

# M40E-70A323RB0

M4000 Advanced Curtain

**SAFETY LIGHT CURTAINS**

**SICK**  
Sensor Intelligence.

Illustration may differ

### Ordering information

| Resolution | Scanning range | Protective field height | System part | Type           | Part no. |
|------------|----------------|-------------------------|-------------|----------------|----------|
| 30 mm      | 21 m           | 1,800 mm                | Receiver    | M40E-70A323RB0 | 1204829  |

Other models and accessories → [www.sick.com/M4000\\_Advanced\\_Curtain](http://www.sick.com/M4000_Advanced_Curtain)



### Detailed technical data

#### Features

|                                |                         |
|--------------------------------|-------------------------|
| <b>System part</b>             | Receiver                |
| <b>Resolution</b>              | 30 mm                   |
| <b>Scanning range</b>          | 21 m                    |
| <b>Protective field height</b> | 1,800 mm                |
| <b>Response time</b>           |                         |
| Without beam coding            | 15 ms                   |
| With beam coding               | 27 ms                   |
| <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> | $28 \times 10^{-9}$ (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

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

<sup>1)</sup> 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).

## Interfaces

|  |                         |                                       |
|--|-------------------------|---------------------------------------|
| <b>System connection</b>                           | Connection type         | Hirschmann male connector M26, 12-pin |
|  | Permitted cable length  | $\leq 50 \text{ m}^1$                 |
|  | Permitted cross-section | $\geq 0.75 \text{ mm}^2$              |
| <b>Extension connection</b>                        |                         | Female connector M12, 5-pin           |
| <b>Configuration method</b>                        |                         | Via software                          |
| <b>Configuration connection</b>                    |                         | Female connector M8, 4-pin            |
| <b>Display elements</b>                            |                         | 7-segment display, LEDs               |
| <b>Status display</b>                              |                         | LEDs                                  |
| <b>End cap with integrated LED on the receiver</b> |                         | ✓                                     |

<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 <math>V_S</math></b>         |                                    | 24 V DC (19.2 V ... 28.8 V)  |
| <b>Residual ripple</b>                         |                                    | $\leq 10 \%^1$   |
| <b>Power consumption</b>                       |                                    | $\leq 0.8 \text{ A}^2$   |
| <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 ( $V_S - 2.25 \text{ V DC} \dots V_S$ )                                      |
|  | OFF state, switching voltage LOW   | $\leq 2 \text{ V DC}$  |
|  | Current-carrying capacity per OSSD | $\leq 500 \text{ mA}$  |
| <b>Application diagnostic outputs</b>          | Type of output                     | PNP semiconductor, short-circuit protected <sup>3)</sup>                             |
|  | ON state, switching voltage HIGH   | 24 V DC ( $V_S - 4.2 \text{ V DC} \dots V_S$ )                                       |
|  | OFF state, switching voltage LOW   | High resistance  |
|  | Current-carrying capacity per OSSD | $\leq 100 \text{ mA}$  |

<sup>1)</sup> Within the limits of  $V_S$ .

<sup>2)</sup> Without OSSDs, without ADO, without reset required and without UE403.

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

## Mechanical data

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

## Ambient data

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Enclosure rating</b>              | IP65 (EN 60529)                      |
| <b>Ambient operating temperature</b> | -30 °C ... +55 °C                    |
| <b>Storage temperature</b>           | -30 °C ... +70 °C                    |
| <b>Air humidity</b>                  | 15 % ... 95 %, Non-condensing        |
| <b>Vibration resistance</b>          | 5 g, 10 Hz ... 55 Hz (IEC 60068-2-6) |

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## SAFETY LIGHT CURTAINS

|                         |                             |
|-------------------------|-----------------------------|
| <b>Shock resistance</b> | 10 g, 16 ms (EN 60068-2-29) |
|-------------------------|-----------------------------|

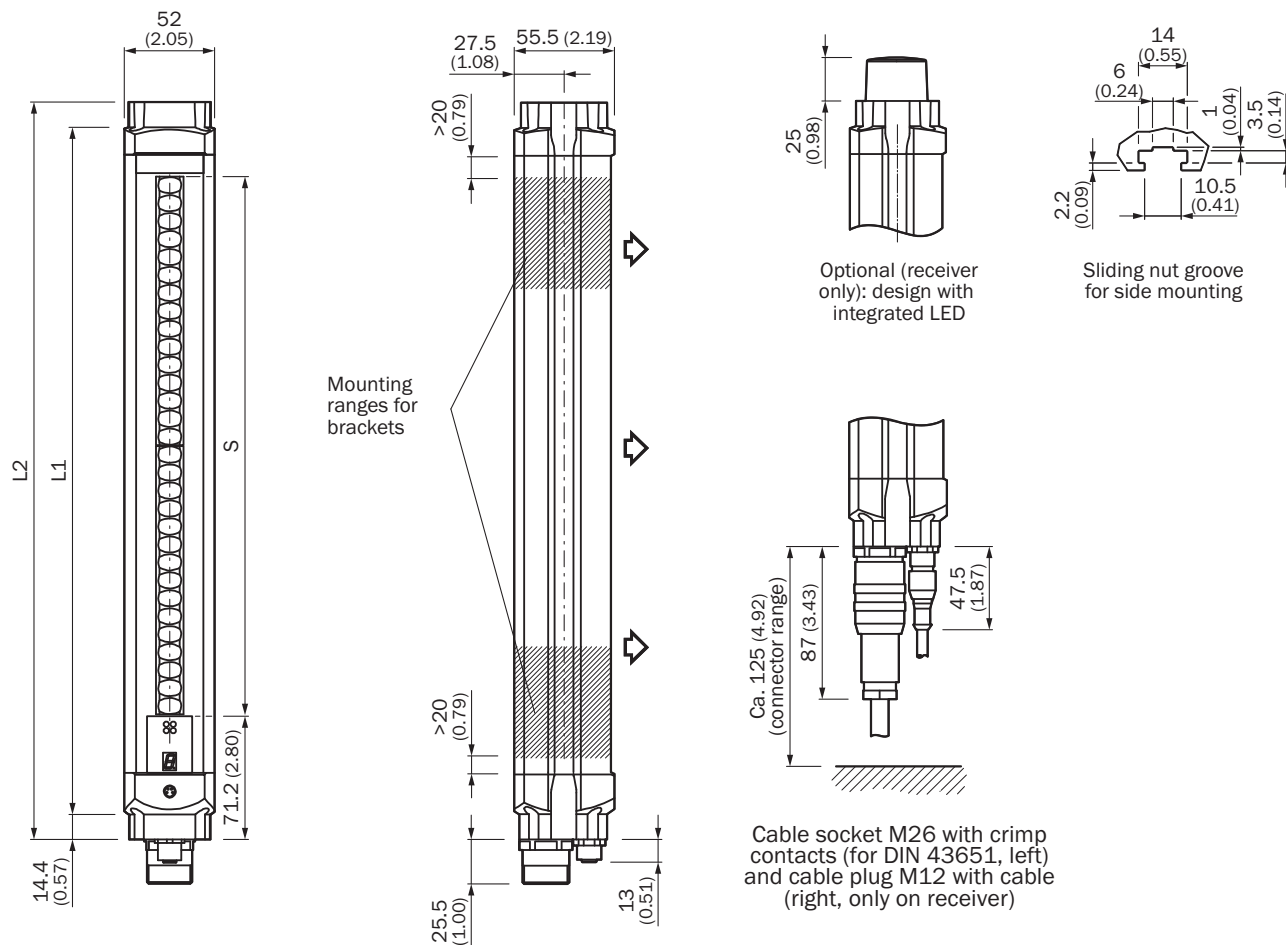
Other information

|                    |        |
|--------------------|--------|
| <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))








|       | 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](http://www.sick.com/M4000_Advanced_Curtain)

|   | 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 M4000 and M4000 Curtain  | AR60 adapter, M4000 | 4040006  |
| <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, Mounting kit 12, rotatable, swivel mount  | BEF-2SMGEAKU4       | 2030510  |
| <b>Others</b>   |   |                     |          |
|   | <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 mm<sup>2</sup> ... 1.5 mm<sup>2</sup></li> <li><b>Note:</b> 12 crimping contacts enclosed</li> </ul>   | DOS-0612G000GA3KM0  | 6020757  |
|  | <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, 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-0612G20M075KM0  | 2022549  |
|  | <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> 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-0612G15M075KM0  | 2022548  |

|  | Brief description  | Type               | Part no. |
|--|--|--------------------|----------|
|   | <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-0612G10M075KM0 | 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>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-0610G05M075KM1 | 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-0610G10M075KM1 | 2046889  |
|   | <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-0612G05M075KM0 | 2022545  |
| Switching amplifiers   |  |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Applications:</b> Muting switching amplifier</li> <li>• <b>Compatible sensor types:</b> M4000 Advanced multiple light beam safety devices</li> </ul>   | 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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Contacts and other locations –[www.sick.com](http://www.sick.com)