

Technical data sheet

Safety light curtain receiver

Part no.: 72101303

ELC150R30-300



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For illustration purposes only

Technical data

Basic data

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

Functions

| | |
|-----------|-------------------------|
| Functions | Automatic start/restart |
|-----------|-------------------------|

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 _D | 8E-09 per hour |
| Mission time T _M | 20 years, EN ISO 13849-1 |
| Category | 4, EN ISO 13849 |

Protective field data

| | |
|-------------------------|--------|
| Resolution | 30 mm |
| Protective field height | 300 mm |

Optical data

| | |
|-----------------|--|
| Synchronization | Optical between transmitter and receiver |
|-----------------|--|

Electrical data

| | |
|--------------------|---|
| Protective circuit | Overvoltage protection Short circuit protected |
|--------------------|---|

Performance data

| | |
|-------------------------------|------------------------|
| Supply voltage U _B | 24 V, DC, -20 ... 20 % |
| Current consumption, max. | 100 mA |

Outputs

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

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, type. | 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 | 4.5 ms |
| Restart delay time | 100 ms |

Connection

| | |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

Connection 1

| | |
|----------------------|----------------------|
| 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 |

Cable properties

| | |
|--|----------------------|
| Permissible conductor cross section, type. | 0.25 mm ² |
| 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 315 mm x 39.3 mm |
| Housing material | Metal |
| Metal housing | Aluminum |
| Lens cover material | Plastic / PMMA |
| Material of end caps | Diecast zinc |
| Net weight | 530 g |
| Housing color | Yellow, RAL 1021 |
| Type of fastening | Groove mounting Mounting brackets |

Operation and display

| | |
|-----------------|------------|
| Type of display | LED |
| Number of LEDs | 6 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 KCs TÜV Süd |
| Vibration resistance | 50 m/s ² |
| 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 |
| 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 |
| UNSPSC 26.08 | 46171620 |

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 mm ² |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 4 -pin |
| Encoding | A-coded |

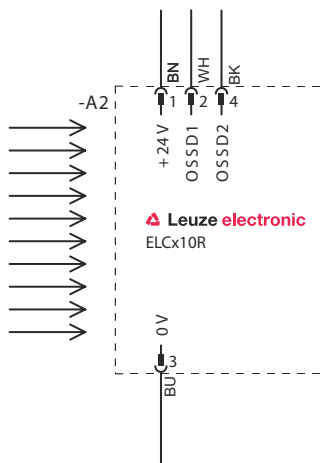
Electrical connection

| Pin | Pin assignment | Conductor color |
|-----|----------------|-----------------|
| 1 | +24 V | Brown |
| 2 | 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 |

Operation and display

| LED | Display | Meaning |
|-----|-----------------------------|---|
| 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 |
|----------|---------------|----------------------------------|--|
| 72100303 | ELC105T30-300 | Safety light curtain transmitter | Resolution: 30 mm Protective field height: 300 mm Operating range: 0.5 ... 10 m Connection: Cable with connector, M12, Metal, 4 -pin, 300 mm, PUR |

Part number code

Part designation: ELC1yyzaa-hhhh

| ELC | Safety light curtain |
|------|--|
| 1 | Series 1: ELC150 |
| yy | Function classes 00: transmitter 50: Receiver – automatic restart |
| z | Device type T: transmitter R: receiver |
| a | Resolution 14: 14 mm 17: 17 mm 30: 30 mm |
| hhhh | Protective field height 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.

Notes

Observe intended use!

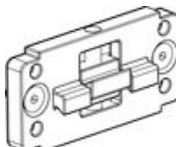
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

Accessories

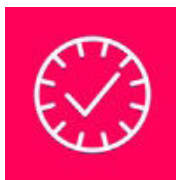

Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|---|----------|--------------------|------------------|--|
|  | 50133860 | KD S-M12-5A-P1-050 | Connection cable | Application: Oil and lubricant resistant 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 |


Mounting technology - Other

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