



deTec4 Core Set 14/1950

deTec

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Type | part no. |
|-------------------------|----------|
| deTec4 Core Set 14/1950 | 1062907 |

Included in delivery: C4C-EA19510A10000 (1), C4C-SA19510A10000 (1), BEF-1SHABPKU4 (1), BEF-3SHABPKU4 (1), YF2A15-050UB5XLEAX (1), RLY3-OSSD200 (1)

Other models and accessories → 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 | 1,950 mm |
| No blind zones | Yes |
| Synchronization | Optical synchronization |
| Items supplied | Sender Receiver 4 FlexFix brackets 4 QuickFix brackets 2 connecting cables, 5 m Test rod with diameter corresponding to the resolution of the safety light curtain RLY3-OSSD2 safety relay Safety instruction Mounting instructions 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_D (mean probability of a dangerous failure per hour) | 3.7×10^{-9} |
| T_M (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 | ✓ |
| Automatic calibration of the protective field width | ✓ |

Interfaces

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

| | | |
|--------------------------|---------------------|-----------------------|
| | Length of cable | 150 mm |
| | Cable diameter | 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 | ≤ 10 % | |
| Output signal switching devices (OSSDs) | | |
| | Type of output | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored ¹⁾ |
| | ON state, switching voltage HIGH | 24 V DC ($V_S - 2.25$ V DC ... V_S) |
| | OFF state, switching voltage LOW | ≤ 2 V DC |
| | Current-carrying capacity per OSSD | ≤ 300 mA |

¹⁾ 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) 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 |

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27272704 |
| ECLASS 5.1.4 | 27272704 |
| ECLASS 6.0 | 27272704 |
| ECLASS 6.2 | 27272704 |
| ECLASS 7.0 | 27272704 |
| ECLASS 8.0 | 27272704 |
| ECLASS 8.1 | 27272704 |
| ECLASS 9.0 | 27272704 |

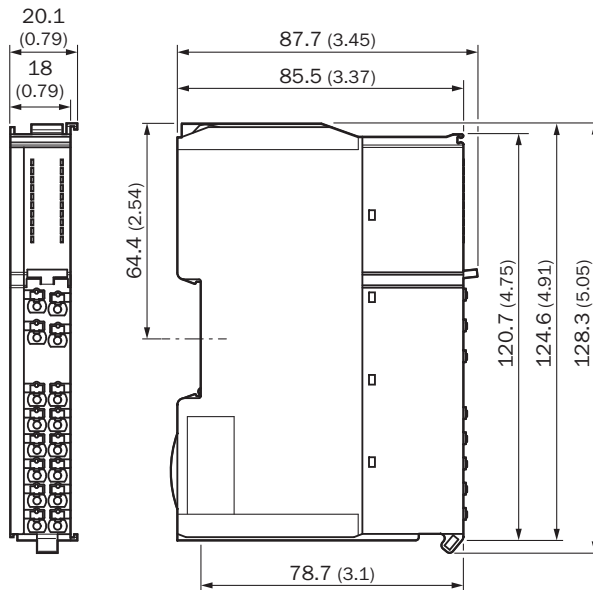
| | |
|-----------------------|----------|
| ECLASS 10.0 | 27272704 |
| ECLASS 11.0 | 27272704 |
| ECLASS 12.0 | 27272704 |
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| ETIM 7.0 | EC002549 |
| ETIM 8.0 | EC002549 |
| UNSPSC 16.0901 | 46171620 |

Dimensional drawing



Dimensions in mm (inch)

Dimensional drawing EMSS1, HAND1, OSSD1, OSSD2, TIME1



Dimensions in mm (inch)

Dimensional drawing



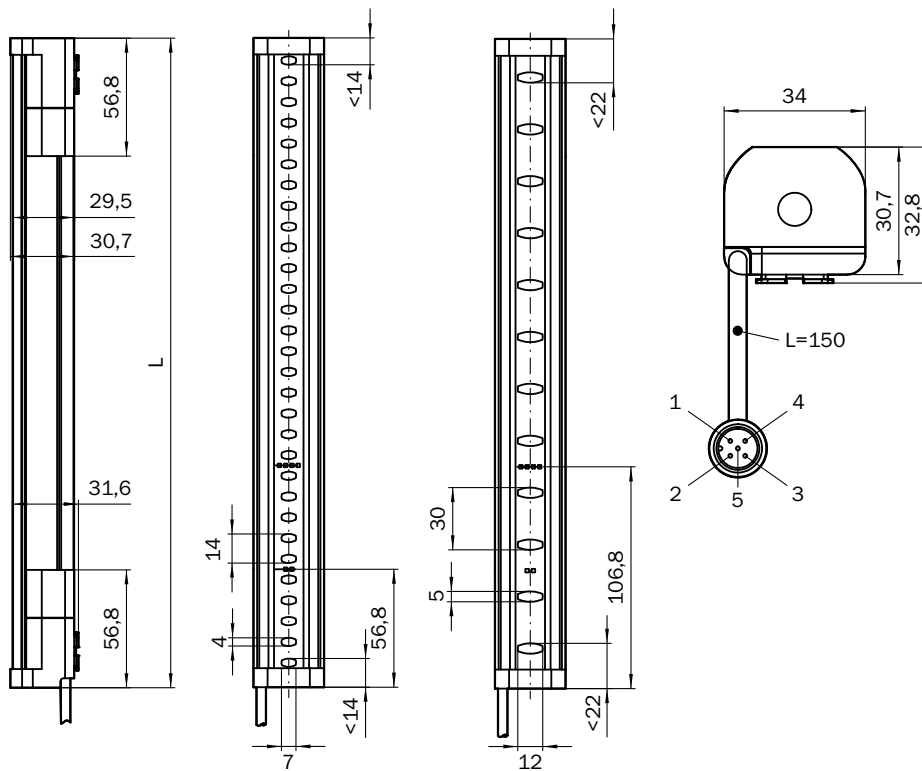
Dimensions in mm (inch)

Dimensional drawing



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) |

Recommended accessories

Other models and accessories → www.sick.com/deTec

| | Brief description | Type | part no. |
|---|---|---------------|----------|
| Safety relays | | | |
|  | <ul style="list-style-type: none"> • Applications: Evaluation unit • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: yes • External device monitoring (EDM): Integrated • Outputs: 3 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe) • Housing width: 18 mm | RLY3-OSSD300 | 1099969 |
|  | <ul style="list-style-type: none"> • Applications: Evaluation unit • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: yes • External device monitoring (EDM): Integrated • Outputs: 2 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe) • Housing width: 18 mm | RLY3-OSSD200 | 1085344 |
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> • Description: QuickFix bracket for 2 devices (e.g. sender and receiver) • Material: Plastic • Details: Plastic • Packing unit: 4 pieces | BEF-3SHABPKU4 | 2098710 |
|  | <ul style="list-style-type: none"> • Description: FlexFix bracket for 2 devices (e.g. sender and receiver), can be aligned $\pm 15^\circ$, including M5 screw • Material: Plastic • Details: Plastic • Packing unit: 4 pieces | BEF-1SHABPKU4 | 2066614 |

| | Brief description | Type | part no. |
|---|--|--------------------|----------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> Description: Unshielded Connection type head A: Female connector, M12, 5-pin, A-coded Connection type head B: Female connector, M12, 5-pin, A-coded Connection type head C: Male connector, M12, 5-pin, A-coded | DSC-1205T000025KMC | 6030664 |
|  | <ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-020UB5M2A15 | 2096009 |
|  | <ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-020UB5XLEAX | 2095617 |
|  | <ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-050UB5M2A15 | 2096010 |
|  | <ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-050UB5XLEAX | 2095618 |
|  | <ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-100UB5M2A15 | 2096011 |
|  | <ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-100UB5XLEAX | 2095619 |

SICK AT A GLANCE

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