

## Technical data sheet

### Safety light curtain transmitter

Part no.: 72100309  
ELC105T30-900



For illustration purposes only

#### Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Circuit diagrams
- Operation and display
- Suitable receivers
- Part number code
- Notes
- Accessories



## Technical data

### Basic data

|             |                  |
|-------------|------------------|
| Series      | ELC150           |
| Device type | Transmitter      |
| Contains    | 2x sliding block |
| Application | Hand protection  |

### Characteristic parameters

|                             |                          |
|-----------------------------|--------------------------|
| Type                        | 4, IEC/EN 61496          |
| SIL                         | 3, IEC 61508             |
| SILCL                       | 3, IEC/EN 62061          |
| Mission time T <sub>M</sub> | 20 years, EN ISO 13849-1 |

### Protective field data

|                         |              |
|-------------------------|--------------|
| Resolution              | 30 mm        |
| Protective field height | 900 mm       |
| Operating range         | 0.5 ... 10 m |

### Optical data

|                          |                                           |
|--------------------------|-------------------------------------------|
| Synchronization          | Optical between transmitter and receiver  |
| Light source             | LED, Infrared                             |
| Wavelength               | 940 nm                                    |
| Transmitted-signal shape | Pulsed                                    |
| LED risk group           | Exempt group (in acc. with EN 62471:2008) |

### Electrical data

|                    |                                                   |
|--------------------|---------------------------------------------------|
| Protective circuit | Overvoltage protection<br>Short circuit protected |
|--------------------|---------------------------------------------------|

### Performance data

|                               |                        |
|-------------------------------|------------------------|
| Supply voltage U <sub>B</sub> | 24 V, DC, -20 ... 20 % |
| Current consumption, max.     | 50 mA                  |

### Connection

|                                            |                      |
|--------------------------------------------|----------------------|
| Number of connections                      | 1 Piece(s)           |
| <b>Connection 1</b>                        |                      |
| Function                                   | Machine interface    |
| Type of connection                         | Cable with connector |
| Cable length                               | 300 mm               |
| Sheathing material                         | PUR                  |
| Number of conductors                       | 4 -wire              |
| Thread size                                | M12                  |
| Material                                   | Metal                |
| No. of pins                                | 4 -pin               |
| <b>Cable properties</b>                    |                      |
| Permissible conductor cross section, type. | 0.25 mm <sup>2</sup> |
| Length of connection cable, max.           | 25 m                 |
| Permissible cable resistance to load, max. | 20 Ω                 |

### Mechanical data

|                       |                                      |
|-----------------------|--------------------------------------|
| Dimension (W x H x L) | 34.7 mm x 915 mm x 35.4 mm           |
| Housing material      | Metal                                |
| Metal housing         | Aluminum                             |
| Lens cover material   | Plastic / PMMA                       |
| Material of end caps  | Diecast zinc                         |
| Net weight            | 1,310 g                              |
| Housing color         | Yellow, RAL 1021                     |
| Type of fastening     | Groove mounting<br>Mounting brackets |

### Operation and display

|                 |            |
|-----------------|------------|
| Type of display | LED        |
| Number of LEDs  | 2 Piece(s) |

### Environmental data

|                                    |               |
|------------------------------------|---------------|
| Ambient temperature, operation     | 0 ... 50 °C   |
| Ambient temperature, storage       | -30 ... 70 °C |
| Relative humidity (non-condensing) | 0 ... 95 %    |

### Certifications

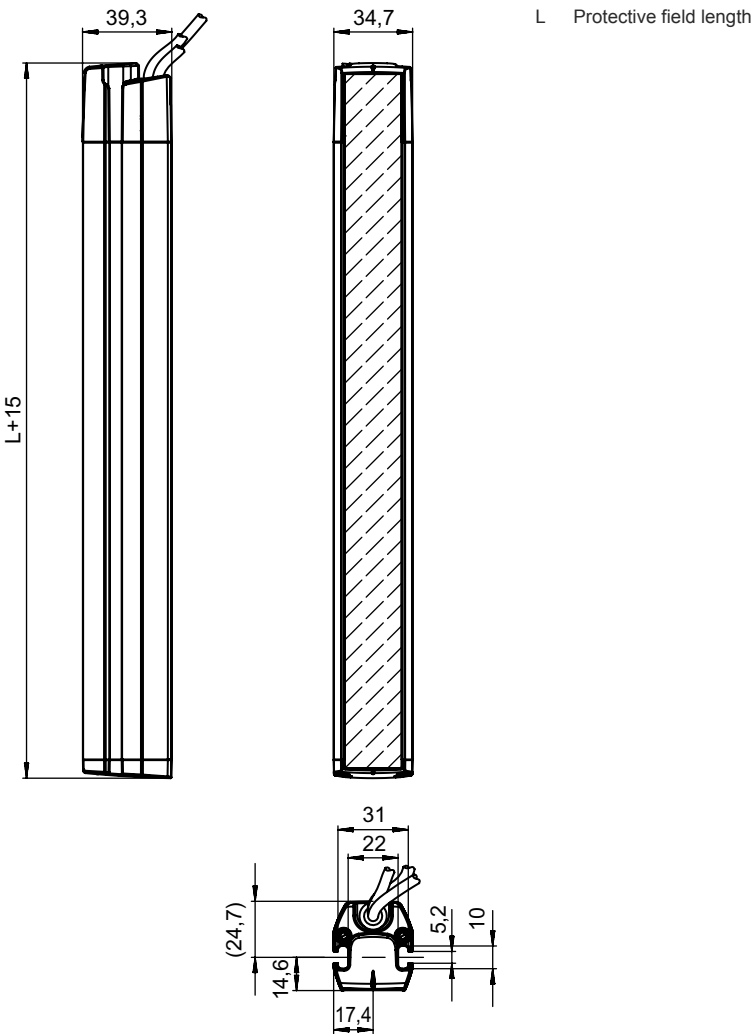
|                      |                           |
|----------------------|---------------------------|
| Degree of protection | IP 65                     |
| Protection class     | III                       |
| Approvals            | c UL US<br>KCs<br>TÜV Süd |
| Vibration resistance | 50 m/s <sup>2</sup>       |
| US patents           | US 6,418,546 B            |

### Classification

|                       |          |
|-----------------------|----------|
| 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 |
| ECLASS 14.0           | 27272704 |
| ECLASS 15.0           | 27272704 |
| ECLASS 16.0           | 27272704 |
| ETIM 5.0              | EC002549 |
| ETIM 6.0              | EC002549 |
| ETIM 7.0              | EC002549 |
| ETIM 8.0              | EC002549 |
| ETIM 9.0              | EC002549 |
| ETIM 10.0             | EC002549 |

Dimensioned drawings

All dimensions in millimeters



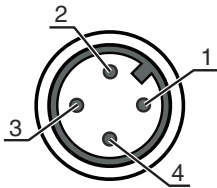
Electrical connection

Connection 1

|                      |                      |
|----------------------|----------------------|
| Function             | Machine interface    |
| Type of connection   | Cable with connector |
| Cable length         | 300 mm               |
| Sheathing material   | PUR                  |
| Cable color          | Black                |
| Number of conductors | 4 -wire              |
| Wire cross section   | 0.2 mm²              |
| Thread size          | M12                  |
| Type                 | Male                 |
| Material             | Metal                |
| No. of pins          | 4 -pin               |
| Encoding             | A-coded              |

Electrical connection

| Pin | Pin assignment | Conductor color |
|-----|----------------|-----------------|
| 1   | +24 V          | Brown           |
| 2   | n.c.           | White           |
| 3   | 0 V            | Blue            |
| 4   | n.c.           | Black           |



Circuit diagrams

Connection diagram transmitter



Operation and display

| LED | Display                                                         | Meaning             |
|-----|-----------------------------------------------------------------|---------------------|
| 1   | Red, flashing                                                   | Error               |
|     | Flash sequence 2x ON/OFF (250 ms), followed by a pause (750 ms) | Connection error    |
|     | Red, flashing, 10 Hz                                            | Device error        |
| 2   | Off                                                             | Device switched off |
|     | On                                                              | Device switched on  |

Suitable receivers

|  | Part no. | Designation   | Article                       | Description                                                                                                                                        |
|--|----------|---------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 72101309 | ELC150R30-900 | Safety light curtain receiver | Resolution: 30 mm<br>Protective field height: 900 mm<br>Response time: 7.3 ms<br>Connection: Cable with connector, M12, Metal, 4 -pin, 300 mm, PUR |

## Part number code

Part designation: ELC1yyzaa-hhhh

| ELC  | Safety light curtain                                                   |
|------|------------------------------------------------------------------------|
| 1    | 1: ELC150                                                              |
| yy   | 00: transmitter<br>50: Receiver – automatic restart                    |
| z    | <b>Device type</b><br>T: transmitter<br>R: receiver                    |
| a    | <b>Resolution</b><br>14: 14 mm<br>17: 17 mm<br>30: 30 mm               |
| hhhh | <b>Protective field height</b><br>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



### Observe intended use!



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

## Accessories

### Connection technology - Connection cables

|                                                                                     | Part no. | Designation        | Article          | Description                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|----------|--------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50133860 | KD S-M12-5A-P1-050 | Connection cable | Application: Oil and lubricant resistant<br>Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connector, LED: No<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR |

### Mounting technology - Other

|                                                                                    | Part no. | Designation | Article          | Description                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------|----------|-------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 424439   | BT-2P45     | Mounting bracket | Contains: 2x BT-P45<br>Bore hole 1: M6<br>Bore hole 2: M6<br>Design of mounting device: Mounting clamp<br>Fastening, at system: Groove mounting<br>Mounting bracket, at device: Groove mounting<br>Type of mounting device: Clampable, Suitable for mounting in UDC-S2, DC-S2 device columns<br>Material: Metal |

## Accessories

|                                                                                  | Part no. | Designation | Article              | Description                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------|----------|-------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 424432   | BT-2SB05    | Mounting bracket set | Contains: 2x BT-SB05<br>Design of mounting device: Mounting clamp<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Clampable, On the lateral C-groove<br>Type of mounting device: Swiveling<br>Swivel range: -8 ... 8 °<br>Material: Metal |

## 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.<br>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. |
|  | S981046  | CS40-S-140  | Start-up support  | Details: For safety devices including stopping time measurement and initial inspection.<br>Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses.                                                                                                                                         |

### Note



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