



# C40E-1003GK010

C4000 Palletizer

SAFETY LIGHT CURTAINS

**SICK**  
Sensor Intelligence.



Illustration may differ

## Ordering information

C4000 Palletizer Advanced with extension connection on receiver

| Resolution | Scanning range | Protective field height | System part | Type           | Part no. |
|------------|----------------|-------------------------|-------------|----------------|----------|
| 30 mm      | 7 m            | 1,050 mm                | Receiver    | C40E-1003GK010 | 1043180  |

Other models and accessories → [www.sick.com/C4000\\_Palletizer](http://www.sick.com/C4000_Palletizer)



## Detailed technical data

### Features

|                                |   |
|--------------------------------|---|
| <b>Description</b>             | C4000 Palletizer Advanced with extension connection on receiver   |
| <b>Application</b>             | Normal industrial environment   |
| <b>System part</b>             | Receiver  |
| <b>Resolution</b>              | 30 mm   |
| <b>Scanning range</b>          | 7 m   |
| <b>Protective field height</b> | 1,050 mm  |
| <b>Synchronization</b>         | Optical synchronisation   |
| <b>Items supplied</b>          | Receiver<br>8 sliding nuts for side mounting<br>Test rod with diameter corresponding to the resolution of the safety light curtain<br>Adhesive label with information on the daily check<br>Operating instructions on CD-ROM<br>CDS (Configuration & Diagnostic Software) |

### Safety-related parameters

|   |  |
|---|--|
| <b>Type</b>   | Type 4 (IEC 61496-1)                   |
| <b>Safety integrity level</b>   | SIL 3 (IEC 61508)                      |
| <b>Category</b>   | Category 4 (EN ISO 13849)              |
| <b>Performance level</b>  | PL e (EN ISO 13849)                    |
| <b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b> | $15 \cdot 10^{-9}$                     |
| <b>T<sub>M</sub> (mission time)</b>                                       | 20 years (EN ISO 13849)                |
| <b>Safe state in the event of a fault</b>                                 | At least one OSSD is in the OFF state. |

### Functions

|   | Functions | Delivery status |
|---|-----------|-----------------|
| <b>Function range</b>                   | Advanced  |                 |
| <b>Protective operation</b>             | ✓         |                 |
| <b>Restart interlock</b>                | ✓         | Internal        |
| <b>External device monitoring (EDM)</b> | ✓         | Deactivated     |
| <b>Beam coding</b>                      | ✓         | Code 1          |

|   | Functions | Delivery status |
|---|-----------|-----------------|
| Configurable scanning range                         | ✓         | 0.5 m ... 7 m   |
| Reduced resolution                                  | ✓         | 2 beams         |
| Self-teaching dynamic blanking for goods detection  | ✓         | 2x evaluation   |
| Self-teaching dynamic blanking for pallet detection | ✓         |                 |
| Multiple sampling                                   | ✓         |                 |
| Direction monitoring                                | ✓         |                 |
| Object entry monitoring                             | ✓         |                 |
| Emergency stop/bypass at the extension connection   | ✓         |                 |
| Safe SICK device communication via EFI              | ✓         |                 |

Functions in combination with UE402

|                          |   |
|--------------------------|---|
| Bypass                   | ✓ |
| Operating mode switching | ✓ |

## Interfaces

|                                 |   |
|---------------------------------|---|
| <b>System connection</b>        | Hirschmann male connector M26, 12-pin               |
| Direction of cable connection   | Straight  |
| Conductor cross section         | 0.75 mm <sup>2</sup>                                |
| Permitted cable length          | ≤ 50 m <sup>1)</sup>                                |
| <b>Extension connection</b>     | Hirschmann female connector M26, 12 pin             |
| <b>Configuration connection</b> | Female connector M8, 4-pin                          |
| <b>Configuration method</b>     | PC with CDS (Configuration and Diagnostic Software) |
| <b>Display elements</b>         | 7-segment display                                   |

<sup>1)</sup> Depending on load, power supply and wire cross-section. The technical specifications must be observed.

## 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) <sup>1)</sup>  |
| <b>Residual ripple</b>                         | ≤ 10 % <sup>2)</sup>   |
| <b>Output signal switching devices (OSSDs)</b> |  |
| Type of output                                 | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored <sup>3)</sup> |
| ON state, switching voltage HIGH               | 24 V DC (V <sub>S</sub> – 2.25 V DC ... V <sub>S</sub> )                             |
| OFF state, switching voltage LOW               | ≤ 2 V DC   |
| Current-carrying capacity per OSSD             | ≤ 500 mA   |
| <b>Application diagnostic output (ADO)</b>     |  |
| Output voltage HIGH (active)                   | 24 V DC (15 V DC ... 28.8 V DC)  |
| Output voltage LOW (deactivated)               | High resistance  |

<sup>1)</sup> The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

<sup>2)</sup> Within the limits of V<sub>S</sub>.

<sup>3)</sup> Applies to the voltage range between –30 V and +30 V.

|                              |          |
|------------------------------|----------|
| Output current HIGH (active) | ≤ 100 mA |
|------------------------------|----------|

<sup>1)</sup> The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

<sup>2)</sup> Within the limits of  $V_S$ .

<sup>3)</sup> Applies to the voltage range between -30 V and +30 V.

## Mechanical data

|                              |                           |
|------------------------------|---------------------------|
| <b>Dimensions</b>            | See dimensional drawing   |
| <b>Housing cross-section</b> | 48 mm x 40 mm             |
| <b>Housing material</b>      | Aluminum extruded profile |
| <b>Weight</b>                | 2,280 g                   |

## Ambient data

|                                      |                                     |
|--------------------------------------|-------------------------------------|
| <b>Enclosure rating</b>              | IP65 (EN 60529)                     |
| <b>Ambient operating temperature</b> | 0 °C ... +55 °C                     |
| <b>Storage temperature</b>           | -25 °C ... +70 °C                   |
| <b>Air humidity</b>                  | 15 % ... 95 %, Non-condensing       |
| <b>Vibration resistance</b>          | 5 g, 10 Hz ... 55 Hz (EN 60068-2-6) |
| <b>Shock resistance</b>              | 10 g, 16 ms (EN 60068-2-27)         |

## Other information

|                    |        |
|--------------------|--------|
| <b>Wave length</b> | 850 nm |
|--------------------|--------|

## Classifications

|                       |          |
|-----------------------|----------|
| <b>eCl@ss 5.0</b>     | 27272704 |
| <b>eCl@ss 5.1.4</b>   | 27272704 |
| <b>eCl@ss 6.0</b>     | 27272704 |
| <b>eCl@ss 6.2</b>     | 27272704 |
| <b>eCl@ss 7.0</b>     | 27272704 |
| <b>eCl@ss 8.0</b>     | 27272704 |
| <b>eCl@ss 8.1</b>     | 27272704 |
| <b>eCl@ss 9.0</b>     | 27272704 |
| <b>eCl@ss 10.0</b>    | 27272704 |
| <b>eCl@ss 11.0</b>    | 27272704 |
| <b>eCl@ss 12.0</b>    | 27272704 |
| <b>ETIM 5.0</b>       | EC002549 |
| <b>ETIM 6.0</b>       | EC002549 |
| <b>ETIM 7.0</b>       | EC002549 |
| <b>ETIM 8.0</b>       | EC002549 |
| <b>UNSPSC 16.0901</b> | 46171620 |

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

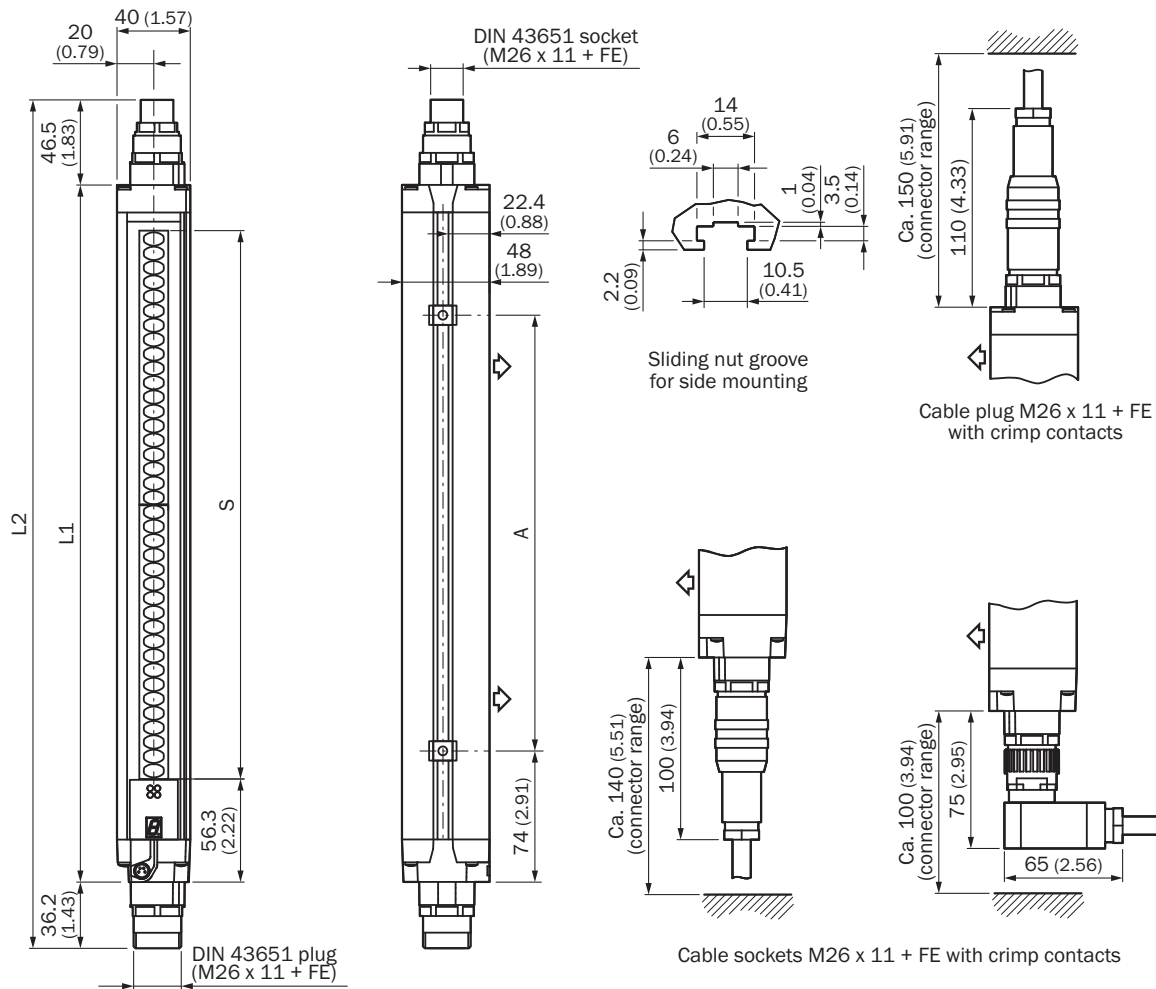






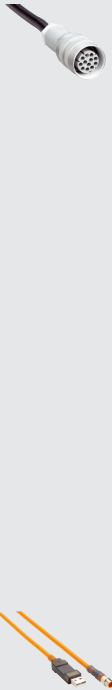










Illustration sender (receiver mirror image)

| Protective field height S | L1    | L2    | A     |
|---------------------------|-------|-------|-------|
| 300                       | 381   | 464   | 224   |
| 450                       | 532   | 614   | 374   |
| 600                       | 682   | 765   | 524   |
| 750                       | 833   | 915   | 674   |
| 900                       | 984   | 1.066 | 824   |
| 1.050                     | 1.134 | 1.216 | 974   |
| 1.200                     | 1.283 | 1.366 | 1.124 |
| 1.350                     | 1.435 | 1.517 | 1.274 |
| 1.500                     | 1.586 | 1.669 | 1.424 |
| 1.650                     | 1.736 | 1.818 | 1.574 |
| 1.800                     | 1.887 | 1.969 | 1.724 |

## Recommended accessories

Other models and accessories → [www.sick.com/C4000\\_Palletizer](http://www.sick.com/C4000_Palletizer)

|   | Brief description  | Type                      | Part no. |
|---|--|---------------------------|----------|
| Alignment aids  |  |                           |          |
|    | Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!, 19 mm x 67.3 mm x 66.9 mm                          | AR60                      | 1015741  |
|    | Adapter AR60 for housing cross-section 48 mm x 40 mm   | AR60 adapter, 48x40       | 4032461  |
|    | Adapter AR60 for housing cross-section 48 mm x 40 mm in PU3H device column   | AR60 adapter, 48x40, PU3H | 4056731  |
| Optics cloths   |  |                           |          |
|    | Cloth for cleaning optical surfaces  | Lens cloth                | 4003353  |
| Test and monitoring tools   |  |                           |          |
|    | 30 mm diameter, 250 mm length  | Test rod 30 mm            | 2022602  |
| Mounting brackets and plates  |  |                           |          |
|   | 4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers   | BEF-3WNGBAST4             | 7021352  |
| Plug connectors and cables  |  |                           |          |
|  | Head A: female connector, M26, 12-pin, straight<br>Head B: Flying leads<br>Cable: PVC, unshielded, 5 m<br>Without EFI: Pin 9 and 10 not connected  | DOL-0610G05M075KM1        | 2046888  |
|   | Head A: female connector, M26, 12-pin, straight<br>Head B: Flying leads<br>Cable: PVC, unshielded, 10 m<br>Without EFI: Pin 9 and 10 not connected | DOL-0610G10M075KM1        | 2046889  |
|   | Head A: female connector, M26, 12-pin, straight<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m                      | DOL-0612G05M075KM0        | 2022545  |
|   | Head A: female connector, M26, 12-pin, straight<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 10 m                     | DOL-0612G10M075KM0        | 2022547  |
|   | Head A: female connector, M26, 12-pin, straight<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 15 m                     | DOL-0612G15M075KM0        | 2022548  |
|   | Head A: female connector, M26, 12-pin, straight<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 20 m                     | DOL-0612G20M075KM0        | 2022549  |
|   | Head A: male connector, M8, 4-pin, straight<br>Head B: male connector, USB-A, straight<br>Cable: PVC, unshielded, 2 m                              | DSL-8U04G02M025KM1        | 6034574  |
|   | Head A: male connector, M8, 4-pin, straight<br>Head B: male connector, USB-A, straight<br>Cable: PVC, unshielded, 10 m                             | DSL-8U04G10M025KM1        | 6034575  |

|   | Brief description  | Type               | Part no. |
|---|--|--------------------|----------|
|    | Head A: female connector, M26, 12-pin, straight<br>Cable: unshielded<br>12 crimping contacts enclosed  | DOS-0612G000GA3KM0 | 6020757  |
|    | Head A: female connector, M26, 12-pin, angled<br>Cable: unshielded<br>12 crimping contacts enclosed  | DOS-0612W000GA3KM0 | 6020758  |
|    | Head A: male connector, M26, 12-pin, straight<br>Cable: unshielded<br>12 crimping contacts enclosed  | STE-0612G000GA3KM0 | 6021191  |
|    | Head A: male connector, M26, 12-pin, angled<br>Cable: unshielded<br>12 crimping contacts enclosed  | STE-0612W000GA3KM0 | 6021192  |
| Terminal and alignment brackets   |  |                    |          |
|    | 4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast  | BEF-1SHABAZN4      | 2019506  |
|    | 4 pieces, Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount  | BEF-2SMMEAAL4      | 2044847  |
|    | 4 pieces, Mounting kit 2, rotatable, swivel mount, Polyamide PA6   | BEF-2SMMEA KU4     | 2019659  |
| Switching amplifiers  |  |                    |          |
|  | <ul style="list-style-type: none"> <li><b>Applications:</b> Functionality upgrade</li> <li><b>Compatible sensor types:</b> C4000 safety light curtains</li> <li><b>Description:</b> Upgrades the C4000 Standard, Advanced, Palletizer, Entry/Exit, and Fusion to include the functions defined in the technical specifications, e.g., bypass, operating mode switching, and PSDI in the case of C4000 Standard, Advanced.</li> </ul> | UE402              | 1023577  |

## 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)