Data sheet

# M40S-64A503AA0

## M4000 Advanced Curtain

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.

Illustration may differ

## Ordering information

| Type | part no. |
|---|---|
| M40S-64A503AA0 | 1203268 |

Other models and accessories ➜ www.sick.com/M4000_Advanced_Curtain

## Detailed technical data

### Features

| | |
|---|---|
| **System part** | Sender |
| **Resolution** | 14 mm |
| **Scanning range** | 10 m |
| **Protective field height** | 900 mm |
| **Synchronization** | Optical synchronisation |

### Safety-related parameters

| | |
|---|---|
| **Type** | Type 4 (IEC 61496-1) |
| **Safety integrity level** | SIL 3 (IEC 61508) |
| **Category** | Category 4 (EN ISO 13849) |
| **Performance level** | PL e (EN ISO 13849) |
| **$PFH_D$ (mean probability of a dangerous failure per hour)** | $28 * 10^{-9}$ (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

| | Functions | Delivery status |
|---|---|---|
| **Restart interlock** | ✓ | Internal |
| **External device monitoring (EDM)** | ✓ | Activated |
| **Beam coding** | ✓ | Uncoded |
| **Configurable status output (ADO)** | ✓ | Contamination (OWS) |
| **Sender test** | ✓ | Deactivated |
| **Configurable scanning range** | ✓ | Low scanning range |
| **Safe SICK device communication via EFI** | ✓ | |
| **Differentiation between man and material (muting)** | ✓ [1)] | |

[1)] The muting functions can only be used in combination with the UE403 muting switching amplifier or a suitable safety controller (e.g., Flexi Classic, Flexi Soft).

## Functions - Functions in combination with UE403

| | |
|---|---|
| **Concurrence monitoring** | ✓ |
| **Monitoring of total muting time** | ✓ |
| **Sensor gap monitoring** | ✓ |
| **Belt stop** | ✓ |
| **Muting with override** | ✓ |
| **Exit monitoring** | ✓ |
| **End of muting by ESPE** | ✓ |

## Interfaces

| | |
|---|---|
| **System connection** | |
| Connection type | Hirschmann male connector M26, 12-pin |
| Permitted cable length | ≤ 50 m [1] |
| Permitted cross-section | ≥ 0 mm² |
| **Configuration method** | Via software |
| **Configuration connection** | Female connector M8, 4-pin |
| **Display elements** | 7-segment display, LEDs |
| **Status display** | LEDs |

[1] Depending on load, power supply and wire cross-section. The technical specifications must be observed.

## Electrical data

| | |
|---|---|
| **Protection class** | III (IEC 61140) |
| **Supply voltage $V_S$** | 24 V DC (19.2 V ... 28.8 V) |
| **Residual ripple** | ≤ 10 % [1] |
| **Power consumption** | ≤ 0.3 A |

[1] Within the limits of $V_S$.

## Mechanical data

| | |
|---|---|
| **Housing cross-section** | 52 mm x 55.5 mm |
| **Housing material** | Aluminum alloy ALMGSI 0.5 |
| **Surface treatment** | Powder coated |
| **Front screen material** | Polycarbonate, scratch-resistant coating |

## Ambient data

| | |
|---|---|
| **Enclosure rating** | IP65 (EN 60529) |
| **Ambient operating temperature** | –30 °C ... +55 °C |
| **Storage temperature** | –30 °C ... +70 °C |
| **Air humidity** | 15 % ... 95 %, Non-condensing |
| **Vibration resistance** | 5 g, 10 Hz ... 55 Hz (IEC 60068-2-6) |
| **Shock resistance** | 10 g, 16 ms (EN 60068-2-29) |

## Other information

| | |
|---|---|
| **Wave length** | 850 nm |

## Certificates

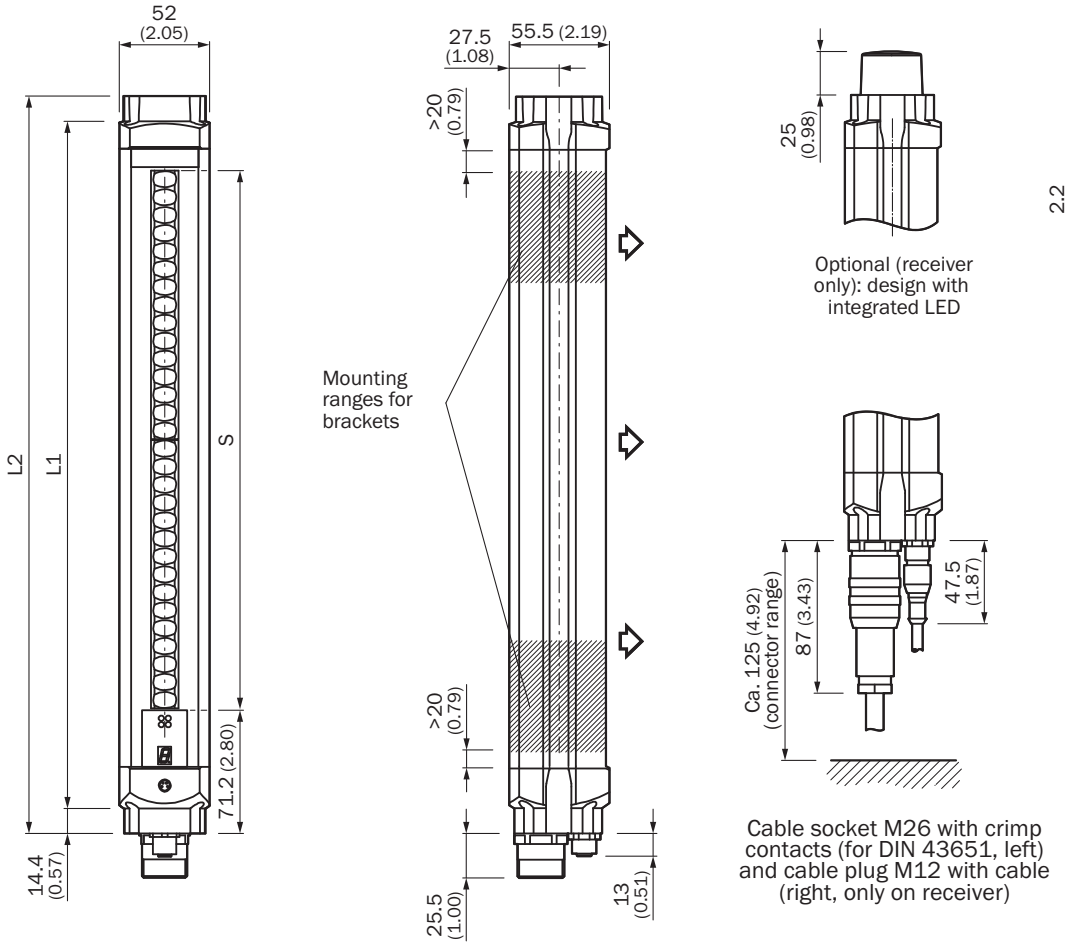
| | |
|---|---|
| **EU declaration of conformity** | ✓ |

| | |
|---|---|
| **UK declaration of conformity** | ✓ |
| **ACMA declaration of conformity** | ✓ |
| **Moroccan declaration of conformity** | ✓ |
| **China RoHS** | ✓ |
| **ULus approval** | ✓ |
| **cUL approval** | ✓ |
| **EC-Type-Examination approval** | ✓ |
| **Information according to Art. 3 of Data Act (Regulation EU 2023/2854)** | ✓ |

## 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)

| | L1 | L2 |
|---|---|---|
| 300 | 387 | 416 |
| 450 | 537 | 566 |
| 600 | 687 | 716 |
| 750 | 837 | 866 |
| 900 | 987 | 1,016 |
| 1,050 | 1,137 | 1,166 |
| 1,200 | 1,287 | 1,316 |
| 1,350 | 1,437 | 1,466 |
| 1,500 | 1,587 | 1,616 |
| 1,650 | 1,737 | 1,766 |
| 1,800 | 1,887 | 1,916 |

## Recommended accessories

Other models and accessories ➜ www.sick.com/M4000_Advanced_Curtain

| | Brief description | Type | part no. |
|---|---|---|---|
| **Commissioning aids and test equipment** | | | |
| | • **Product:** Alignment aids<br>• **Dimensions (W x H x L):** 19 mm<br>67.3 mm<br>66.9 mm<br>• **Description:** Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam! | AR60 | 1015741 |
| | • **Product:** Alignment aids<br>• **Description:** Adapter AR60 for M4000 and M4000 Curtain | AR60 adapter, M4000 | 4040006 |
| **Mounting systems** | | | |
| | • **Description:** Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers<br>• **Packing unit:** 4 pieces<br>• **Suitable for:** All protective field heights | BEF-3WNGBAST4 | 7021352 |
| | • **Description:** Mounting kit 12, rotatable, swivel mount<br>• **Packing unit:** 4 pieces<br>• **Suitable for:** All protective field heights | BEF-2SMGEAKU4 | 2030510 |
| | • **Description:** Mounting kit 6, side bracket, rotatable<br>• **Material:** Zinc diecast<br>• **Details:** Zinc diecast<br>• **Packing unit:** 4 pieces<br>• **Suitable for:** All protective field heights | BEF-1SHABAZN4 | 2019506 |

| | Brief description | Type | part no. |
|---|---|---|---|
| connectors and cables | | | |
| | • **Connection type head A:** Female connector, M26, 12-pin, straight, A-coded<br>• **Description:** Unshielded<br>• **Connection systems:** Crimp contacts<br>• **Permitted cross-section:** 0.5 mm² ... 1.5 mm²<br>• **Note:** 12 crimping contacts enclosed | DOS-0612G000GA3KM( | 6020757 |
| | • **Connection type head A:** Male connector, M8, 4-pin, straight<br>• **Connection type head B:** Male connector, USB-A, straight<br>• **Cable:** 10 m, 4-wire, PVC<br>• **Description:** Unshielded | DSL-8U04G10M025KM1 | 6034575 |
| | • **Connection type head A:** Female connector, M26, 12-pin, straight<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 20 m, 12-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Connection systems:** Flying leads | DOL-0612G20M075KM( | 2022549 |
| | • **Connection type head A:** Male connector, M8, 4-pin, straight<br>• **Connection type head B:** Male connector, USB-A, straight<br>• **Cable:** 2 m, 4-wire, PVC<br>• **Description:** Unshielded | DSL-8U04G02M025KM1 | 6034574 |
| | • **Connection type head A:** Female connector, M26, 12-pin, straight<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 15 m, 12-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Connection systems:** Flying leads | DOL-0612G15M075KM( | 2022548 |
| | • **Connection type head A:** Female connector, M26, 12-pin, straight<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 10 m, 12-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Connection systems:** Flying leads | DOL-0612G10M075KM( | 2022547 |
| | • **Connection type head A:** Female connector, M26, 12-pin, straight<br>• **Connection type head B:** Flying leads<br>• **Cable:** 5 m, PVC<br>• **Description:** Unshielded<br>• **Connection systems:** Flying leads<br>• **Note:** Without EFI: Pin 9 and 10 not connected | DOL-0610G05M075KM1 | 2046888 |
| | • **Connection type head A:** Female connector, M26, 12-pin, straight<br>• **Connection type head B:** Flying leads<br>• **Cable:** 10 m, PVC<br>• **Description:** Unshielded<br>• **Connection systems:** Flying leads<br>• **Note:** Without EFI: Pin 9 and 10 not connected | DOL-0610G10M075KM1 | 2046889 |
| | • **Connection type head A:** Female connector, M26, 12-pin, straight<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 12-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Connection systems:** Flying leads | DOL-0612G05M075KM( | 2022545 |
| system plugs and extension modules | | | |
| | • **Applications:** Muting switching amplifier<br>• **Compatible sensor types:** M4000 Advanced multiple light beam safety devices<br>• **Mounting:** Flexible mounting on the M4000 Advanced or directly in the system | UE403-A0930 | 1026287 |

# 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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