



M40E-61A105RA0

M4000 Area

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Resolution | Scanning range | Protective field height | System part | Type | Part no. |
|------------|----------------|-------------------------|-------------|----------------|----------|
| 80 mm | 90 m | 450 mm | Receiver | M40E-61A105RA0 | 1207204 |

Other models and accessories → www.sick.com/M4000_Area

Detailed technical data

Features

| | |
|-------------------------------------|-------------------------|
| Resolution | 80 mm |
| Scanning range | 90 m |
| Low scanning range | 0.5 m ... 20 m |
| Great scanning range | 9 m ... 90 m |
| Protective field height | 450 mm |
| Length of the monitored area | 450 mm |
| Response time | 17 ms |
| 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) |
| 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 | ✓ | |

Interfaces

| | | |
|---------------------------------|-----------------|---|
| System connection | Connection type | Hirschmann male connector M26, 12-pin |
| Configuration method | | PC with CDS (Configuration and Diagnostic Software) |
| Configuration connection | | Female connector M8, 4-pin |
| Display elements | | 7-segment display, LEDs |
| Status display | | LEDs |

Electrical data

| | | |
|--|------------------------------------|--|
| Protection class | | III (IEC 61140) |
| Supply voltage V_S | | 24 V DC (19.2 V DC ... 28.8 V DC) |
| Residual ripple | | $\leq 10\%$ ¹⁾ |
| Power consumption | | $\leq 0.6\text{ A}$ ²⁾ |
| Output signal switching devices (OSSDs) | Type of output | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored ³⁾ |
| | ON state, switching voltage HIGH | 24 V DC ($V_S - 2.25\text{ V DC}$... V_S) |
| | OFF state, switching voltage LOW | $\leq 2\text{ V DC}$ |
| | Current-carrying capacity per OSSD | $\leq 500\text{ mA}$ |

¹⁾ Within the limits of V_S .

²⁾ Without load.

³⁾ Applies to the voltage range between -30 V and $+30\text{ V}$.

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 ... $+55\text{ °C}$ |
| Storage temperature | -30 °C ... $+70\text{ °C}$ |
| 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

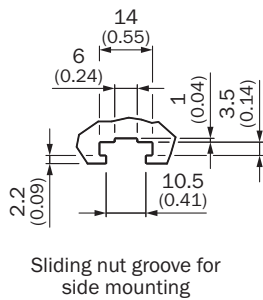
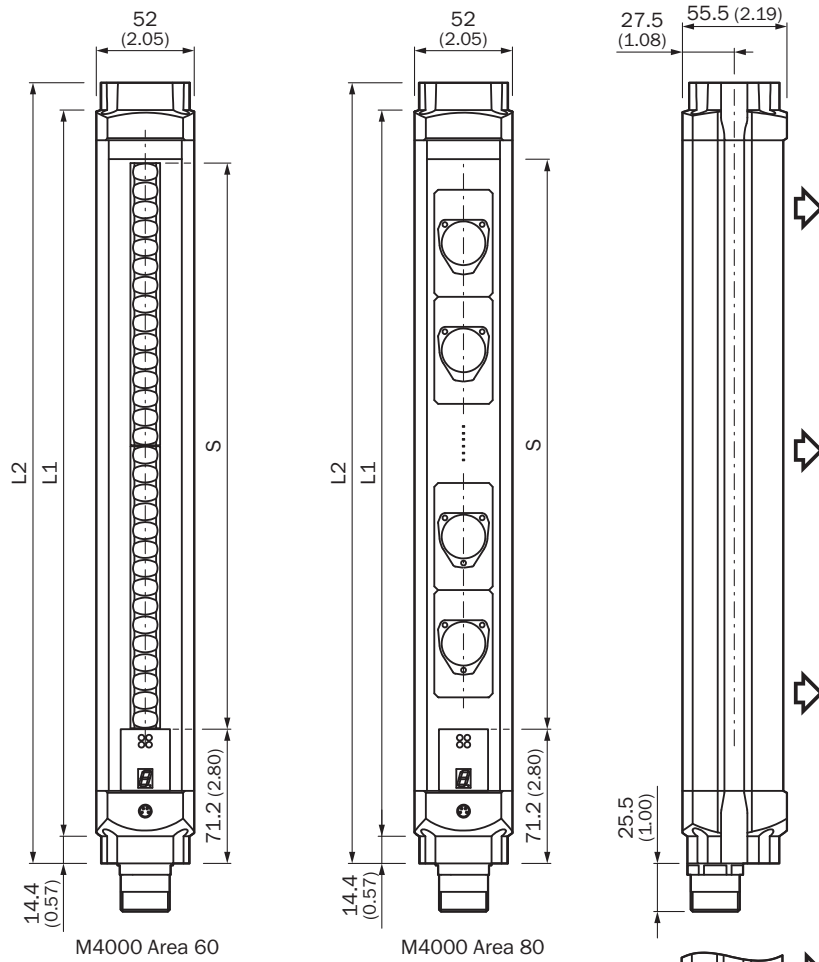
| | |
|--------------------|--------|
| Wave length | 850 nm |
|--------------------|--------|

Classifications

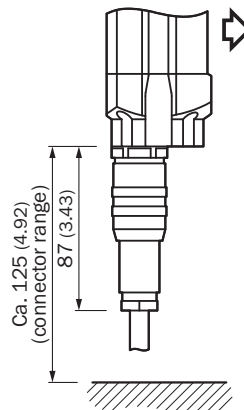
| | |
|---------------------|----------|
| ECLASS 5.0 | 27272704 |
| ECLASS 5.1.4 | 27272704 |
| ECLASS 6.0 | 27272704 |
| ECLASS 6.2 | 27272704 |
| ECLASS 7.0 | 27272704 |
| ECLASS 8.0 | 27272704 |

| | |
|-----------------------|----------|
| 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))



Sliding nut groove for side mounting











Cable socket M26 with crimp contacts (for DIN 43651)




| Length of the monitored area S | L1 | L2 |
|--------------------------------|-------------|---------------|
| 300 (11.81) | 387 (15.24) | 416 (16.38) |
| 450 (17.72) | 537 (21.14) | 566 (22.28) |
| 600 (23.62) | 687 (27.05) | 716 (28.19) |
| 750 (29.53) | 837 (32.95) | 866 (34.09) |
| 900 (35.43) | 987 (38.86) | 1,016 (40.00) |

| Length of the monitored area S | L1 | L2 |
|--------------------------------|---------------|---------------|
| 1,050 (41.34) | 1,137 (44.76) | 1,166 (45.91) |
| 1,200 (47.24) | 1,287 (50.67) | 1,316 (51.81) |
| 1,350 (53.15) | 1,437 (56.57) | 1,466 (57.72) |
| 1,500 (59.06) | 1,587 (62.48) | 1,616 (63.62) |
| 1,650 (64.96) | 1,737 (68.39) | 1,766 (69.53) |
| 1,800 (70.87) | 1,887 (74.29) | 1,916 (75.43) |

Recommended accessories

Other models and accessories → www.sick.com/M4000_Area

| | Brief description | Type | Part no. |
|---|---|---------------------|----------|
| Alignment aids | | | |
|  | 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 |
| Mounting brackets and plates | | | |
|  | 4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers | BEF-3WNGBAST4 | 7021352 |
| Other mounting accessories | | | |
|  | 2 pieces, Floor stands for the horizontal mounting of the safety light curtains C4000 Fusion, Entry/Exit, Palletizer, as well as the multi-beam safety light curtain M4000 Area, for mounting heights of between 70 mm and 780 mm., Includes mounting bracket | BEF-3HHOCAST2 | 2041661 |
| Terminal and alignment brackets | | | |
|  | 4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast | BEF-1SHABAZN4 | 2019506 |
|  | 4 pieces, Mounting kit 12, rotatable, swivel mount | BEF-2SMGEAKU4 | 2030510 |
| Others | | | |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M26, 12-pin, straight, A-coded Description: Unshielded Connection systems: Crimp contacts Permitted cross-section: 0.5 mm² ... 1.5 mm² Note: 12 crimping contacts enclosed | DOS-0612G000GA3KMO | 6020757 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M26, 12-pin, angled, A-coded Description: Unshielded Connection systems: Crimp contacts Permitted cross-section: 0.5 mm² ... 1.5 mm² Note: 12 crimping contacts enclosed | DOS-0612W000GA3KMO | 6020758 |

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M26, 12-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 20 m, 12-wire, PVC • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads | DOL-0612G20M075KM0 | 2022549 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M26, 12-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 12-wire, PVC • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads | DOL-0612G10M075KM0 | 2022547 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M26, 12-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 12-wire, PVC • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads | DOL-0612G05M075KM0 | 2022545 |

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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