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DATA SHEET

# M4C-EA04300A10

deTem
Safety multibeam sensors

SICK Sensor Intelligence

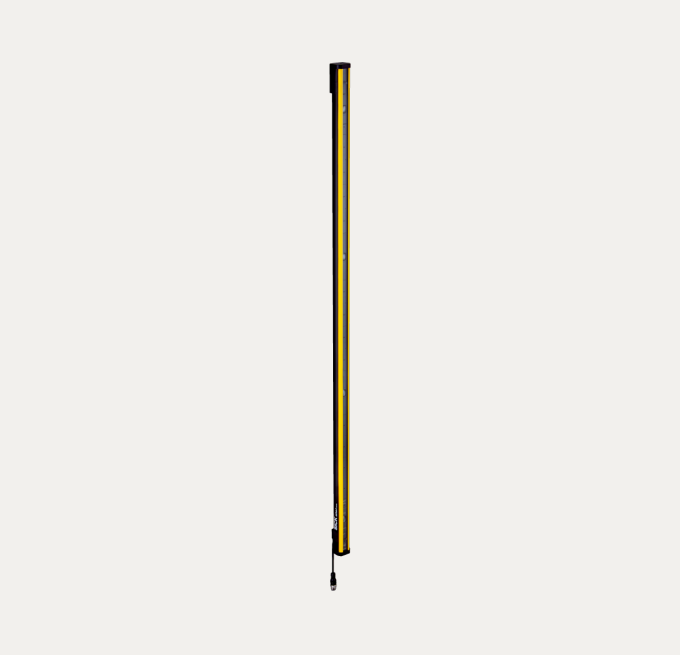


Illustration may differ

# SAFETY MULTIBEAM SENSORS

# M4C-EA04300A10

## ORDERING INFORMATION

| Type | part no. |
|---|---|
| M4C-EA04300A10 | 1082692 |

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

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| Product version | deTem4 Core |
| Application | Normal industrial environment |
| Functional principle | Sender/receiver |
| System part | Receiver |
| Number of beams | 4 |
| Beam separation | 300 mm |
| Response time | 20 ms |
| Synchronization | Optical synchronization |
| Items supplied | Receiver<br>Safety instruction<br>Mounting instructions<br>Operating instructions for download |

### SAFETY-RELATED PARAMETERS

| | |
|---|---|
| Type | Type 4 (IEC 61496-1) |
| Safety integrity level | SIL 3 (IEC 61508) |
| Category | Category 4 (ISO 13849-1) |
| Performance level | PL e (ISO 13849-1) |
| $PFH_D$ (mean probability of a dangerous failure per hour) | $3 \times 10^{-9}$ |
| $T_M$ (mission time) | 20 years (ISO 13849-1) |
| Safe state in the event of a fault | At least one OSSD is in the OFF state. |

## INTERFACES

| | |
|---|---|
| System connection | Plug, M12, 5-pin |
| Flexi Loop compatible M12 male connector | ✓ |
| Permitted cable length | 50 m |
| Display elements | LEDs |

## ELECTRONICS

| | |
|---|---|
| Protection class | III (IEC 61140) [1] |
| Supply voltage $V_S$ | 24 V DC (19.2 V DC ... 28.8 V DC) [2] |
| Residual ripple | ≤ 10 % [3] |
| Power consumption | ≤ 150 mA |
| Power consumption | ≤ 4.32 W (DC) |
| Output signal switching devices (OSSDs) | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored [4] |
| ON state, switching voltage HIGH | 24 V DC ($V_S$ – 2.25 V DC ... $V_S$) |
| OFF state, switching voltage LOW | ≤ 2 V DC |
| Current-carrying capacity per OSSD | ≤ 300 mA |

[1] SELV/PELV safety/protective extra-low voltage.

[2] 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.

[3] Within the limits of $V_S$.

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

## MECHANICS

| | |
|---|---|
| Dimensions | See dimensional drawing |
| Housing cross-section | 31 mm x 34 mm |
| Material | |
| Housing | Aluminum extruded profile |
| Front screen | Polycarbonate, scratch-resistant coating |
| Weight | 880 g (± 50 g) |
| Cable bend radius | |
| Stationary position | > 12 x cable diameter |
| Flexible use | > 15 x cable diameter |

## AMBIENT DATA

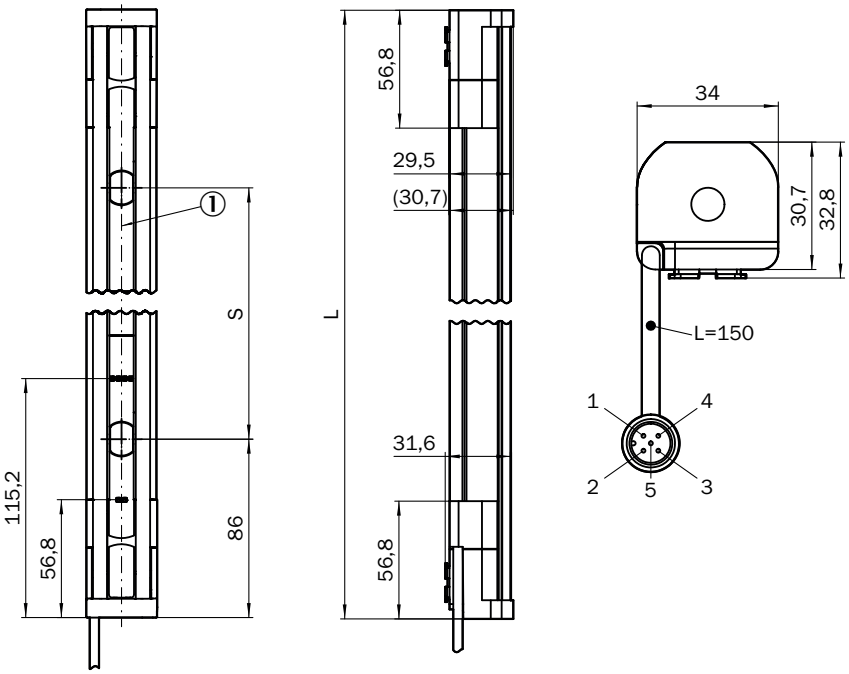
| | |
|---|---|
| Enclosure rating | IP65 (IEC 60529)<br>IP67 (IEC 60529) |
| Ambient operating temperature | –30 °C ... +55 °C |
| Storage temperature | –30 °C ... +70 °C |
| Air humidity | 15 % ... 95 %, Non-condensing |
| Vibration resistance | 5 ... 150 Hz, 3,5 mm / 1 g (EN 60068-2-6) |
| Shock resistance | 15 g / 6 ms (EN 60068-2-27) |
| Class | 3M4 (IEC TR 60721-4-3) |

## CERTIFICATES

| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |

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

## DIMENSIONAL DRAWING




Dimensions in mm (inch)
① Optical axis

| Number of beams | Beam separation S | Length L |
|---|---|---|
| 2 | 500 (19.69) | 672 (26.46) |
| 3 | 400 (15.75) | 972 (38.27) |
| 4 | 300 (11.81) | 1,072 (42.2) |

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/1082692

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Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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