

## Technical data sheet

### Safety light curtain receiver

Part no.: 72001315  
ELC110R30-1500



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## Technical data

### Basic data

Series	ELC100
Device type	Receiver
Contains	2x sliding block
Application	Hand protection

### Functions

Functions	Automatic start/restart
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### Characteristic parameters

Type	4, IEC/EN 61496
SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
PFH <sub>D</sub>	8E-09 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

### Protective field data

Resolution	30 mm
Protective field height	1,500 mm

### Optical data

Synchronization	Optical between transmitter and receiver
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### Electrical data

Protective circuit	Overvoltage protection Short circuit protected
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### Performance data

Supply voltage U <sub>B</sub>	24 V, DC, -20 ... 20 %
Current consumption, max.	100 mA

### Outputs

Number of safety-related switching outputs (OSSDs)	2 Piece(s)
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### Safety-related switching outputs

Type	Safety-related switching output OSSD
Switching voltage high, min.	18 V
Switching voltage low, max.	2.5 V
Switching voltage, typ.	22.5 V
Voltage type	DC
Current load, max.	50 mA
Load inductivity	500,000 µH
Load capacity	0.03 µF
Residual current, max.	0.5 mA
Voltage drop	1.5 V

### Safety-related switching output 1

Assignment	Connection 1, pin 2
Switching element	Transistor, PNP

### Safety-related switching output 2

Assignment	Connection 1, pin 4
Switching element	Transistor, PNP

### Time behavior

Response time	11.4 ms
Restart delay time	100 ms

### Connection

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

Function	Machine interface
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Number of conductors	4 -wire
Thread size	M12
Material	Metal
No. of pins	4 -pin

### Cable properties

Permissible conductor cross section, typ.	0.25 mm <sup>2</sup>
Length of connection cable, max.	15 m
Permissible cable resistance to load, max.	20 Ω

### Mechanical data

Dimension (W x H x L)	34.7 mm x 1,515 mm x 39.3 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Diecast zinc
Net weight	2,120 g
Housing color	Yellow, RAL 1021
Type of fastening	Groove mounting Mounting bracket

### Operation and display

Type of display	LED
Number of LEDs	6 Piece(s)

### Environmental data

Ambient temperature, operation	0 ... 55 °C
Ambient temperature, storage	-30 ... 70 °C
Relative humidity (non-condensing)	0 ... 95 %

### Certifications

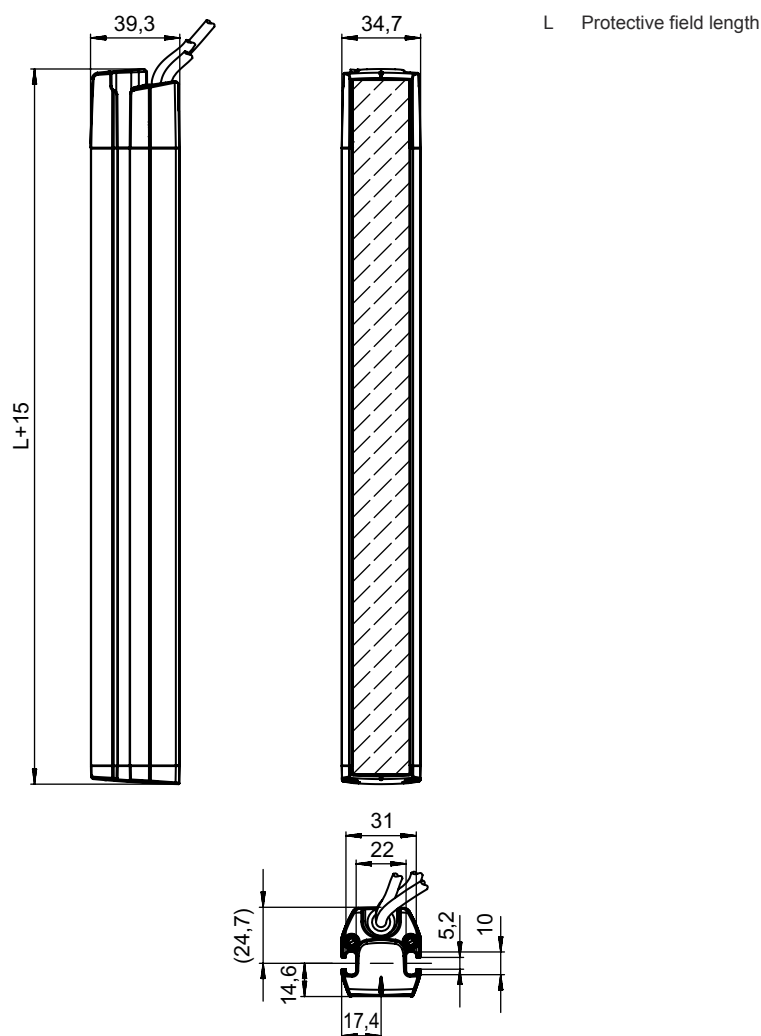
Degree of protection	IP 65
Protection class	III
Certifications	c UL US TÜV Süd
Vibration resistance	50 m/s <sup>2</sup>
Shock resistance, single shock	40 m/s <sup>2</sup> , 100,000 on each spatial axis
Shock resistance, continuous shock	15 g, 6 ms IEC 60068-2-27
US patents	US 6,418,546 B

## Technical data

Customs tariff number	85365019
ECLASS 5.1.4	27272704
ECLASS 8.0	27272704
ECLASS 9.0	27272704
ECLASS 10.0	27272704
ECLASS 11.0	27272704
ECLASS 12.0	27272704
ECLASS 13.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549

## Dimensioned drawings

All dimensions in millimeters



# Electrical connection

## Connection 1

Function	Machine interface
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm <sup>2</sup>
Thread size	M12
Type	Male
Material	Metal
No. of pins	4 -pin
Encoding	A-coded

Pin	Pin assignment	Conductor color
1	+24 V	Brown
2	OSSD1	White
3	0 V	Blue
4	OSSD2	Black



## Circuit diagrams

### Connection diagram receiver



### Circuit diagram example with downstream MSI-SR4B safety relay




1.2 Spark extinction circuit, suitable spark extinction provided

# Operation and display

LED	Display	Meaning
1	Red, continuous light	OSSD off
	red, slowly flashing (0.5 Hz)	External error
	red, flashing fast (10 Hz)	Internal error
	Flash sequence 2x ON/OFF, followed by a pause	Connection error
2	Green, continuous light	OSSD on
3	Blue, flashing	Light reception strength 1
	Blue, continuous light	Light reception strength 2
4	Blue, flashing	Light reception strength 3
	Blue, continuous light	Light reception strength 4, OSSD switches on
5	Blue, flashing	Light reception strength 5
	Blue, continuous light	Light reception strength 6
6	Blue, flashing	Light reception strength 7
	Blue, continuous light	Light reception strength 8, optimum alignment
	Blue, very quickly flashing	Fault in light reception

## Suitable transmitters


	Part no.	Designation	Article	Description
	72000315	ELC100T30-1500	Safety light curtain transmitter	Resolution: 30 mm Protective field height: 1.500 mm Operating range: 0.5 ... 6 m Connection: Cable with connector, M12, Metal, 4 -pin, 200 mm, PUR

## Part number code

Part designation: **ELC1yyzaa-hhhh**

ELC	Safety light curtain
x	<b>Series</b> 1: ELC100
yy	<b>Function classes</b> 00: transmitter 10: receiver – automatic restart
z	<b>Device type</b> T: transmitter R: receiver
a	<b>Resolution</b> 17: 17 mm 30: 30 mm
hhhh	<b>Protective field height</b> 300 ... 1500: from 300 mm to 1500 mm

### Note



↳ A list with all available device types can be found on the Leuze website at [www.leuze.com](http://www.leuze.com).

## Notes

<b>Observe intended use!</b>	
	<ul style="list-style-type: none"> <li>↪ The product may only be put into operation by competent persons.</li> <li>↪ Only use the product in accordance with its intended use.</li> </ul>

## Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50133860	KD S-M12-5A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5.000 mm Sheathing material: PUR

## Services

	Part no.	Designation	Article	Description
	S981050	CS40-I-140	Safety inspection	Details: Checking of a safety light barrier application in accordance with current standards and guidelines. Inclusion of the device and machine data in a database, production of a test log per application. Conditions: It must be possible to stop the machine, support provided by customer's employees and access to the machine for Leuze employees must be ensured. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.
	S981046	CS40-S-140	Start-up support	Details: For safety devices including stopping time measurement and initial inspection. Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses. Restrictions: Max. 2 h., no mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.

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