



## Safety light curtains miniTwin2 as a standalone device

C2MT-10814BBC03FB0



**Model Name** > [C2MT-10814BBC03FB0](#)  
**Part No.** > [1207939](#)



**At a glance**

- Type 2 (IEC 61496), SIL1 (IEC 61508), PL c (EN ISO 13849)
- Compact cross section (15 mm x 32 mm) with no dead zones
- Cascadable twin stick design - sender and receiver in a single housing
- Customized protective field heights in 60-mm increments from 120 mm to 1,200 mm
- Typical scanning ranges 0 m ... 8 m
- Intelligent, software-free configuration of external device monitoring (EDM) and reset function (RES)
- M12, 5-pin device connection

**Your benefits**

- Cost-effective machine integration: its small design, cascadable features and incremental protective field heights enable a flexible adjustment to the machine design
- Standardization saves time and resources because of more straightforward logistics, order entry and service
- Simplified handling and setup: Software-free, almost fully automatic commissioning and intuitive operation with sustainable optics
- Bright LED display provides fast alignment, easy start up and clear protective field visualization ensure quick diagnostics
- End-to-end coverage in cascadable applications eliminates dead zones and shortens the safety distance, increasing productivity
- Application-specific brackets provide increased flexibility and reduce installation time



**Safety-related parameters**

|                                     |  |
|-------------------------------------|--|
| Type:                               | Type 2 (IEC 61496)   |
| Safety integrity level:             | SIL1 (IEC 61508)<br>SILCL1 (EN 62061)  |
| Category:                           | category 2 (EN ISO 13849)  |
| Test rate (internal test):          | 58 /s  |
| Maximum demand rate:                | 34 /min (EN ISO 13849) <sup>1)</sup>   |
| Performance level:                  | PL c (EN ISO 13849), Pay attention to optical characteristics! <sup>2)</sup> |
| PFHd:                               | Standalone system: 2.4 * 1E-08 (EN ISO 13849)                                |
| TM (mission time):                  | 20 a (EN ISO 13849)  |
| Safe state in the event of a fault: | At least one OSSD is in the OFF state.                                       |

<sup>1)</sup> Between two demands on a safety-related response of the device, at least 100 internal or external tests must be carried out. <sup>2)</sup> The performance level does not contain any specific requirements on aspects such as the optical characteristics. For more detailed information on this topic, see page xx.

## Functions

|   |             |
|---|-------------|
| Restart interlock:                            | ✓           |
| Restart interlock (delivery status):          | Deactivated |
| External device monitoring (EDM):             | ✓           |
| External device monitoring (delivery status): | Deactivated |
| Beam coding:                                  | ✓           |
| Automatic beam coding:                        | ✓           |
| Cascaded:                                     | -           |
| Safe SICK device communication via EFI/SDL:   | -           |

## Features

|                          |   |
|--------------------------|---|
| Resolution:              | 14 mm                                     |
| Protective field height: | 1,080 mm                                  |
| Scanning range:          | 0 m ... 6 m                               |
| Typical range:           | 0 m ... 8 m                               |
| Response time:           | ≤ 17 ms <sup>1)</sup>                     |
| Synchronization:         | Optical, without separate synchronization |

<sup>1)</sup> Standalone devices, no cascaded systems. Other response times see operating instructions.

## Mechanical data

|  |                           |
|--|---------------------------|
| Housing cross-section (incl. system connection): | 15 mm x 32 mm             |
| Housing material:                                | Aluminum alloy ALMGSI 0.5 |
| Weight:  | 380 g                     |

## Electrical data

|                         |  |
|-------------------------|--|
| Protection class:       | III (EN 61140)   |
| Supply voltage:         | 24 V DC (19.2 V DC ... 28.8 V DC)  |
| Residual ripple:        | ≤ 10 % <sup>1)</sup>   |
| Power consumption:      | ≤ 3 A <sup>2)</sup>  |
| Type of output:         | PNP semiconductors, short-circuit protected, cross-circuit monitored <sup>3)</sup> |
| Switching voltage HIGH: | 24 V DC (VS - 2.25 V DC ... VS)  |
| Switching voltage LOW:  | 2 V DC   |
| Switching current:      | 300 mA   |

<sup>1)</sup> Within the limits of  $V_S$  <sup>2)</sup> Maximum power consumption of a host/guest/guest system with 1,200 mm protective field height and a resolution of 14 mm <sup>3)</sup> Applies to the voltage range between -30 V and +30 V

## Interfaces

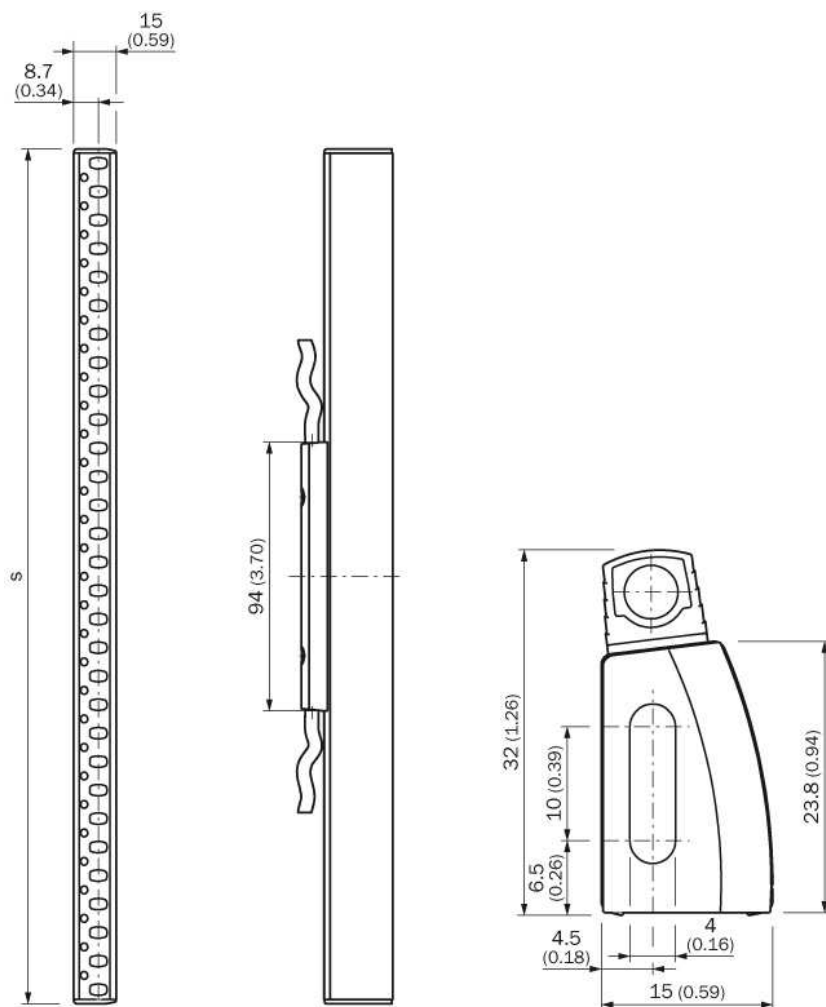
|   |  |
|---|--|
| Electrical connection:                        | Connector M12, 5-pin   |
| Cable length:                                 | 700 mm   |
| Conductor cross-section:                      | 0.34 mm <sup>2</sup>   |
| Permitted cable length:                       | ≤ 20 m <sup>1)</sup>   |
| Configuration method:                         | Hard wired   |
| Display elements:                             | LEDs   |
| Integration via Flexi Soft safety controller: | CANopenDeviceNetEtherCATEtherNet/IPModbus TCP PROFIBUS DP PROFINET <sup>2)</sup> |

1) 2) For further information on Flexi Soft, please see sens:Control - safe control solutions product catalog or -> [www.sick.com/FlexiSoft](http://www.sick.com/FlexiSoft)

### Ambient data

|                                |                                     |
|--------------------------------|-------------------------------------|
| Enclosure rating:              | IP 65 (EN 60529)                    |
| Ambient operating temperature: | -20 °C ... +55 °C                   |
| Storage temperature:           | -25 °C ... +70 °C                   |
| Air humidity:                  | 15 % ... 95 %, non-condensing       |
| Vibration resistance:          | 5 g, 10 Hz ... 55 Hz (EN 60068-2-6) |
| Shock resistance:              | 10 g, 16 ms (EN 60068-2-27)         |

### Dimensional drawing



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