



C40E-S128

C4000 Standard ATEX II 3G/3D

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Ordering information

| Resolution | Scanning range | Protective field height | System part | Type | Part no. |
|------------|----------------|-------------------------|-------------|-----------|----------|
| 30 mm | 21 m | 1,200 mm | Receiver | C40E-S128 | 1053696 |

Other models and accessories → www.sick.com/C4000_Standard_ATEX_II_3G_3D

Illustration may differ



Detailed technical data

Features

| | |
|--------------------------------|--|
| Application | Explosive areas |
| Ex-approvals | ATEX for gas: II 3G Ex nA op is IIC T4 Gc X ATEX for dust: II 3D Ex tc IIIC T135°C Dc |
| System part | Receiver |
| Resolution | 30 mm |
| Scanning range | 21 m |
| Protective field height | 1,200 mm |
| Synchronization | Optical synchronisation |

Safety-related parameters

| | |
|---|--|
| Type | Type 4 (IEC 61496-1) |
| Safety integrity level | SIL3 (IEC 61508) SILCL3 (EN 62061) |
| Category | Category 4 (EN ISO 13849) |
| Performance level | PL e (EN ISO 13849) |
| PFH_D (mean probability of a dangerous failure per hour) | 15×10^{-9} (EN ISO 13849) |
| T_M (mission time) | 20 years (EN ISO 13849) |
| Safe state in the event of a fault | At least one OSSD is in the OFF state. |

Functions

| | |
|---|---|
| Protective operation | ✓ |
| Restart interlock | ✓ |
| External device monitoring (EDM) | ✓ |
| Beam coding | ✓ |
| Safe SICK device communication via EFI | ✓ |

Interfaces

| | | |
|-------------------------------------|--|---|
| System connection | Connection type | Hirschmann male connector M26, 12-pin |
| Configuration connection | Connection type | Female connector M8, 4-pin |
| | Configuration method | PC with CDS (Configuration and Diagnostic Software) |
| Display elements | | 7-segment display |
| Fieldbus, industrial network | Integration via EFI gateways | CANopen ¹⁾ Ethernet PROFIBUS DP PROFIBUS PROFI-safe PROFINET PROFI-safe |
| | Integration via Flexi Soft safety controller | CANopen ²⁾ DeviceNet™ EtherCAT® EtherNet/IP™ Modbus TCP PROFIBUS DP PROFINET |

¹⁾ For a suitable EFI-gateway see modules and gateways in the accessory section of connection systems.

²⁾ For additional information on Flexi Soft -> www.sick.com/Flexi_Soft.

Electrical data

| | |
|--|---|
| Protection class | III (IEC 61140) |
| Supply voltage V_S | 24 V DC (19.2 V ... 28.8 V) ¹⁾ |
| Residual ripple | ≤ 10 % ²⁾ |

¹⁾ 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.

²⁾ Within the limits of V_S .

Mechanical data

| | |
|------------------------------|---------------------------|
| Dimensions | See dimensional drawing |
| Housing cross-section | 48 mm x 40 mm |
| Housing material | Aluminum extruded profile |

Ambient data

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

Classifications

| | |
|---------------------|----------|
| ECl@ss 5.0 | 27272704 |
| ECl@ss 5.1.4 | 27272704 |
| ECl@ss 6.0 | 27272704 |
| ECl@ss 6.2 | 27272704 |

| | |
|-----------------------|----------|
| ECl@ss 7.0 | 27272704 |
| ECl@ss 8.0 | 27272704 |
| ECl@ss 8.1 | 27272704 |
| ECl@ss 9.0 | 27272704 |
| ECl@ss 10.0 | 27272704 |
| ECl@ss 11.0 | 27272704 |
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| ETIM 7.0 | EC002549 |
| UNSPSC 16.0901 | 46171620 |

Dimensional drawing (Dimensions in mm (inch))

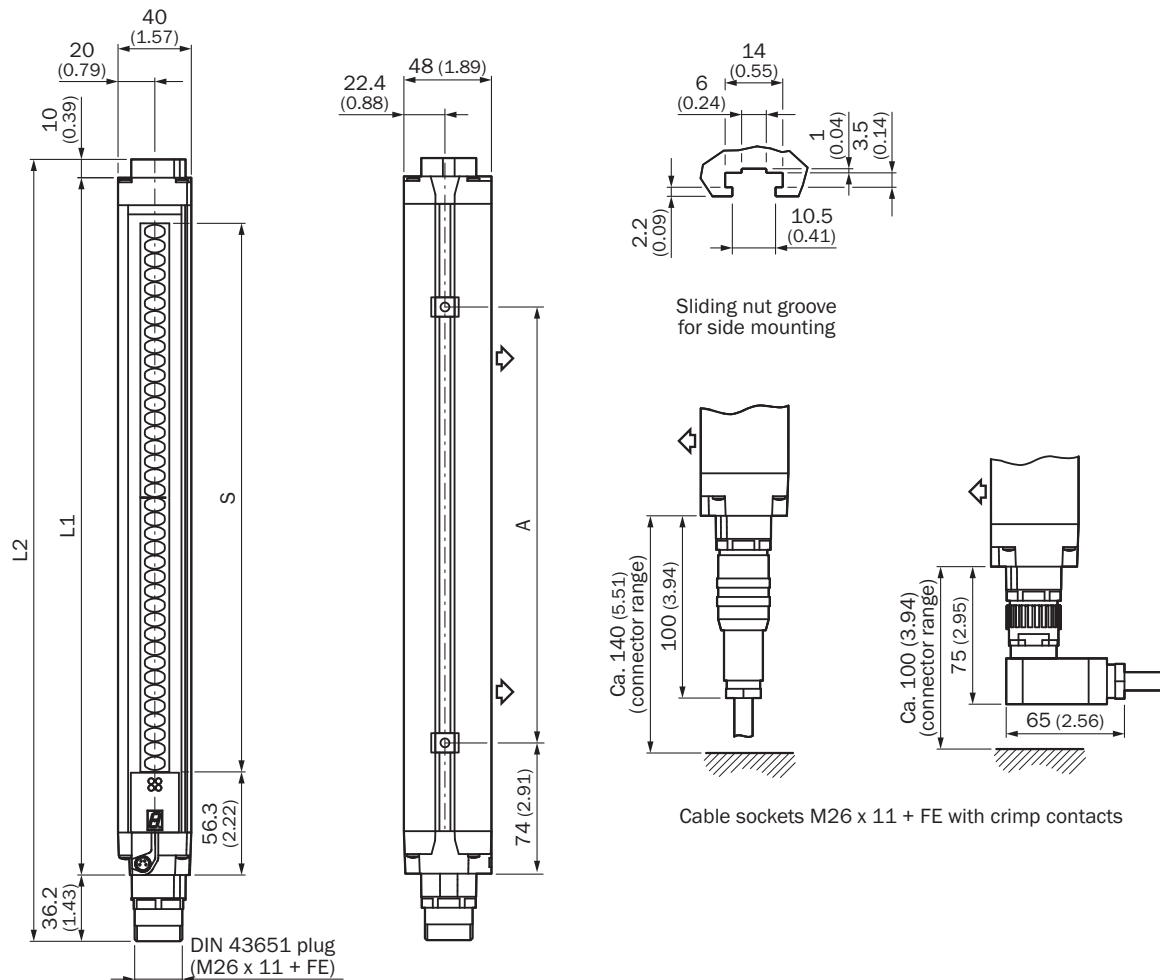




Illustration sender (receiver mirror image)

| Protective field height S | L1 | L2 | A |
|---------------------------|-----|-----|-----|
| 300 | 381 | 427 | 224 |
| 450 | 532 | 578 | 374 |
| 600 | 682 | 728 | 524 |



| Protective field height S | L1 | L2 | A |
|---------------------------|-------|-------|-------|
| 750 | 833 | 879 | 674 |
| 900 | 984 | 1.030 | 824 |
| 1.050 | 1.134 | 1.180 | 974 |
| 1.200 | 1.283 | 1.329 | 1.124 |
| 1.350 | 1.435 | 1.481 | 1.274 |
| 1.500 | 1.586 | 1.632 | 1.424 |
| 1.650 | 1.736 | 1.782 | 1.574 |
| 1.800 | 1.887 | 1.933 | 1.724 |





Recommended accessories

Other models and accessories → www.sick.com/C4000_Standard_ATEX_II_3G_3D

| | Brief description | Description | Type | Part no. |
|---|---|---|-----------------------------------|----------|
| Mounting brackets and plates | | | | |
|  | 4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers | 4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers | BEF-3WNGBAST4 | 7021352 |
|  | 4 pieces, Mounting kit 11, exchangeable retainer, suitable for replacement of FGS | 4 pieces, Mounting kit 11, exchangeable retainer, suitable for replacement of FGS | BEF-3WNGBCST4 | 2021646 |
| Other mounting accessories | | | | |
|  | 4 pieces, Sliding nut set, M5, 4x, Included in delivery | 4 pieces, Sliding nut set, M5, 4x, Included in delivery | Sliding nuts | 2017550 |
|  | 6 pieces, suitable for PNS75 and PNS125 | 6 pieces, suitable for PNS75 and PNS125 | Sliding nuts for deflector mirror | 2030600 |
| Terminal and alignment brackets | | | | |
|  | 2 pieces, Mounting kit, rotatable, telescopic, swivel mount, Polyamide PA6 | 2 pieces, Mounting kit, rotatable, telescopic, swivel mount, Polyamide PA6 | BEF-0SMMEA002 | 2046172 |
|  | 4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast | 4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast | BEF-1SHABAZN4 | 2019506 |
|  | 4 pieces, Mounting kit 3, rotatable, with shock-absorber | 4 pieces, Mounting kit 3, rotatable, with shock-absorber | BEF-1SHADAAL4 | 2017752 |
|  | 4 pieces, Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount | 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 | 4 pieces, Stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301 | BEF-2SMMEAES4 | 2023708 |

| | Brief description | Description | Type | Part no. |
|---|---|---|---------------------------|----------|
|  | 4 pieces, Mounting kit 2, rotatable, swivel mount, Polyamide PA6 | 4 pieces, Mounting kit 2, rotatable, swivel mount, Polyamide PA6 | BEF-2SMMEAKU4 | 2019659 |
|  | 4 pieces, Reinforced stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301 | 4 pieces, Reinforced stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301 | BEF-2SMMVAES4 | 2026850 |
| Alignment aids | | | | |
|  | Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam! | Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam! | AR60 | 1015741 |
|  | Adapter AR60 for housing cross-section 48 mm x 40 mm | 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 | 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 | Cloth for cleaning optical surfaces | Lens cloth | 4003353 |
| EFI gateways | | | | |
|  | PROFIBUS DP | PROFIBUS DP | UE1140-22I0000 | 1029099 |
|  | Ethernet TCP/IP | Ethernet TCP/IP | UE1840-22H0000 | 1029100 |
|  | CANopen | CANopen | UE1940-22I0000 | 1040397 |
|  | PROFIBUS PROFI-safe | PROFIBUS PROFI-safe | UE4140-22I0000 | 1029098 |
|  | PROFINET PROFI-safe | PROFINET PROFI-safe | UE4740-22H0000 | 1046978 |
| Cleaning agent | | | | |
|  | Plastic cleaner and care product, anti-static, 0.5 liter | Plastic cleaner and care product, anti-static, 0.5 liter | Plastic cleaner | 5600006 |
| Switching amplifiers | | | | |
|  | UE402 | UE402 | UE402 | 1023577 |
| Plug connectors and cables | | | | |
|  | Head A: Flying leads Head B: Flying leads Cable: PVC, unshielded max. 100 m, fitting for EFI connections | Head A: Flying leads Head B: Flying leads Cable: PVC, unshielded max. 100 m, fitting for EFI connections | Connecting cable | 6021437 |

| | Brief description | Description | Type | Part no. |
|---|--|--|--------------------|----------|
|  | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 5 m Without EFI: Pin 9 and 10 not connected | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 5 m Without EFI: Pin 9 and 10 not connected | DOL-0610G05M075KM1 | 2046888 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 10 m Without EFI: Pin 9 and 10 not connected | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 10 m Without EFI: Pin 9 and 10 not connected | DOL-0610G10M075KM1 | 2046889 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 20 m Without EFI: Pin 9 and 10 not connected | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 20 m Without EFI: Pin 9 and 10 not connected | DOL-0610G20M075KM1 | 2046890 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | DOL-0612G05M075KM0 | 2022545 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m | DOL-0612G10M075KM0 | 2022547 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m | DOL-0612G15M075KM0 | 2022548 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m | DOL-0612G20M075KM0 | 2022549 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2.5 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2.5 m | DOL-0612G2M5075KM0 | 2022544 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 30 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 30 m | DOL-0612G30M075KM0 | 2022550 |
| | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 50 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 50 m | DOL-0612G50M075KM0 | 2033548 |
| Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 7.5 m | Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 7.5 m | DOL-0612G7M5075KM0 | 2022546 | |
|  | Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 2 m | Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 2 m | DSL-8U04G02M025KM1 | 6034574 |

| | Brief description | Description | Type | Part no. |
|---|--|--|--------------------|----------|
| | Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 10 m | Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 10 m | DSL-8U04G10M025KM1 | 6034575 |
|  | Head A: female connector, M26, 12-pin, straight Cable: unshielded 12 crimping contacts enclosed | Head A: female connector, M26, 12-pin, straight Cable: unshielded 12 crimping contacts enclosed | DOS-0612G000GA3KM0 | 6020757 |
|  | Head A: female connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed | Head A: female connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed | DOS-0612W000GA3KM0 | 6020758 |
|  | Head A: male connector, M26, 12-pin, straight Cable: unshielded 12 crimping contacts enclosed | Head A: male connector, M26, 12-pin, straight Cable: unshielded 12 crimping contacts enclosed | STE-0612G000GA3KM0 | 6021191 |
|  | Head A: male connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed | Head A: male connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed | STE-0612W000GA3KM0 | 6021192 |

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.”

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