Product data sheet



# M4C-ZA04300C10

deTem

SAFETY MULTIBEAM SENSORS

SICK
Sensor Intelligence.



## Ordering information

deTem4 Core A/P

| Scanning range | Number of beams | Beam separation | System part | Type | Part no. |
|---|---|---|---|---|---|
| 7 m | 4 | 300 mm | Active unit | M4C-ZA04300C10 | 1102645 |

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

## Detailed technical data

### Features

| | |
|---|---|
| **Application** | Normal industrial environment |
| **Functional principle** | Active/passive |
| **System part** | Active unit |
| **Scanning range** | 7 m |
| **Dimension of the light path** | |
| Typical | 0.5 m ... 7 m |
| **Number of beams** | 4 |
| **Beam separation** | 300 mm |
| **Response time** | 20 ms |
| **Items supplied** | Active unit<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)** | $5.3 \times 10^{-9}$ |
| **$T_M$ (mission time)** | 20 years (ISO 13849-1) |
| **Safe state in the event of a fault** | At least one OSSD is in the OFF state. |

### Functions

| | |
|---|---|
| **Protective operation** | ✓ |

### Interfaces

| | |
|---|---|
| **System connection** | Male connector M12, 5-pin |
| **Display elements** | LEDs |

| | |
|---|---|
| **Alignment aid** | Alignment quality via diagnostic LEDs |
| **Near Field Communication (NFC)** | ✓ |

## Electrical data

| | |
|---|---|
| **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 typical** | 2.4 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 | ≤ 500 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.

## Mechanical data

| | |
|---|---|
| **Dimensions** | See dimensional drawing |
| **Housing cross-section** | 31 mm x 34 mm |
| **Material** | |
| Housing | Aluminum extruded profile |
| Front screen | Polycarbonate, scratch-resistant coating |
| **Weight** | 890 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 g, 10 Hz ... 55 Hz (IEC 60068-2-6) |
| **Shock resistance** | 10 g, 16 ms (IEC 60068-2-27) |

## Other information

| | |
|---|---|
| **Type of light** | Near-infrared (NIR), invisible |

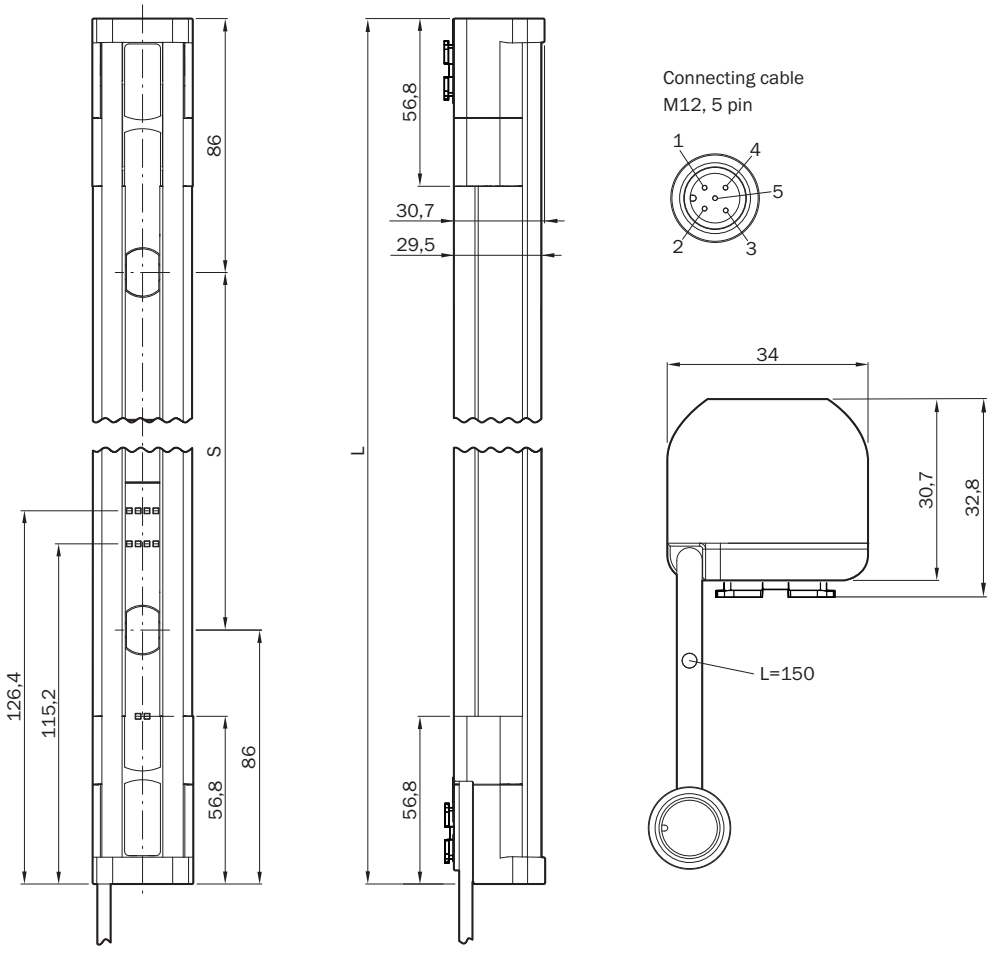
## Classifications

| | |
|---|---|
| **eCl@ss 5.0** | 27272703 |
| **eCl@ss 5.1.4** | 27272703 |
| **eCl@ss 6.0** | 27272703 |
| **eCl@ss 6.2** | 27272703 |
| **eCl@ss 7.0** | 27272703 |

| | |
|---|---|
| **eCl@ss 8.0** | 27272703 |
| **eCl@ss 8.1** | 27272703 |
| **eCl@ss 9.0** | 27272703 |
| **eCl@ss 10.0** | 27272703 |
| **eCl@ss 11.0** | 27272703 |
| **eCl@ss 12.0** | 27272703 |
| **ETIM 5.0** | EC001832 |
| **ETIM 6.0** | EC001832 |
| **ETIM 7.0** | EC001832 |
| **ETIM 8.0** | EC001832 |
| **UNSPSC 16.0901** | 46171620 |

## Dimensional drawing (Dimensions in mm (inch))

Active unit

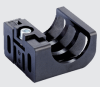



① +24 V DC
② OSSD1
③ 0 V DC
④ OSSD2
⑤ Not assigned

| Number of beams | Beam separation S | L |
|---|---|---|
| 2 | 500 | 672 |
| 4 | 300 | 1072 |

## Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|---|---|
| **Plug connectors and cables** | | | |
|  | Head A: female connector, M12, 5-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF2A15-020UB5XLEAX | 2095617 |
| | Head A: female connector, M12, 5-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YF2A15-050UB5XLEAX | 2095618 |
| | Head A: female connector, M12, 5-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m | YF2A15-100UB5XLEAX | 2095619 |
| **Terminal and alignment brackets** | | | |
|  | 4 pieces, FlexFix bracket for 2 devices (e.g. sender and receiver), can be aligned ± 15°, including M5 screw, plastic | BEF-1SHABPKU4 | 2066614 |
|  | 4 pieces, QuickFix bracket for 2 devices (e.g. sender and receiver), plastic | BEF-3SHABPKU4 | 2098710 |
| **Safety switching amplifier** | | | |
|  | • **Applications:** Evaluation unit<br>• **Compatible sensor types:** Safety sensors with OSSDs<br>• **Connection type:** Front connector with spring terminals<br>• **Restart interlock:** yes<br>• **External device monitoring (EDM):** Integrated<br>• **Outputs:** 2 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe)<br>• **Housing width:** 18 mm | RLY3-OSSD200 | 1085344 |
|  | • **Applications:** Evaluation unit<br>• **Compatible sensor types:** Safety sensors with OSSDs<br>• **Connection type:** Front connector with spring terminals<br>• **Restart interlock:** yes<br>• **External device monitoring (EDM):** Integrated<br>• **Outputs:** 3 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe)<br>• **Housing width:** 18 mm | RLY3-OSSD300 | 1099969 |

# 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.”**

# WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com

# Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

## SICK:

KUP-0610-S MPS-160TSTP0 C4C-SA06030A10000 DFS60B-S4PC10000 IM18-12NNS-ZQD
IMB12-04BPPVC0K LFP2000-A4NMB GL10G-P4251 IME12-08NPSZW2K BEF-KHZT01MPA
FX3-MPL000001 IMB12-04BNPVC0S IME12-04BNOZC0S IME12-04BPOZW2K PLV14-A S30A-XXXXBA
SBO-02F12-SM1 BEF-WN-W18 C4P-SA03031A00 WL11-2P2432 WTB2S-2P3230 YF8U14-020UA3XLEAX
IMB18-12NPSVC0S IME08-04NPSZW2K VT12T-2P112 IME12-04BPSZW2S MPS-128TSTP0
WFM50-60P311 WTB26I-24161420A00 YF8U14-050UA3XLEAX