

# C4P-SA04510A00

deTec

**SAFETY LIGHT CURTAINS**

**SICK**  
Sensor Intelligence.

Illustration may differ

## Ordering information

### deTec4 Prime

| Resolution | Scanning range | Protective field height | System part | Type           | Part no. |
|------------|----------------|-------------------------|-------------|----------------|----------|
| 14 mm      | 20 m           | 450 mm                  | Sender      | C4P-SA04510A00 | 1215276  |

The system plug has to be ordered separately. For details, see "Accessories".

Other models and accessories → [www.sick.com/deTec](http://www.sick.com/deTec)



## Detailed technical data

### Features

|                                       |                               |
|---------------------------------------|-------------------------------|
| <b>Application</b>                    | Normal industrial environment |
| <b>System part</b>                    | Sender                        |
| <b>Resolution</b>                     | 14 mm                         |
| <b>Scanning range</b>                 | 20 m                          |
| <b>Protective field height</b>        | 450 mm                        |
| <b>No blind zones</b>                 | Yes                           |
| <b>Synchronization</b>                | Optical synchronisation       |
| <b>Integrated laser alignment aid</b> | ✓                             |
| <b>Items supplied</b>                 | Sender                        |

### Safety-related parameters

|                                                                           |                                        |
|---------------------------------------------------------------------------|----------------------------------------|
| <b>Type</b>                                                               | Type 4 (IEC 61496-1)                   |
| <b>Safety integrity level</b>                                             | SIL3 (IEC 61508)<br>SILCL3 (IEC 62061) |
| <b>Category</b>                                                           | Category 4 (ISO 13849-1)               |
| <b>Performance level</b>                                                  | PL e (ISO 13849-1)                     |
| <b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b> |                                        |
| Single device                                                             | $9.6 \times 10^{-9}$                   |
| Cascade with one guest                                                    | $1.9 \times 10^{-8}$                   |
| Cascade with two guest devices                                            | $2.9 \times 10^{-8}$                   |
| <b>T<sub>M</sub> (mission time)</b>                                       | 20 years (ISO 13849-1)                 |
| <b>Safe state in the event of a fault</b>                                 | At least one OSSD is in the OFF state. |

### Functions

|                                                            |   |
|------------------------------------------------------------|---|
| <b>Protective operation</b>                                | ✓ |
| <b>Automatic calibration of the protective field width</b> | ✓ |
| <b>Beam coding</b>                                         | ✓ |

|                  |   |
|------------------|---|
| <b>Cascading</b> | ✓ |
|------------------|---|

## Interfaces

|                                              |                                                                                                           |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>System connection</b>                     | Depending on system plug (M12 male connector, 5-pin or 8-pin)                                             |
| <b>Configuration method</b>                  | DIP switch on system plug                                                                                 |
| <b>Display elements</b>                      | LEDs                                                                                                      |
| <b>Fieldbus, industrial network</b>          | CANopen <sup>1)</sup><br>DeviceNet™<br>EtherCAT®<br>Ethernet/IP™<br>Modbus TCP<br>PROFIBUS DP<br>PROFINET |
| Integration via Flexi Soft safety controller |                                                                                                           |
|                                              |                                                                                                           |
|                                              |                                                                                                           |
|                                              |                                                                                                           |

<sup>1)</sup> For additional information on Flexi Soft -> [www.sick.com/Flexi\\_Soft](http://www.sick.com/Flexi_Soft).

## Electrical data

|                                     |                             |
|-------------------------------------|-----------------------------|
| <b>Protection class</b>             | III (IEC 61140)             |
| <b>Supply voltage V<sub>s</sub></b> | 24 V DC (19.2 V ... 28.8 V) |
| <b>Ripple</b>                       | ≤ 10 %                      |
| <b>Power consumption typical</b>    | 1.51 W (DC)                 |

## Mechanical data

|                         |                           |
|-------------------------|---------------------------|
| <b>Dimensions</b>       | See dimensional drawing   |
| <b>Housing material</b> | Aluminum extruded profile |

## Ambient data

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Enclosure rating</b>              | IP65 (IEC 60529)<br>IP67 (IEC 60529) |
| <b>Ambient operating temperature</b> | -30 °C ... +55 °C                    |
| <b>Storage temperature</b>           | -30 °C ... +70 °C                    |
| <b>Air humidity</b>                  | 15 % ... 95 %, Non-condensing        |
| <b>Vibration resistance</b>          | 5 g, 10 Hz ... 55 Hz (IEC 60068-2-6) |
| <b>Shock resistance</b>              | 10 g, 16 ms (IEC 60068-2-27)         |

## Other information

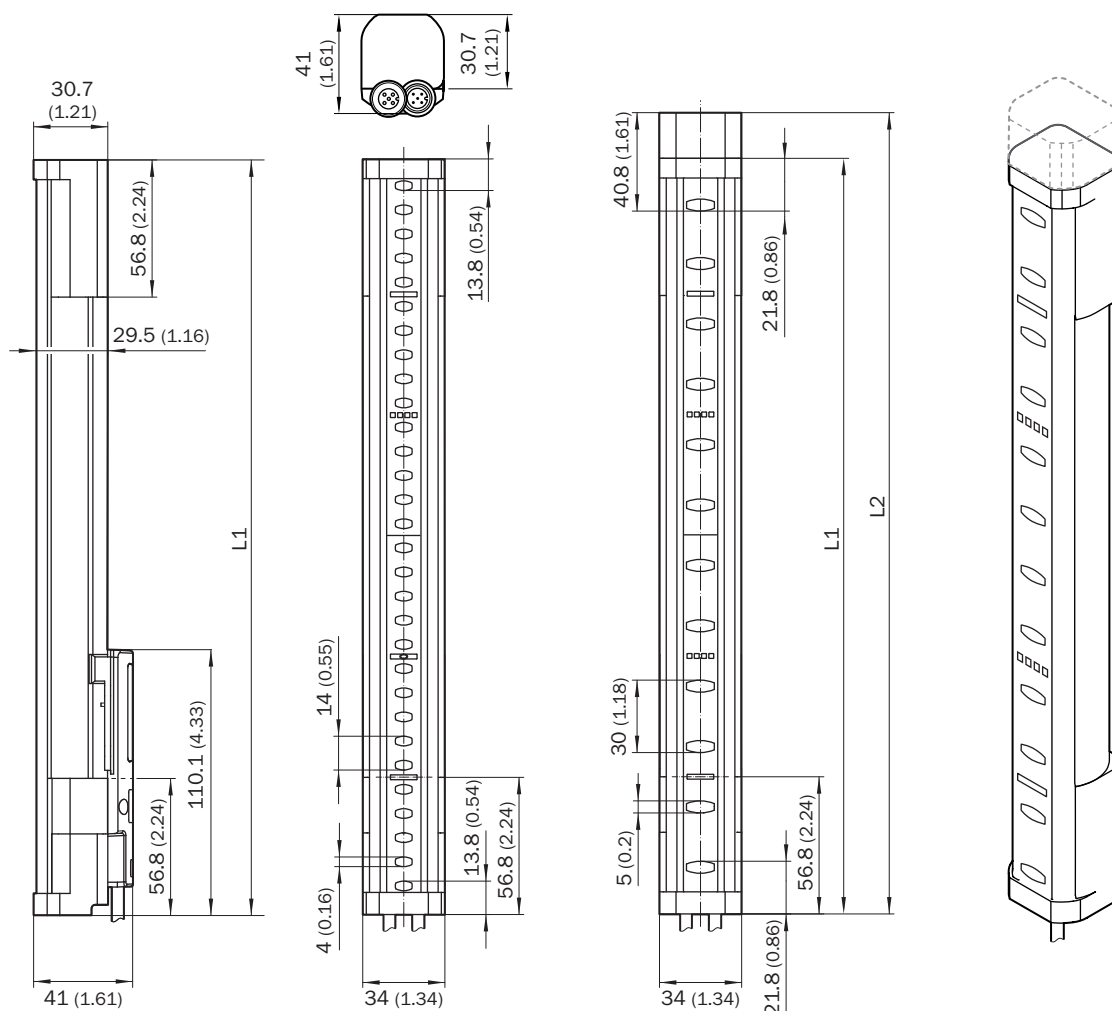
|                                       |                                |
|---------------------------------------|--------------------------------|
| <b>Wave length</b>                    | 850 nm                         |
| <b>Type of light</b>                  | Near-infrared (NIR), invisible |
| <b>Integrated laser alignment aid</b> | ✓                              |
| Laser class                           | 1                              |
| Wave length                           | 650 nm                         |
| Type of light                         | Visible red light              |

## Classifications

|                     |          |
|---------------------|----------|
| <b>ECI@ss 5.0</b>   | 27272704 |
| <b>ECI@ss 5.1.4</b> | 27272704 |
| <b>ECI@ss 6.0</b>   | 27272704 |
| <b>ECI@ss 6.2</b>   | 27272704 |
| <b>ECI@ss 7.0</b>   | 27272704 |

|                       |          |
|-----------------------|----------|
| <b>ECI@ss 8.0</b>     | 27272704 |
| <b>ECI@ss 8.1</b>     | 27272704 |
| <b>ECI@ss 9.0</b>     | 27272704 |
| <b>ECI@ss 10.0</b>    | 27272704 |
| <b>ECI@ss 11.0</b>    | 27272704 |
| <b>ETIM 5.0</b>       | EC002549 |
| <b>ETIM 6.0</b>       | EC002549 |
| <b>ETIM 7.0</b>       | EC002549 |
| <b>UNSPSC 16.0901</b> | 46171620 |

### Dimensional drawing (Dimensions in mm (inch))



| Protective field height | L1          | L2          |
|-------------------------|-------------|-------------|
| 300 (11.81)             | 313 (12.32) | 332 (13.07) |
| 450 (17.72)             | 463 (18.23) | 482 (18.98) |
| 600 (23.62)             | 613 (24.13) | 632 (24.88) |
| 750 (29.53)             | 763 (30.04) | 782 (30.79) |

| Protective field height | L1            | L2            |
|-------------------------|---------------|---------------|
| 900 (35.43)             | 913 (35.94)   | 932 (36.69)   |
| 1,050 (41.34)           | 1,063 (41.85) | 1,082 (42.6)  |
| 1,200 (47.24)           | 1,213 (47.75) | 1,232 (48.5)  |
| 1,350 (53.15)           | 1,362 (53.62) | 1,381 (54.37) |
| 1,500 (59.06)           | 1,512 (59.53) | 1,531 (60.28) |
| 1,650 (64.96)           | 1,662 (65.43) | 1,681 (66.18) |
| 1,800 (70.87)           | 1,812 (71.34) | 1,831 (72.09) |
| 1,950 (76.77)           | 1,962 (77.24) | 1,981 (77.99) |
| 2,100 (82.68)           | 2,112 (83.15) | 2,131 (83.9)  |

## Recommended accessories

Other models and accessories → [www.sick.com/deTec](http://www.sick.com/deTec)

|                                                                                     | Brief description                                                                                                                      | Description                                                                                                                            | Type                           | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------|
| Terminal and alignment brackets                                                     |                                                                                                                                        |                                                                                                                                        |                                |          |
|    | 4 pieces, FlexFix bracket for 2 devices (e.g. sender and receiver), can be aligned $\pm 15^\circ$ , including M5 screw, plastic        | 4 pieces, FlexFix bracket for 2 devices (e.g. sender and receiver), can be aligned $\pm 15^\circ$ , including M5 screw, plastic        | BEF-1SHABPKU4                  | 2066614  |
|  | 4 pieces, QuickFix bracket for 2 devices (e.g. sender and receiver), plastic                                                           | 4 pieces, QuickFix bracket for 2 devices (e.g. sender and receiver), plastic                                                           | BEF-3SHABPKU4                  | 2098710  |
| Others                                                                              |                                                                                                                                        |                                                                                                                                        |                                |          |
|  | deTec deTec system plug                                                                                                                | deTec deTec system plug                                                                                                                | 1000                           | 2076832  |
|  |                                                                                                                                        |                                                                                                                                        | 1100                           | 2076833  |
|  |                                                                                                                                        |                                                                                                                                        | 1200                           | 2076834  |
|  |                                                                                                                                        |                                                                                                                                        | 1300                           | 2076835  |
|  | Connector for connecting an IO-Link master and up to 2 muting sensors to a safety light curtain or a multiple light beam safety device | Connector for connecting an IO-Link master and up to 2 muting sensors to a safety light curtain or a multiple light beam safety device | IO-Link connector              | 2092757  |
|  | IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A                                                        | IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A                                                        | IOLA2US-01101 (SiLink2 Master) | 1061790  |
|  | SIG200-0A0412200                                                                                                                       | SIG200-0A0412200                                                                                                                       | SIG200-0A0412200               | 1089794  |

|                                                                                   | Brief description                                                                                                                                   | Description                                                                                                                                         | Type               | Part no. |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
|  | SIG200-0A0G12200                                                                                                                                    | SIG200-0A0G12200                                                                                                                                    | SIG200-0A0G12200   | 1102605  |
| Distributors                                                                      |                                                                                                                                                     |                                                                                                                                                     |                    |          |
|  | Head A: female connector, M12, 5-pin, A-coded<br>Head B: male connector, M12, 5-pin, A-coded 5-pin                                                  | Head A: female connector, M12, 5-pin, A-coded<br>Head B: male connector, M12, 5-pin, A-coded 5-pin                                                  | DSC-1205T000025KM0 | 6030664  |
|  | Head A: female connector, M12, 8-pin, A-coded<br>Head B: female connector, M12, 8-pin, A-coded 8-pin                                                | Head A: female connector, M12, 8-pin, A-coded<br>Head B: female connector, M12, 8-pin, A-coded 8-pin                                                | DSC-1208T000025KM0 | 6058647  |
| Plug connectors and cables                                                        |                                                                                                                                                     |                                                                                                                                                     |                    |          |
|  | Head A: female connector, M12, 8-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | Head A: female connector, M12, 8-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF2A18-020UA5XLEAX | 2095652  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)