



DATA SHEET

# deTec4 Core Set 14/450

deTec  
Safety light curtains



Illustration may differ

SAFETY LIGHT CURTAINS

deTec4 Core Set  
14/450

ORDERING INFORMATION

| Type                   | part no. |
|------------------------|----------|
| deTec4 Core Set 14/450 | 1062897  |

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

DETAILED TECHNICAL DATA

FEATURES

|                         |                                                                                                                                                                                                                                                                                                    |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product version         | deTec4 Core                                                                                                                                                                                                                                                                                        |
| Application             | Normal industrial environment                                                                                                                                                                                                                                                                      |
| System part             | Set                                                                                                                                                                                                                                                                                                |
| Resolution              | 14 mm                                                                                                                                                                                                                                                                                              |
| Scanning range          | 10 m                                                                                                                                                                                                                                                                                               |
| Protective field height | 450 mm                                                                                                                                                                                                                                                                                             |
| No blind zones          | Yes                                                                                                                                                                                                                                                                                                |
| Synchronization         | Optical synchronization                                                                                                                                                                                                                                                                            |
| Items supplied          | Sender<br>Receiver<br>4 FlexFix brackets<br>4 QuickFix brackets<br>2 connecting cables, 5 m<br>Test rod with diameter corresponding to the resolution of the safety light curtain<br>RLY3-OSSD2 safety relay<br>Safety instruction<br>Mounting instructions<br>Operating instructions for download |

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. |

### INTERFACES

|                   |                     |                       |
|-------------------|---------------------|-----------------------|
| System connection | Length of cable     | Plug, M12, 5-pin      |
|                   | Cable diameter      | 150 mm                |
|                   |                     | 4.3 mm                |
| Cable bend radius | Stationary position | > 12 x cable diameter |
|                   | Flexible use        | > 15 x cable diameter |
| Display elements  |                     | LEDs                  |

### ELECTRONICS

|                                         |                                                                                      |
|-----------------------------------------|--------------------------------------------------------------------------------------|
| Protection class                        | III (IEC 61140)                                                                      |
| Supply voltage $V_s$                    | 24 V DC (19.2 V ... 28.8 V)                                                          |
| Ripple                                  | $\leq 10 \%$                                                                         |
| Output signal switching devices (OSSDs) |                                                                                      |
| Type of output                          | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored <sup>1)</sup> |
| ON state, switching voltage HIGH        | 24 V DC ( $V_s - 2.25 \text{ V DC} \dots V_s$ )                                      |
| OFF state, switching voltage LOW        | $\leq 2 \text{ V DC}$                                                                |
| Current-carrying capacity per OSSD      | $\leq 300 \text{ mA}$                                                                |

<sup>1)</sup> Applies to the voltage range between -30 V and +30 V.

### MECHANICS

|                  |                           |
|------------------|---------------------------|
| Dimensions       | See dimensional drawing   |
| Housing material | Aluminum extruded profile |

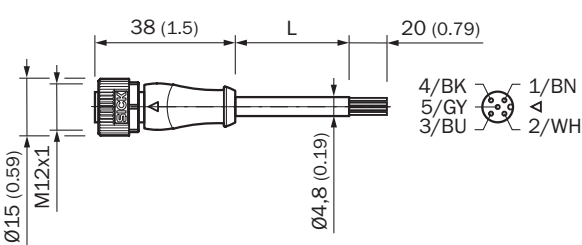
### AMBIENT DATA

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

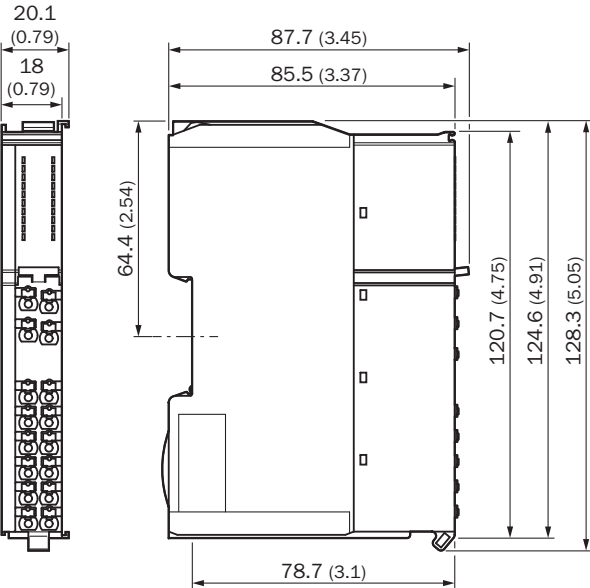
|               |                                |
|---------------|--------------------------------|
| Wave length   | 850 nm                         |
| Type of light | Near-infrared (NIR), invisible |

### DIMENSIONAL DRAWING



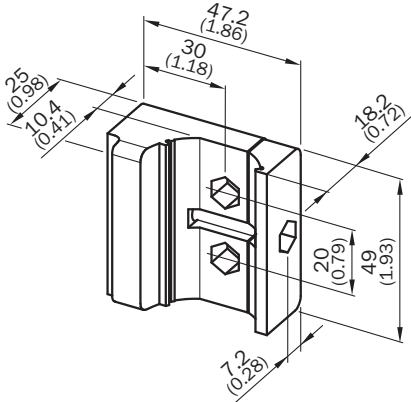
Dimensions in mm (inch)

DIMENSIONAL DRAWING EMSS1, HAND1, OSSD1, OSSD2, TIME1



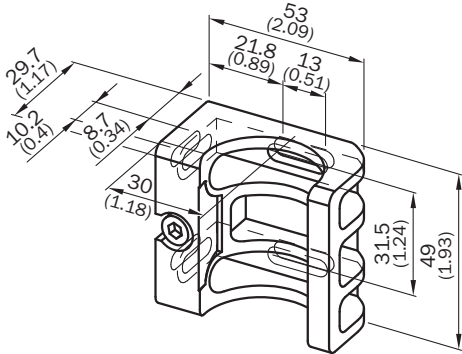
Dimensions in mm (inch)

DIMENSIONAL DRAWING



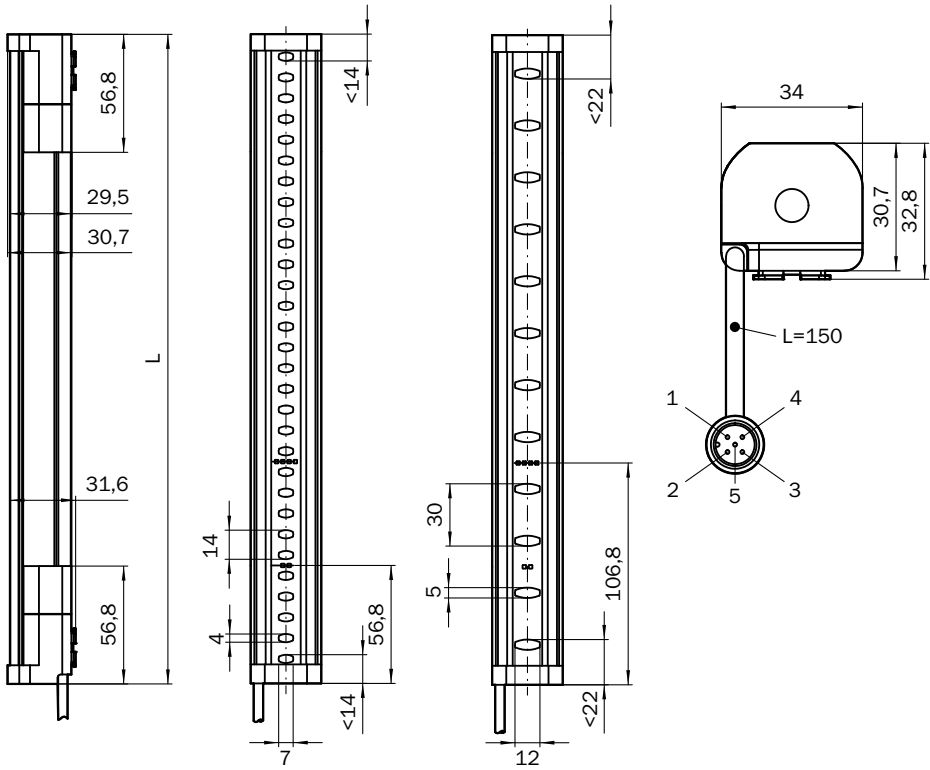
Dimensions in mm (inch)

DIMENSIONAL DRAWING FLEXFIX



Dimensions in mm (inch)

DIMENSIONAL DRAWING



Dimensions in mm (inch)

| Protective field height | L             |
|-------------------------|---------------|
| 300 (11.81)             | 313 (12.32)   |
| 450 (17.72)             | 463 (18.23)   |
| 600 (23.62)             | 613 (24.13)   |
| 750 (29.53)             | 763 (30.04)   |
| 900 (35.43)             | 913 (35.94)   |
| 1,050 (41.34)           | 1,063 (41.85) |
| 1,200 (47.24)           | 1,213 (47.76) |
| 1,350 (53.15)           | 1,362 (53.62) |
| 1,500 (59.06)           | 1,512 (59.53) |
| 1,650 (64.96)           | 1,662 (65.43) |
| 1,800 (70.87)           | 1,812 (71.34) |
| 1,950 (76.77)           | 1,962 (77.24) |
| 2,100 (82.68)           | 2,112 (83.15) |

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/1062897](http://www.sick.com/1062897)

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