



# C46S-1601CT400

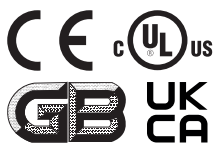
C4000 Advanced

**SAFETY LIGHT CURTAINS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Resolution | Scanning range | Protective field height | System part | Type           | Part no. |
|------------|----------------|-------------------------|-------------|----------------|----------|
| 14 mm      | 10 m           | 1,650 mm                | Sender      | C46S-1601CT400 | 1040182  |

The C4000 Guest is only allowed to be connected to a C4000 Host safety light curtain with extension connection M12, 8-pin.

Other models and accessories → [www.sick.com/C4000\\_Advanced](http://www.sick.com/C4000_Advanced)

### Detailed technical data

#### Features

|                                |                               |
|--------------------------------|-------------------------------|
| <b>Application</b>             | Normal industrial environment |
| <b>System part</b>             | Sender                        |
| <b>Resolution</b>              | 14 mm                         |
| <b>Scanning range</b>          | 10 m                          |
| <b>Protective field height</b> | 1,650 mm                      |
| <b>Synchronization</b>         | Optical synchronisation       |

#### 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> | 43 * 10 <sup>-9</sup>     |
| Cascade with one guest  |                           |
| <b>T<sub>M</sub> (mission time)</b>                                       | 20 years (EN ISO 13849)   |

#### Functions

|   | Functions       | Delivery status |
|---|-----------------|-----------------|
| <b>Protective operation</b>             | ✓               |                 |
| <b>Restart interlock</b>                | ✓ <sup>1)</sup> |                 |
| <b>External device monitoring (EDM)</b> | 1)              |                 |
| <b>Beam coding</b>                      | ✓ <sup>1)</sup> | Uncoded         |
| <b>Configurable scanning range</b>      | ✓ <sup>1)</sup> | 0 m ... 2.5 m   |

<sup>1)</sup> In conjunction with host device.

|  | Functions | Delivery status |
|--|-----------|-----------------|
| Fixed blanking                         | ✓         | Deactivated     |
| Floating blanking                      | ✓         | Deactivated     |
| Safe SICK device communication via EFI | ✓         |                 |

<sup>1)</sup> In conjunction with host device.

#### Functions in combination with UE402

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

#### Interfaces

|                               |  |
|-------------------------------|--|
| <b>System connection</b>      | Fixed connection cable 320 mm with male connector M12, 8-pin |
| Direction of cable connection | Straight   |
| Conductor cross section       | 0.25 mm <sup>2</sup>   |
| Permitted cable length        | 3 m <sup>1)</sup>  |
| <b>Display elements</b>       | 7-segment display  |

<sup>1)</sup> Between host and guest.

#### 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>                      |

<sup>1)</sup> Voltage supply via host device.

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

#### 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>                | 3,390 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>ECLASS 5.0</b>   | 27272704 |
| <b>ECLASS 5.1.4</b> | 27272704 |

|                       |          |
|-----------------------|----------|
| <b>ECLASS 6.0</b>     | 27272704 |
| <b>ECLASS 6.2</b>     | 27272704 |
| <b>ECLASS 7.0</b>     | 27272704 |
| <b>ECLASS 8.0</b>     | 27272704 |
| <b>ECLASS 8.1</b>     | 27272704 |
| <b>ECLASS 9.0</b>     | 27272704 |
| <b>ECLASS 10.0</b>    | 27272704 |
| <b>ECLASS 11.0</b>    | 27272704 |
| <b>ECLASS 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))

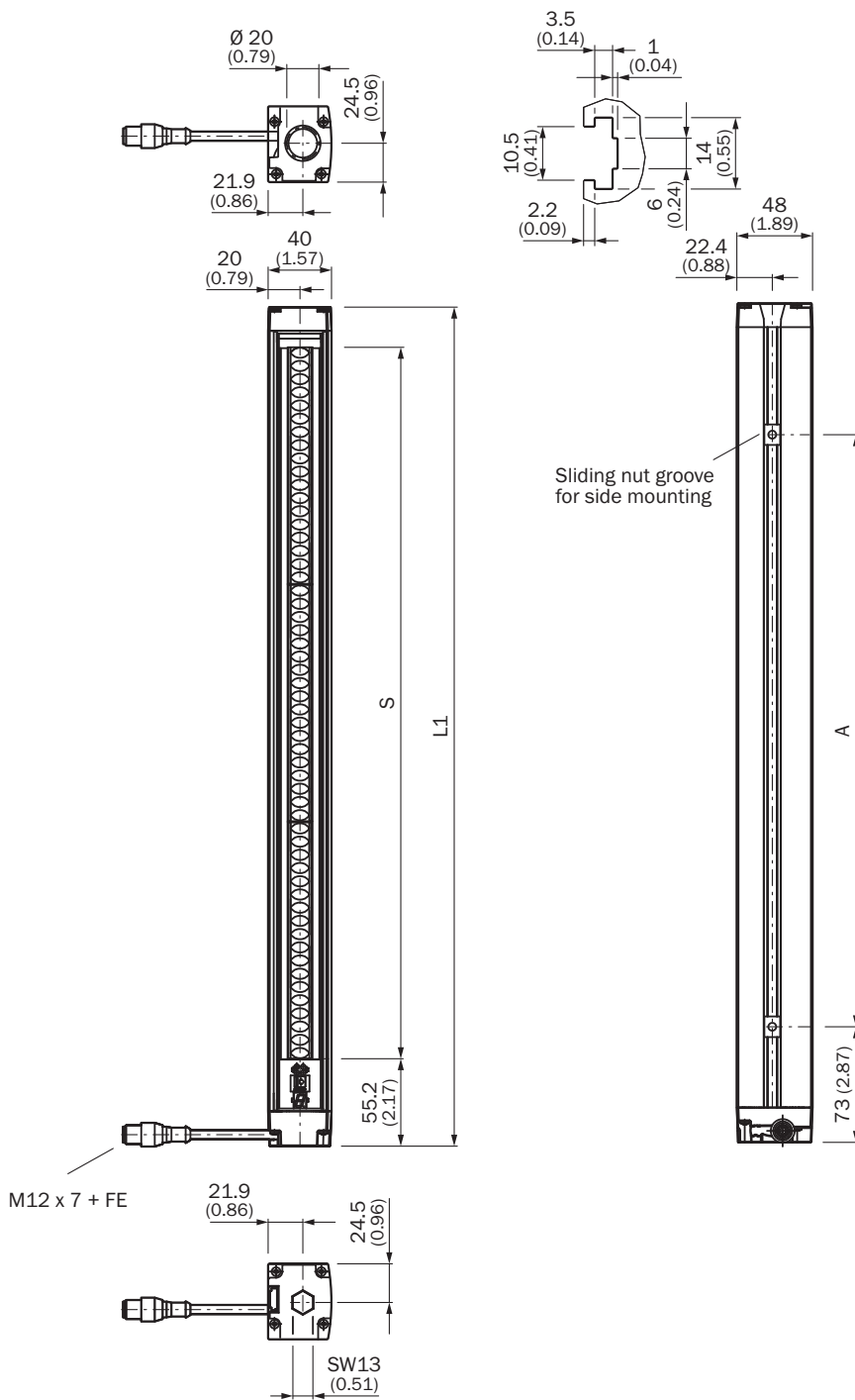





Illustration sender (receiver mirror image)





| Protective field height S | L   | A   |
|---------------------------|-----|-----|
| 150                       | 220 | 76  |
| 300                       | 380 | 224 |
| 450                       | 530 | 374 |
| 600                       | 680 | 524 |
| 750                       | 830 | 674 |

| Protective field height S | L     | A     |
|---------------------------|-------|-------|
| 900                       | 981   | 825   |
| 1.050                     | 1.131 | 975   |
| 1.200                     | 1.281 | 1.125 |
| 1.350                     | 1.432 | 1.275 |
| 1.500                     | 1.583 | 1.427 |
| 1.650                     | 1.733 | 1.504 |
| 1.800                     | 1.884 | 1.728 |

### Recommended accessories

Other models and accessories → [www.sick.com/C4000\\_Advanced](http://www.sick.com/C4000_Advanced)

|   | Brief description   | Type                      | Part no. |
|---|---|---------------------------|----------|
| <b>Alignment aids</b>   |   |                           |          |
|    | 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  |
| <b>Optics cloths</b>  |   |                           |          |
|  | Cloth for cleaning optical surfaces   | Lens cloth                | 4003353  |
| <b>Mounting brackets and plates</b>   |   |                           |          |
|  | 4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers                          | BEF-3WNGBAST4             | 7021352  |
| <b>Terminal and alignment brackets</b>  |   |                           |          |
|  | 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, Stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301                              | BEF-2SMMEAES4             | 2023708  |
|  | 4 pieces, Mounting kit 2, rotatable, swivel mount, Polyamide PA6  | BEF-2SMMEAUK4             | 2019659  |

|   | Brief description   | Type               | Part no. |
|---|---|--------------------|----------|
| Others  |   |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M8, 4-pin, straight</li> <li>• <b>Connection type head B:</b> Male connector, USB-A, straight</li> <li>• <b>Cable:</b> 2 m, 4-wire, PVC</li> <li>• <b>Description:</b> Unshielded, Configuration cable with integrated RS-232 transducer on USB for connecting a sensor configuration connection (M8, 4-pin) to the USB interface of a PC</li> </ul>  | DSL-8U04G02M025KM1 | 6034574  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M8, 4-pin, straight</li> <li>• <b>Connection type head B:</b> Male connector, USB-A, straight</li> <li>• <b>Cable:</b> 10 m, 4-wire, PVC</li> <li>• <b>Description:</b> Unshielded, Configuration cable with integrated RS-232 transducer on USB for connecting a sensor configuration connection (M8, 4-pin) to the USB interface of a PC</li> </ul> | DSL-8U04G10M025KM1 | 6034575  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight</li> <li>• <b>Connection type head B:</b> Male connector, M12, 8-pin, straight</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 1 m, 7-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> </ul>  | DSL-127SG01ME25KM0 | 2076628  |
| 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)