

## Technical data sheet

### Laser scanner

Part no.: 50153045

ROD 108

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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 (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
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#### Performance data

Supply voltage U <sub>B</sub>	12 ... 24 V, DC, -10 ... 30 %
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#### Inputs

Number of digital switching inputs	4 Piece(s)
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#### 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)
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#### 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
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#### Switching output 3

Switching element	Transistor, PNP
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#### Switching output 4

Switching element	Transistor, PNP
Function	"Error" signal output

#### Switching output 5

Switching element	Transistor, PNP
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### 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
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#### USB

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

### Connection

Number of connections	2 Piece(s)
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#### Connection 1

Function	Machine interface Signal IN Signal OUT
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Type of connection	Connector
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Thread size	M12
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Type	Male
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Material	Metal
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No. of pins	12 -pin
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Encoding	A-coded
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#### Connection 2

Function	Data interface Ethernet port to PC for device configuration and parameterization
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Type of connection	Connector
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Thread size	M12
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Type	Female
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Material	Metal
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No. of pins	4 -pin
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Encoding	D-coded
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### Mechanical data

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

### Operation and display

<b>Note</b>	For further details on the LED circuit segment assignment, see the operating instructions at <a href="http://www.leuze.com">www.leuze.com</a>
<b>Type of configuration</b>	Software ROD configurator

### Environmental data

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

### Certifications

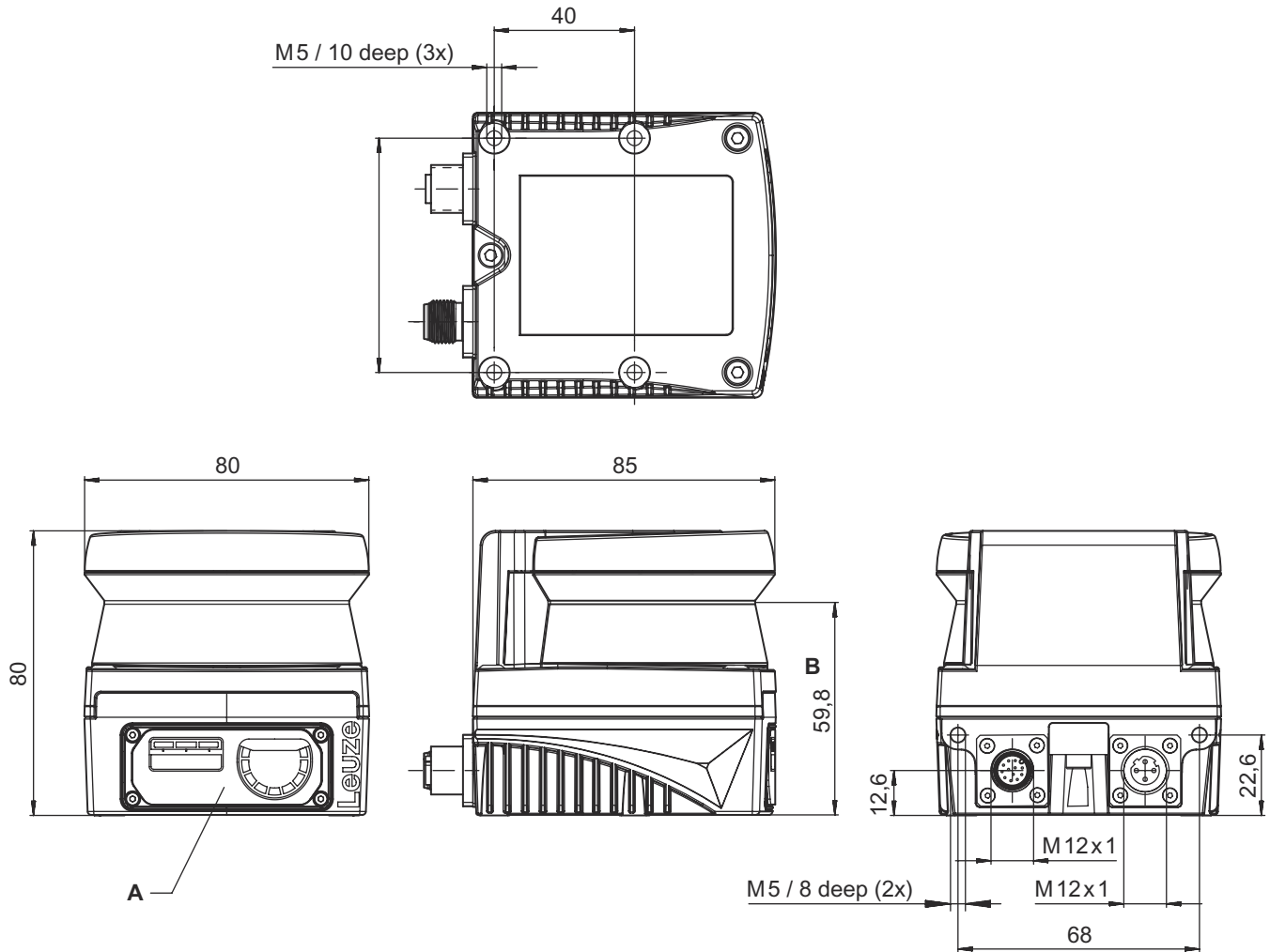
<b>Degree of protection</b>	IP 67
<b>Protection class</b>	III

### Classification

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

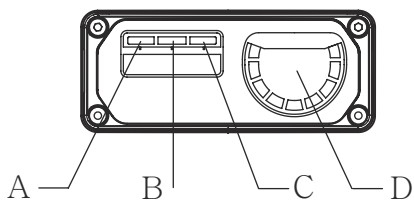
# Dimensioned drawings

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

<b>Function</b>	Machine interface
	Signal IN
	Signal OUT
<b>Type of connection</b>	Connector

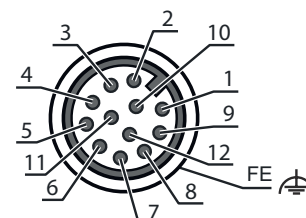
## Electrical connection

### Connection 1

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

Pin	Pin assignment
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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

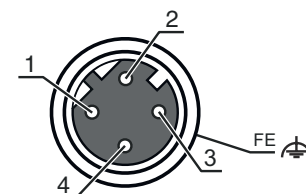


### Connection 2

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
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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](http://www.leuze.com).

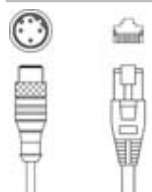
- ☞ Call up the Leuze home page: [www.leuze.com](http://www.leuze.com)
- ☞ Enter the type designation or part number of the device as the search term.
- ☞ The applicable documents can be found on the product page for the device under the **Downloads** tab.

## 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.