



# C40E-S143

C4000 Standard ATEX II 3G/3D

**SAFETY LIGHT CURTAINS**

**SICK**  
Sensor Intelligence.



## Ordering information

| Type      | part no. |
|-----------|----------|
| C40E-S143 | 1070973  |

Other models and accessories → [www.sick.com/C4000\\_Standard\\_ATEX\\_II\\_3G\\_3D](http://www.sick.com/C4000_Standard_ATEX_II_3G_3D)

Illustration may differ



## Detailed technical data

## Features

|                                |                                                                                          |
|--------------------------------|------------------------------------------------------------------------------------------|
| <b>Application</b>             | Explosive areas                                                                          |
| <b>Ex-approvals</b>            | ATEX for gas: II 3G Ex nA op is IIC T4 Gc X<br>ATEX for dust: II 3D Ex tc IIIC T135°C Dc |
| <b>System part</b>             | Receiver                                                                                 |
| <b>Resolution</b>              | 14 mm                                                                                    |
| <b>Scanning range</b>          | 10 m                                                                                     |
| <b>Protective field height</b> | 1,200 mm                                                                                 |
| <b>Synchronization</b>         | Optical synchronization                                                                  |

## 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 x 10 <sup>-9</sup> (EN ISO 13849)   |
| <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

|                                         |   |
|-----------------------------------------|---|
| <b>Protective operation</b>             | ✓ |
| <b>Restart interlock</b>                | ✓ |
| <b>External device monitoring (EDM)</b> | ✓ |
| <b>Beam coding</b>                      | ✓ |

## Safe SICK device communication via EFI

✓

## Interfaces

## Configuration connection

Female connector M8, 4-pin

## Configuration method

PC with CDS (Configuration and Diagnostic Software)

## Display elements

7-segment display

## Electronics

## Protection class

III (IEC 61140)

Supply voltage  $V_S$ 24 V DC (19.2 V ... 28.8 V) <sup>1)</sup>

## Residual ripple

≤ 10 % <sup>2)</sup>

<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  $V_S$ .

## Mechanics

## 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)

## Other information

## Wave length

850 nm

## Certificates

## EU declaration of conformity

✓

## UK declaration of conformity

✓

## ACMA declaration of conformity

✓

## Moroccan declaration of conformity

✓

## China RoHS

✓

## ULus approval

✓

## cUL approval

✓

## EC-Type-Examination approval

✓

## China GB certificate

✓

## Information according to Art. 3 of Data Act (Regulation EU 2023/2854)

✓

## Classifications

## ECLASS 5.0

27272704

## ECLASS 5.1.4

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

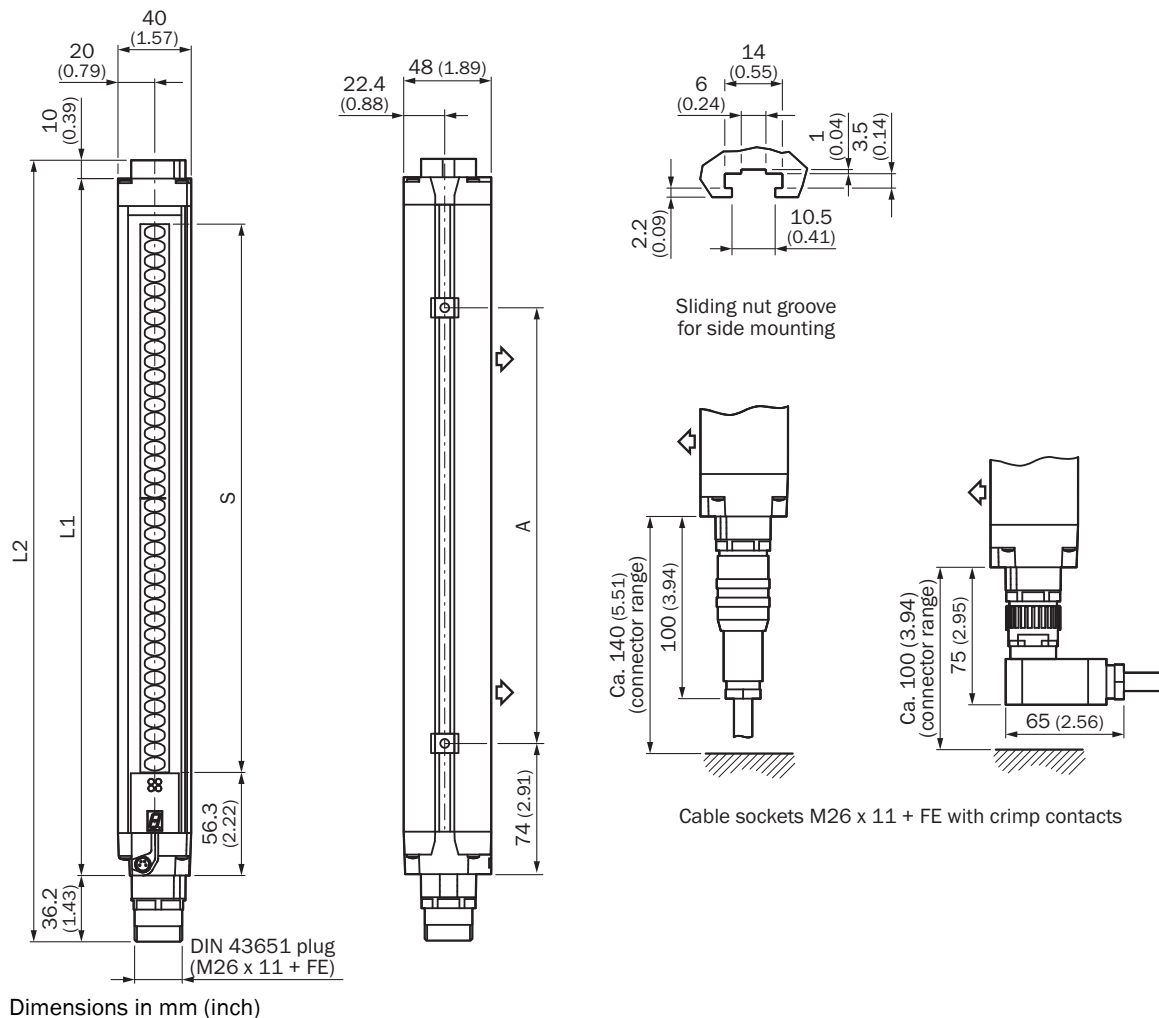


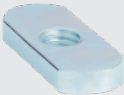
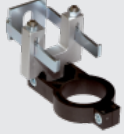
illustration sender (receiver mirror image)

|       | L1    | L2    | A     |
|-------|-------|-------|-------|
| 300   | 381   | 427   | 224   |
| 450   | 532   | 578   | 374   |
| 600   | 682   | 728   | 524   |
| 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](http://www.sick.com/C4000_Standard_ATEX_II_3G_3D)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                    | Type       | part no. |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|
| device protection and care                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |          |
|  | <ul style="list-style-type: none"> <li><b>Product family:</b> Cleaning agents</li> <li><b>Description:</b> Cloth for cleaning optical surfaces</li> </ul>                                                                                                                                                                                                                                                                            | Lens cloth | 4003353  |
| system plugs and extension modules                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |          |
|  | <ul style="list-style-type: none"> <li><b>Applications:</b> Functionality upgrade</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> <li><b>Compatible sensor types:</b> C4000 safety light curtains</li> </ul> | UE402      | 1023577  |

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                   | Type                              | part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------|
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                                     |                                   |          |
|    | <ul style="list-style-type: none"> <li><b>Description:</b> Suitable for PNS75 and PNS125</li> <li><b>Packing unit:</b> 6 pieces</li> </ul>                                                                                                                                                                          | Sliding nuts for deflector mirror | 2030600  |
|    | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit 11, exchangeable retainer, suitable for replacement of FGS</li> <li><b>Packing unit:</b> 4 pieces</li> <li><b>Suitable for:</b> Large housing profile</li> </ul>                                                                            | BEF-3WNGBCST4                     | 2021646  |
|    | <ul style="list-style-type: none"> <li><b>Description:</b> Stainless steel bracket, rotatable</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4350, stainless steel 1.4301</li> <li><b>Packing unit:</b> 4 pieces</li> </ul>                                                   | BEF-2SMMEAES4                     | 2023708  |
|    | <ul style="list-style-type: none"> <li><b>Description:</b> Reinforced stainless steel bracket, rotatable</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4350, stainless steel 1.4301</li> <li><b>Packing unit:</b> 4 pieces</li> </ul>                                        | BEF-2SMMVAES4                     | 2026850  |
|   | <ul style="list-style-type: none"> <li><b>Description:</b> Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount</li> <li><b>Packing unit:</b> 4 pieces</li> <li><b>Suitable for:</b> All protective field heights in large housing</li> </ul>                                    | BEF-2SMMEAAL4                     | 2044847  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit 6, side bracket, rotatable</li> <li><b>Material:</b> Zinc diecast</li> <li><b>Details:</b> Zinc diecast</li> <li><b>Packing unit:</b> 4 pieces</li> <li><b>Suitable for:</b> All protective field heights</li> </ul>                        | BEF-1SHABAZN4                     | 2019506  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit 2, rotatable, swivel mount</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Polyamide PA6</li> <li><b>Packing unit:</b> 4 pieces</li> <li><b>Suitable for:</b> All protective field heights</li> </ul>                            | BEF-2SMMEAKU4                     | 2019659  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers</li> <li><b>Packing unit:</b> 4 pieces</li> <li><b>Suitable for:</b> All protective field heights</li> </ul>                                                      | BEF-3WNGBAST4                     | 7021352  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit 3, rotatable, with shock-absorber</li> <li><b>Packing unit:</b> 4 pieces</li> </ul>                                                                                                                                                         | BEF-1SHADAAL4                     | 2017752  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit, rotatable, telescopic, swivel mount</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Polyamide PA6</li> <li><b>Packing unit:</b> 2 pieces</li> <li><b>Suitable for:</b> All protective field heights in large housing</li> </ul> | BEF-0SMMEA002                     | 2046172  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Sliding nut set, M5, 4x</li> <li><b>Packing unit:</b> 4 pieces</li> <li><b>Items supplied:</b> Included in delivery</li> </ul>                                                                                                                           | Sliding nuts                      | 2017550  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Reinforced stainless steel bracket, rotatable</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4350, stainless steel 1.4301</li> <li><b>Packing unit:</b> 2 pieces</li> </ul>                                        | BEF-2SMMVAES2                     | 2048373  |

|                                                                                   | Brief description                                                                                                                                                                                                                                                                        | Type                         | part no. |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------|
| network devices                                                                   |                                                                                                                                                                                                                                                                                          |                              |          |
|  |                                                                                                                                                                                                                                                                                          | UE4740-22H0000               | 1046978  |
| Commissioning aids and test equipment                                             |                                                                                                                                                                                                                                                                                          |                              |          |
|  | <ul style="list-style-type: none"> <li>• <b>Product:</b> Alignment aids</li> <li>• <b>Dimensions (W x H x L):</b> 19 mm<br/>67.3 mm<br/>66.9 mm</li> <li>• <b>Description:</b> Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!</li> </ul> | AR60                         | 1015741  |
|  | <ul style="list-style-type: none"> <li>• <b>Product:</b> Alignment aids</li> <li>• <b>Description:</b> Adapter AR60 for housing cross-section 48 mm x 40 mm</li> </ul>                                                                                                                   | AR60 adapter, 48x40          | 4032461  |
|  | <ul style="list-style-type: none"> <li>• <b>Product:</b> Alignment aids</li> <li>• <b>Description:</b> Adapter AR60 for housing cross-section 48 mm x 40 mm in PU3H device column</li> </ul>                                                                                             | AR60 adapter,<br>48x40, PU3H | 4056731  |

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                       | Type               | part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                                                                                                         |                    |          |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M26, 12-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Crimp contacts</li> <li>• <b>Permitted cross-section:</b> 0.5 mm² ... 1.5 mm²</li> <li>• <b>Note:</b> 12 crimping contacts enclosed</li> </ul>                                                   | STE-0612G000GA3KMC | 6021191  |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M26, 12-pin, angled, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Crimp contacts</li> <li>• <b>Permitted cross-section:</b> 0.5 mm² ... 1.5 mm²</li> <li>• <b>Note:</b> 12 crimping contacts enclosed</li> </ul>                                                     | STE-0612W000GA3KMC | 6021192  |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Crimp contacts</li> <li>• <b>Permitted cross-section:</b> 0.5 mm² ... 1.5 mm²</li> <li>• <b>Note:</b> 12 crimping contacts enclosed</li> </ul>                                                 | DOS-0612G000GA3KMC | 6020757  |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, angled, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Crimp contacts</li> <li>• <b>Permitted cross-section:</b> 0.5 mm² ... 1.5 mm²</li> <li>• <b>Note:</b> 12 crimping contacts enclosed</li> </ul>                                                   | DOS-0612W000GA3KMC | 6020758  |
|    | <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</li> </ul>                                                                                                                    | DSL-8U04G02M025KMC | 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</li> </ul>                                                                                                                   | DSL-8U04G10M025KMC | 6034575  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 12-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>   | DOL-0612G05M075KMC | 2022545  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 10 m, 12-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>  | DOL-0612G10M075KMC | 2022547  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 15 m, 12-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>  | DOL-0612G15M075KMC | 2022548  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 2.5 m, 12-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul> | DOL-0612G2M5075KMC | 2022544  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 20 m, 12-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>  | DOL-0612G20M075KMC | 2022549  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 30 m, 12-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> </ul>                                                     | DOL-0612G30M075KMC | 2022550  |

|                                                                                    | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                | Type               | part no. |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
|   | <ul style="list-style-type: none"> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 50 m, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul> | DOL-0612G50M075KM0 | 2033548  |
|                                                                                    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 7.5 m, 12-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>                                          | DOL-0612G7M5075KM0 | 2022546  |
|   | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Cable:</b> 20 m, PVC</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Note:</b> Without EFI: Pin 9 and 10 not connected</li> </ul>                                                                | DOL-0610G20M075KM0 | 2046890  |
|   | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Cable:</b> 5 m, PVC</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Note:</b> Without EFI: Pin 9 and 10 not connected</li> </ul>                                                                 | DOL-0610G05M075KM0 | 2046888  |
|   | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M26, 12-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Cable:</b> 10 m, PVC</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Note:</b> Without EFI: Pin 9 and 10 not connected</li> </ul>                                                                | DOL-0610G10M075KM0 | 2046889  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Flying leads</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Items supplied:</b> By the meter</li> <li>• <b>Cable:</b> 12-wire, PVC</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Note:</b> max. 100 m, fitting for EFI connections</li> </ul>                                                                                            | Connecting cable   | 6021437  |

## 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)