



DATA SHEET

C4C-SC07510A10000

C4-RD  
Safety light curtains

**SICK** Sensor Intelligence



Illustration may differ

# SAFETY LIGHT CURTAINS

## C4C-SC07510A10000

### ORDERING INFORMATION

| Type              | part no.                |
|-------------------|-------------------------|
| C4C-SC07510A10000 | <a href="#">1113192</a> |

Further device versions and accessories at [www.sick.com/C4-RD](http://www.sick.com/C4-RD)



### DETAILED TECHNICAL DATA

#### FEATURES

|                         |                         |
|-------------------------|-------------------------|
| System part             | Sender                  |
| Compatible receiver     | 1113212                 |
| Resolution              | 14 mm                   |
| Scanning range          | 4.5 m                   |
| Protective field height | 750 mm                  |
| No blind zones          | Yes                     |
| Synchronization         | Optical synchronization |
| Items supplied          | Sender                  |

#### SAFETY-RELATED PARAMETERS

|                                                                     |                                        |
|---------------------------------------------------------------------|----------------------------------------|
| Type                                                                | Type 4 (IEC 61496-1)                   |
| Safety integrity level                                              | SIL 3 (IEC 61508)                      |
| Category                                                            | Category 4 (ISO 13849-1)               |
| Performance level                                                   | PL e (ISO 13849-1)                     |
| PFH <sub>D</sub> (mean probability of a dangerous failure per hour) | 3.7 x 10 <sup>-9</sup>                 |
| T <sub>M</sub> (mission time)                                       | 20 years (ISO 13849-1)                 |
| Safe state in the event of a fault                                  | At least one OSSD is in the OFF state. |

#### FUNCTIONS

|                      |   |
|----------------------|---|
| Protective operation | ✓ |
|----------------------|---|

#### INTERFACES

|                   |                  |
|-------------------|------------------|
| System connection | Plug, M12, 5-pin |
|-------------------|------------------|

|                  |      |
|------------------|------|
| Display elements | LEDs |
|------------------|------|

**ELECTRONICS**

|                           |                             |
|---------------------------|-----------------------------|
| Protection class          | III (IEC 61140)             |
| Supply voltage $V_s$      | 24 V DC (19.2 V ... 28.8 V) |
| Ripple                    | $\leq 10\%$ <sup>1)</sup>   |
| Power consumption typical | 1.32 W (DC)                 |

<sup>1)</sup> Within the limits of  $V_s$ .

**MECHANICS**

|                  |                           |
|------------------|---------------------------|
| Dimensions       | See dimensional drawing   |
| Housing material | Aluminum extruded profile |
| Weight           | 669 g ( $\pm 50$ g)       |

**AMBIENT DATA**

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Enclosure rating              | IP65 (IEC 60529)<br>IP67 (IEC 60529)      |
| Ambient operating temperature | -30 °C ... +55 °C                         |
| Storage temperature           | -30 °C ... +70 °C                         |
| Air humidity                  | 15 % ... 95 %, Non-condensing             |
| Vibration resistance          | 5 ... 150 Hz, 3,5 mm / 1 g (EN 60068-2-6) |
| Shock resistance              | 15 g / 6 ms (EN 60068-2-27)               |
| Class                         | 3M4 (IEC TR 60721-4-3)                    |

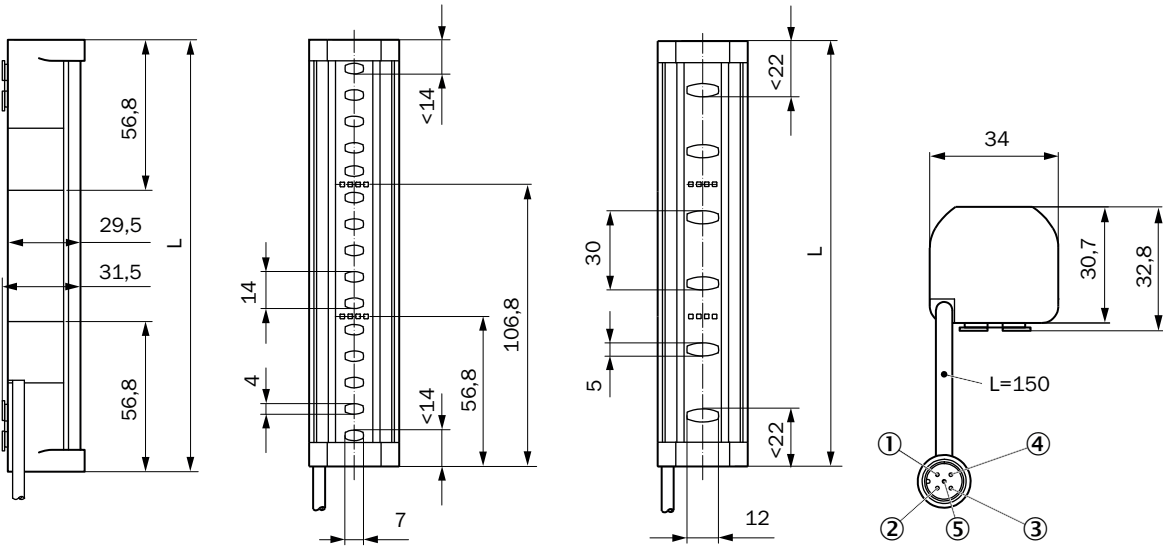
**OTHER INFORMATION**

|               |                                |
|---------------|--------------------------------|
| Wave length   | 850 nm                         |
| Type of light | Near-infrared (NIR), invisible |

**CERTIFICATES**

|                                                                       |   |
|-----------------------------------------------------------------------|---|
| EU declaration of conformity                                          | ✓ |
| UK declaration of conformity                                          | ✓ |
| ACMA declaration of conformity                                        | ✓ |
| Moroccan declaration of conformity                                    | ✓ |
| China RoHS                                                            | ✓ |
| ULus approval                                                         | ✓ |
| cUL approval                                                          | ✓ |
| Japan Press Safety certificate                                        | ✓ |
| EC-Type-Examination approval                                          | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

DIMENSIONAL DRAWING

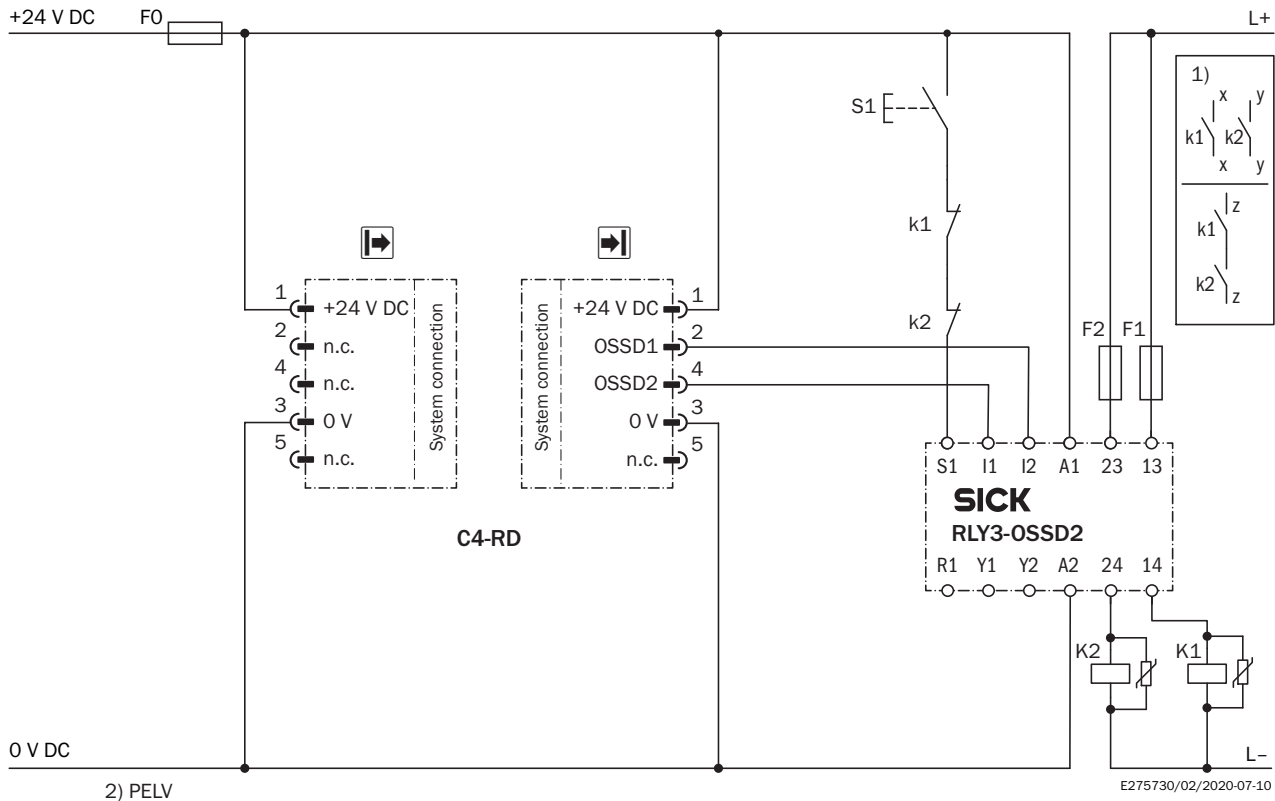


Dimensions in mm (inch)

- ① +24 V DC
- ② Sender: Reserved, receiver: OSSD1
- ③ 0 V DC
- ④ Sender: Reserved, receiver: OSSD2
- ⑤ Not assigned

| Protective field height |  | L     |
|-------------------------|--|-------|
| 150                     |  | 163   |
| 200                     |  | 213   |
| 250                     |  | 263   |
| 300                     |  | 313   |
| 350                     |  | 363   |
| 400                     |  | 413   |
| 450                     |  | 463   |
| 500                     |  | 513   |
| 550                     |  | 563   |
| 600                     |  | 613   |
| 750                     |  | 763   |
| 900                     |  | 913   |
| 1.050                   |  | 1.063 |
| 1.200                   |  | 1.213 |

## CONNECTION DIAGRAM C4-RD SAFETY LIGHT CURTAIN ON RLY3-OSSD200 SAFETY RELAY



① Output circuits: These contacts must be incorporated into the control such that the dangerous state is brought to an end if the output circuit is open. For categories 4 and 3, they must be incorporated on dual-channels (x, y paths). Single-channel incorporation into the control (z path) is only possible with a single-channel control and taking the risk analysis into account.

② SELV/PELV safety/protective extra-low voltage.

#### Task

Connection of a C4-RD safety light curtain to a RLY3-OSSD2 safety relay. Operating mode: With restart interlock and external device monitoring.

#### Mode of operation

When the protective field is clear, the OSSD1 and OSSD2 outputs carry voltage. The system can be switched on when K1 and K2 are in a fault-free de-energized position. The RLY3-OSSD2 is switched on by pressing S1 (pushbutton is pressed and released). The outputs (contacts 13-14 and 23-24) switch the K1 and K2 contactors on. When the protective field is interrupted, the OSSD1 and OSSD2 outputs switch the RLY3-OSSD2 off. Contactors K1 and K2 are switched off.

#### Fault analysis

Cross-circuits and short-circuits of the OSSDs are recognized and lead to the locking status (lock-out). A malfunction with one of the K1 or K2 contactors is detected. The switch-off function is retained. In the event of manipulation (e.g., jamming) of the S1 pushbutton, the RLY3-OSSD2 will not re-enable the output current circuits.

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/1113199](http://www.sick.com/1113199)



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