
Connection	USB 2.0 type C, socket

Connection

Number of connections	2 Piece(s)
-----------------------	------------

Connection 1

Function	Machine interface Signal IN Signal OUT
----------	----------------------------------------------

Type of connection

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

Connection 2

Function	Data interface Ethernet port to PC for device configuration and parameterization
----------	-------------------------------------------------------------------------------------

Type of connection

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

Technical data

Operation and display

Note	For further details on the LED circuit segment assignment, see the operating instructions at www.leuze.com
Type of configuration	Software ROD configurator

Environmental data

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

Certifications

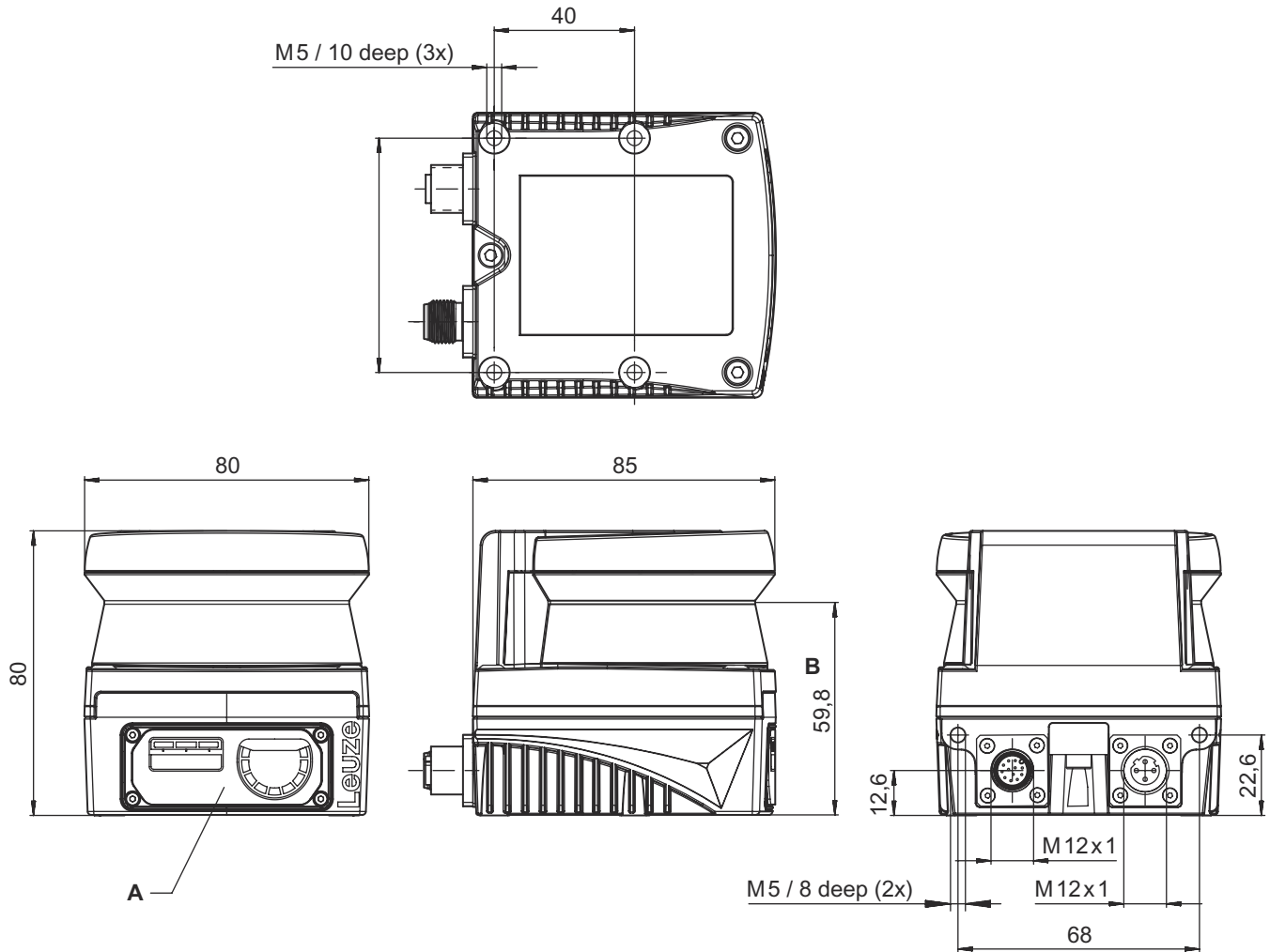
Degree of protection	IP 67
Protection class	III

Classification

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

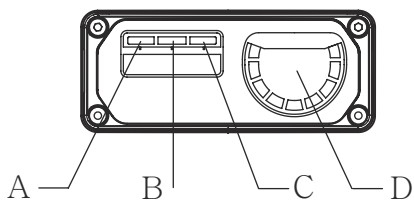
Dimensioned drawings

All dimensions in millimeters



- A Status LEDs
- B Scan level

Status LEDs



- A Voltage supply
- B Ethernet
- C Error
- D Contamination and digital output status indicator

Electrical connection

Connection 1

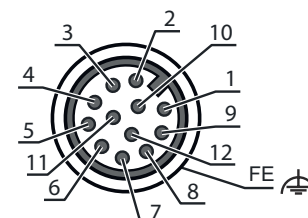
Function	Machine interface
	Signal IN
	Signal OUT
Type of connection	Connector

Electrical connection

Connection 1

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

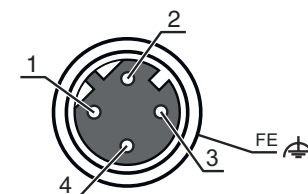
Pin	Pin assignment
1	OUT 1 WARNING
2	+24 V DC
3	OUT 2
4	OUT 3
5	OUT ERROR
6	GND
7	0 V DC
8	OUT 4
9	IN 1
10	IN 2
11	IN 3
12	IN 4



Connection 2

Function	Data interface Ethernet port to PC for device configuration and parameterization
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.

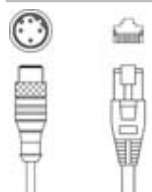
- ☞ Call up the Leuze home page: www.leuze.com
- ☞ Enter the type designation or part number of the device as the search term.
- ☞ The applicable documents can be found on the product page for the device under the **Downloads** tab.

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

Note



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