



Figure can vary

**Part no.: 53800107**  
**RSL430-M**  
**Safety laser scanner**



## Contents

- Technical data
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- Operation and display
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## Technical data

<b>Basic data</b>	
Series	RSL 400
<b>Functions</b>	
Functions	E-stop linkage Safe time delay, internal Dynamic contactor monitoring (EDM), selectable Data output, configurable Resolution, selectable Four-field mode
<b>Characteristic parameters</b>	
Type	3, IEC/EN 61496
SIL	2, IEC 61508
SILCL	2, IEC/EN 62061
Performance Level (PL)	d, EN ISO 13849-1
PFH <sub>D</sub>	9E-08 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	3, EN ISO 13849
<b>Protective field data</b>	
Scanning angle	270 °
Minimum adjustable range	200 mm
Number of field pairs, reversible	10 + 10
Number of quads, reversible	10 + 10
Number of protective functions	2 Piece(s)
Number of independent sensor configurations	2
Diffuse reflection, min.	1.8 %
Operating range	0 ... 4.5 m
<b>Warning field data</b>	
Number of field pairs	10 + 10
Operating range	0 ... 20 m
Object size	150 mm x 150 mm
Diffuse reflection, min.	1.8 %
<b>Optical data</b>	
Light source	Laser, Infrared
Laser light wavelength	905 nm
Laser class	1, IEC/EN 60825-1:2007
Transmitted-signal shape	Pulsed
Repetition frequency	90 kHz
<b>Measurement data</b>	
Radial resolution	5 mm
Detection range	0 ... 50 m
Angular resolution	0.1 °
<b>Electrical data</b>	

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Protective circuit	Overvoltage protection
<b>Performance data</b>	
Supply voltage	24 V, DC, -30 ... 20 %
Current consumption (without load), max.	700 mA, (use power supply unit with 3 A)
Power consumption, max.	17 W, For 24 V, plus output load
<b>Outputs</b>	
Number of safety-related switching outputs (OSSDs)	4 Piece(s)
<b>Safety-related switching outputs</b>	
Type	Safety-related switching output OSSD
Switching voltage high, min.	20.8 V
Switching voltage low, max.	2 V
Voltage type	DC
<b>Safety-related switching output 1</b>	
Switching element	Transistor, PNP
<b>Safety-related switching output 2</b>	
Switching element	Transistor, PNP
<b>Safety-related switching output 3</b>	
Switching element	Transistor, PNP
<b>Safety-related switching output 4</b>	
Switching element	Transistor, PNP
<b>Interface</b>	
Type	Bluetooth
<b>Bluetooth</b>	
Function	Configuration/parametering
Frequency band	2,400 ... 2,483.5 MHz
Radiated transmitting power	Max. 4.5 dBm (2.82 mW), class 2
<b>Connection</b>	
<b>Cable properties</b>	
Cable resistance, max.	15 Ω
<b>Mechanical data</b>	
Dimension (W x H x L)	140 mm x 149 mm x 140 mm
Housing material	Metal Plastic, Diecast zinc,
Lens cover material	Plastic/PC
Net weight	2,000 g
Housing color	Yellow, RAL 1021
Type of fastening	Via optional mounting device Through-hole mounting Mounting plate
<b>Operation and display</b>	
Type of display	LED indicator Alphanumerical display
Number of LEDs	6 Piece(s)
Type of configuration	Software Sensor Studio
Operational controls	Software Sensor Studio
<b>Environmental data</b>	

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Ambient temperature, operation	0 ... 50 °C
Ambient temperature, storage	-20 ... 60 °C

**Certifications**

Degree of protection	IP 65
Protection class	III, EN 61140
Certifications	c UL US c TÜV Süd US TÜV Süd
US patents	US 2016/0086469 A US 7,656,917 B US 8,520,221 B US 7,696,468 B

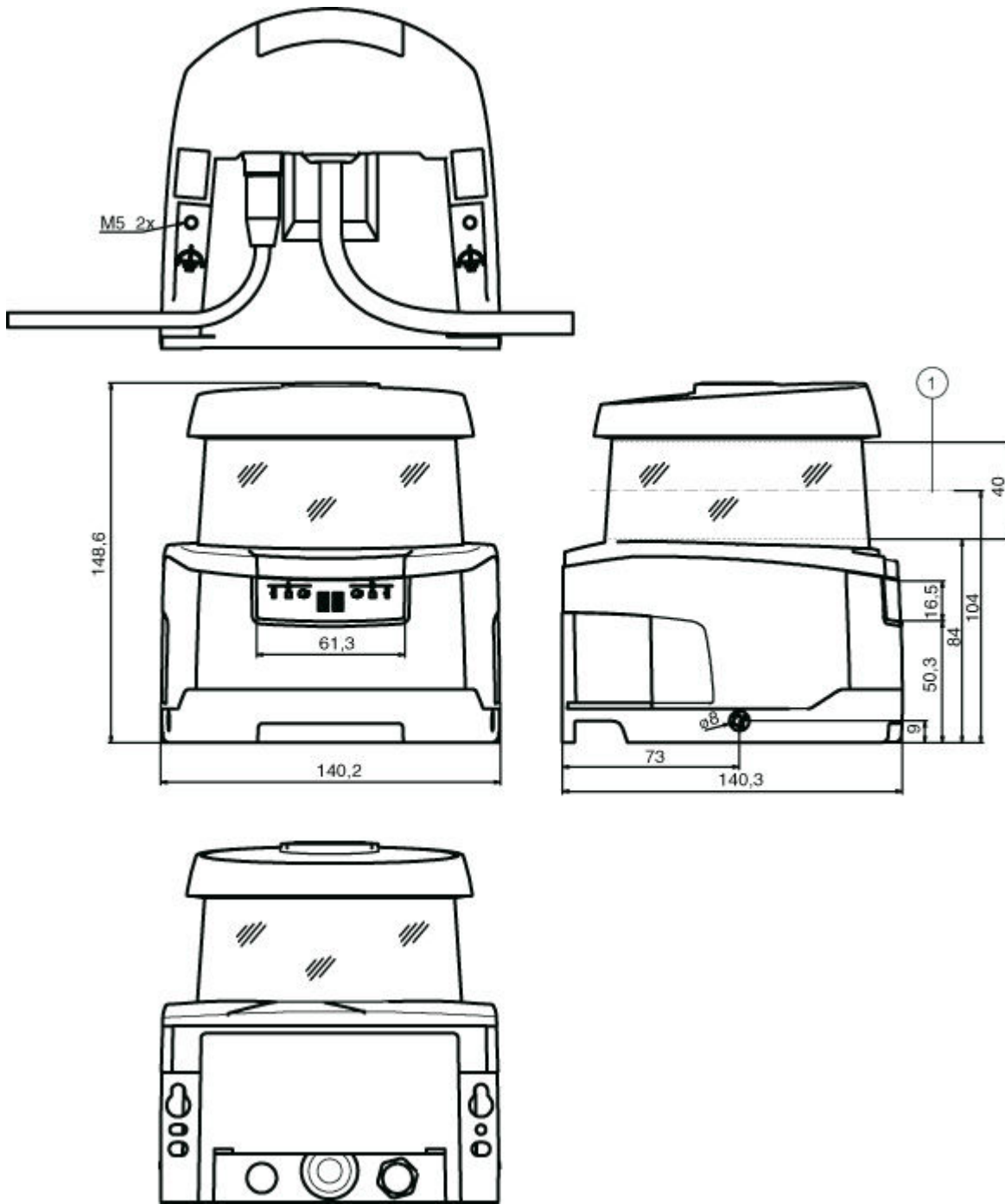
**Classification**

eCl@ss 8.0	27272705
eCl@ss 9.0	27272705
ETIM 5.0	EC002550

**Dimensioned drawings**

All dimensions in millimeters

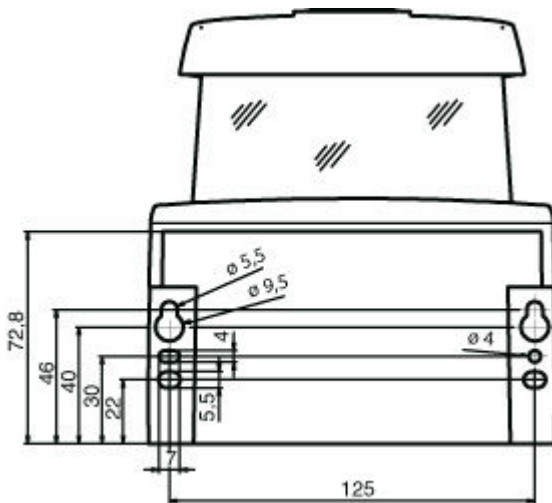
Dimensions safety laser scanner with connection unit



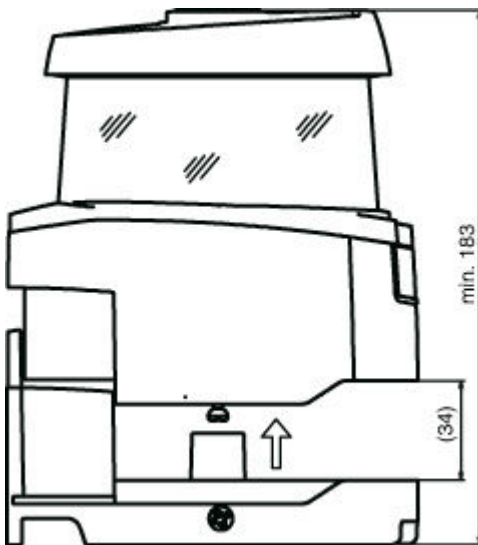
1 Scan level

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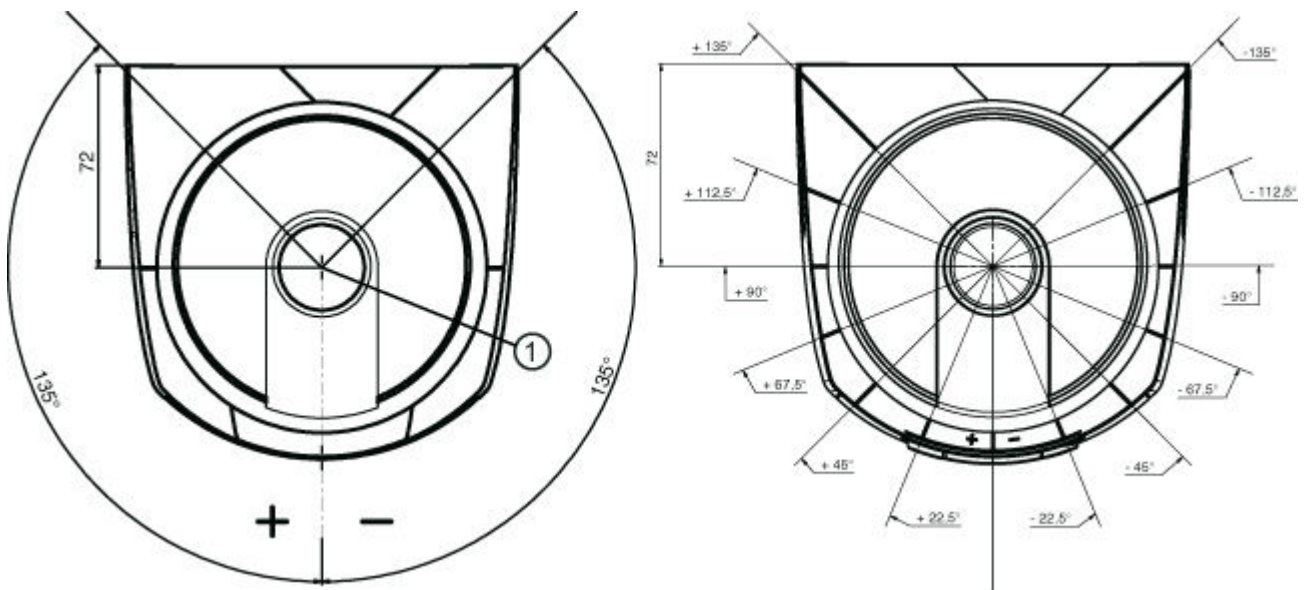
Mounting dimensions safety laser scanner with connection unit



Minimum space requirements for installation and replacement of scanner unit



### Dimensions of scanning range



1 Reference point for distance measurement and protective field radius





## Operation and display

### LEDs





LED	Display	Meaning
1	Off	Device switched off
	Red, continuous light	OSSD off
	Red, flashing	Error
	Green, continuous light	OSSD on
2	Off	RES deactivated or RES activated and released
	Yellow, flashing	Protective field occupied
	Yellow, continuous light	RES activated and blocked but ready to be unlocked - protective field free and linked sensor is enabled if applicable
3	Off	Free warning field
	Blue, continuous light	Warning field interrupted
4	Off	Free warning field
	Blue, continuous light	Warning field interrupted
5	Off	RES deactivated or RES activated and released
	Yellow, flashing	Protective field occupied
	Yellow, continuous light	RES activated and blocked but ready to be unlocked - protective field free and linked sensor is enabled if applicable
6	Off	Device switched off
	Red, continuous light	OSSD off
	Red, flashing	Error
	Green, continuous light	OSSD on

## Accessories


### Connection technology - Terminal boxes

	Part no.	Designation	Article	Description
	53800122	CU429-10000	Connection unit	Number of connections: 2 Piece(s) Connection 1: Cable, 10,000 mm, PVC, 29 -wire Connection 2: Connector, M12, D-coded, 5 -pin Dimensions: 140.2 mm x 72.8 mm x 140.3 mm Color: Black Type of fastening: Bayonet system
	53800123	CU429-25000	Connection unit	Number of connections: 2 Piece(s) Connection 1: Cable, 25,000 mm, PVC, 29 -wire Connection 2: Connector, M12, D-coded, 5 -pin Dimensions: 140.2 mm x 72.8 mm x 140.3 mm Color: Black Type of fastening: Bayonet system
	53800181	CU429-300-WPU	Connection unit	Number of connections: 2 Piece(s) Connection 1: Cable with connector, M30, 300 mm, PVC, 30 -pin Connection 2: Connector, M12, D-coded, 5 -pin Dimensions: 140.2 mm x 72.8 mm x 140.3 mm Color: Black Type of fastening: Bayonet system
	53800121	CU429-5000	Connection unit	Number of connections: 2 Piece(s) Connection 1: Cable, 5,000 mm, PVC, 29 -wire Connection 2: Connector, M12, D-coded, 5 -pin Dimensions: 140.2 mm x 72.8 mm x 140.3 mm Color: Black Type of fastening: Bayonet system

### Mounting technology - Mounting brackets


	Part no.	Designation	Article	Description
	53800134	BT840M	Mounting bracket	Dimensions: 84.9 mm x 72 mm x 205.2 mm Color: Yellow, RAL 1021 Type of fastening, at system: Through-hole mounting Type of fastening, at device: Screw type Material: Metal
	53800135	BT856M	Mounting bracket	Dimensions: 119 mm x 72 mm x 233.5 mm Color: Yellow, RAL 1021 Type of fastening, at system: Through-hole mounting Type of fastening, at device: Screw type Material: Metal
	53800132	BTF815M	Mounting bracket	Dimensions: 186 mm x 120 mm x 288 mm Color: Yellow, RAL 1021 Type of fastening, at system: Through-hole mounting Type of fastening, at device: Screw type Material: Metal
	53800133	BTF830M	Mounting bracket	Dimensions: 186 mm x 275 mm x 288 mm Color: Yellow, RAL 1021 Type of fastening, at system: Through-hole mounting Type of fastening, at device: Screw type Material: Metal

### Mounting technology - Other



	Part no.	Designation	Article	Description
	53800130	BTU800M	Mounting system	Dimensions: 54.5 mm x 90 mm x 192 mm Color: Black Type of fastening, at system: Through-hole mounting Type of fastening, at device: Screw type Material: Metal

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## Mounting

	Part no.	Designation	Article	Description
	53800131	BTP800M	Loop guard	Dimensions: 160 mm x 169 mm Color: Black Material: Metal

## General

	Part no.	Designation	Article	Description
	430400	RS4-clean-Set1	Cleaning set	Number of cleaning cloths: 40 Piece(s) Content of cleaning fluid: 150 ml
	430410	RS4-clean-Set2	Cleaning set	Number of cleaning cloths: 120 Piece(s) Content of cleaning fluid: 1,000 ml

## 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.

### WARNING! INVISIBLE LASER RADIATION – LASER CLASS 1

The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of **laser class 1** as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24, 2007.

- 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.