SICK.COM




DATA SHEET

# M40S-70A105AA0, M40E-70A105RA0

M4000 Area
Safety light curtains

SICK Sensor Intelligence

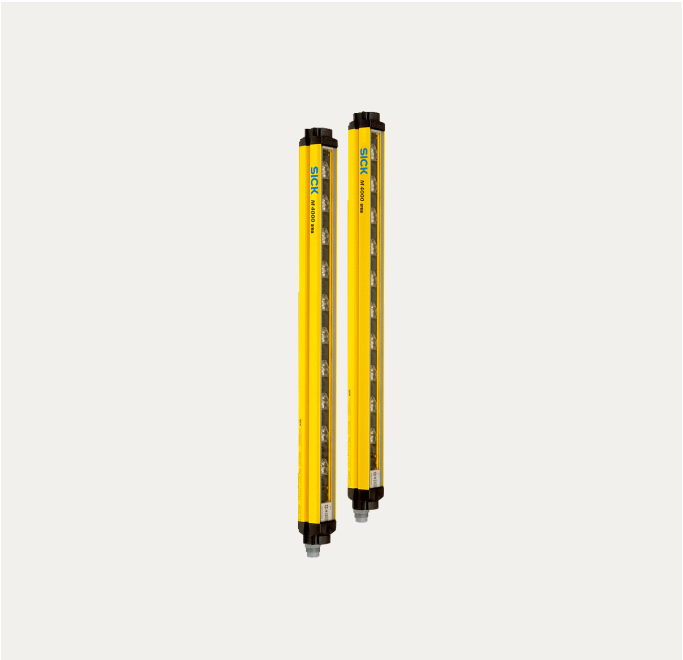


Illustration may differ

## SAFETY LIGHT CURTAINS

# M40S-70A105AA0, M40E-70A105RA0

### ORDERING INFORMATION

| System part | Type | part no. |
|---|---|---|
| sender | M40S-70A105AA0 | 1200149 |
| receiver | M40E-70A105RA0 | 1200148 |

Further device versions and accessories at www.sick.com/M4000_Area

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| System part | Pair |
| Resolution | 80 mm |
| Scanning range | 90 m |
| Protective field height | 1,800 mm |
| Synchronization | Optical synchronization |

### 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 |

## ELECTRONICS

| | |
|---|---|
| Protection class | III (IEC 61140) |
| Supply voltage $V_S$ | 24 V DC (19.2 V DC ... 28.8 V DC) |
| Residual ripple | ≤ 10 % [1] |
| Power consumption | ≤ 0.6 A [2]<br>≤ 0.2 A |
| Output signal switching devices (OSSDs) | |
| Type of output | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored [3] |

[1] Within the limits of $V_S$.

[2] Without load.

[3] Applies to the voltage range between –30 V and +30 V.

## MECHANICS

| | |
|---|---|
| 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 |

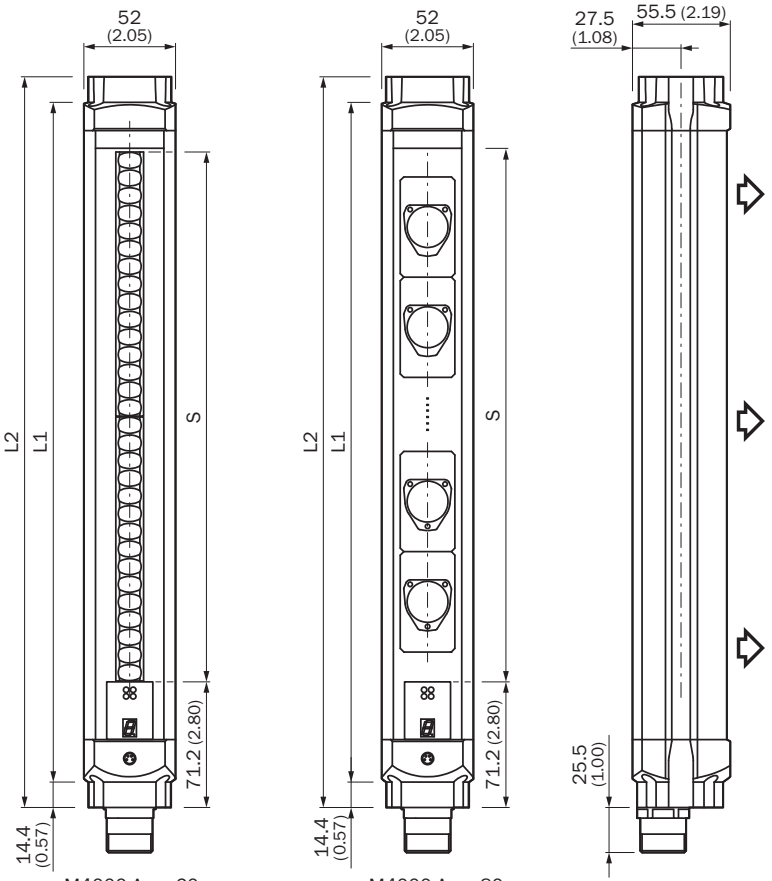
## AMBIENT DATA

| | |
|---|---|
| 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 (EN 60068-2-6) |
| Shock resistance | 10 g, 16 ms (EN 60068-2-27) |

## OTHER INFORMATION

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

**DIMENSIONAL DRAWING**




Dimensions in mm (inch)

| 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) |
| 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) |

| Length of the monitored area S | L1 | L2 |
|---|---|---|
| 1,800 (70.87) | 1,887 (74.29) | 1,916 (75.43) |

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1200149

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