

C4M-EB0223A1BB0

mac4

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|-----------------|----------|
| C4M-EB0223A1BB0 | 1060622 |

Other models and accessories → www.sick.com/mac4

Detailed technical data

Features

| | |
|--------------------------------|-----------------|
| Module | Base module |
| Resolution | 30 mm |
| Protective field height | 210 mm |
| Scanning range | 0.4 m ... 3.2 m |
| Response time | 12 ms ... 20 ms |
| Synchronization | Electrical |

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) |
| PFH_D (mean probability of a dangerous failure per hour) | $< 1 \times 10^{-8}$ (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. |

Interfaces

| | |
|------------------------|---------------------------|
| Connection type | Male connector M12, 4-pin |
| Length of cable | ≤ 10 m |

Electrical data

| | |
|-------------------------------------|-------------------------------|
| Protection class | III (IEC 61140) |
| Supply voltage V_S | 24 V DC (21 V DC ... 27 V DC) |
| Residual ripple | ≤ 10 % ¹⁾ |

¹⁾ Within the limits of V_S.

²⁾ Applies to the voltage range between -30 V and +30 V.

| | |
|--|--|
| Power consumption | 2 W (DC) |
| Output signal switching devices (OSSDs) | |
| Type of output | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored ²⁾ |
| ON state, switching voltage HIGH | 22.5 V DC ($V_S - 3 \text{ V DC} \dots V_S$) |
| OFF state, switching voltage LOW | $\leq 2 \text{ V DC}$ |
| Current-carrying capacity per OSSD | $\leq 300 \text{ mA}$ |

¹⁾ Within the limits of V_S .

²⁾ Applies to the voltage range between -30 V and $+30 \text{ V}$.

Mechanical data

| | |
|------------------------------|---|
| Housing cross-section | 25 mm x 30 mm |
| Weight | 160 g ($\pm 12 \text{ g}$) ... 616 g ($\pm 32 \text{ g}$) (depending on type) |

Ambient data

| | |
|--------------------------------------|-------------------------------------|
| Enclosure rating | IP65 (EN 60529) |
| Ambient operating temperature | 0 °C ... +50 °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 60068-2-29) |

Certificates

| | |
|---------------------------------------|---|
| EU declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| China-RoHS | ✓ |
| cTUVus certificate | ✓ |
| S Mark certificate | ✓ |
| EC-Type-Examination approval | ✓ |

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 |

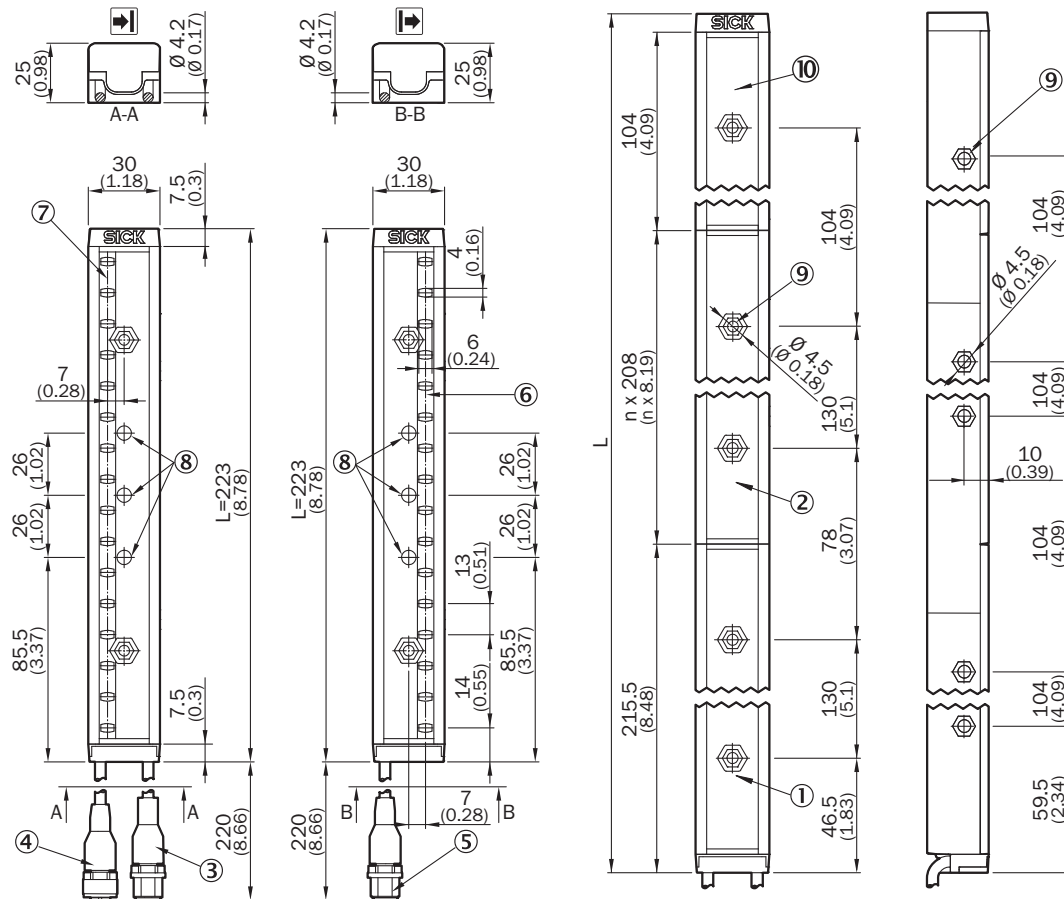
ETIM 8.0

EC002549

UNSPSC 16.0901

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Dimensional drawing



Dimensions in mm (inch)




- ① base module
- ② extension module
- ③ connection M12, 4-pin, black
- ④ connection M12, 5-pin, yellow
- ⑤ connection M12, 5-pin, yellow
- ⑥ optical axis, sender
- ⑦ optical axis, receiver
- ⑧ status indicators
- ⑨ mounting holes
- ⑩ end module

| Protective field height, rounded | Protective field height (housing length L), exact value |
|----------------------------------|---|
| 210 (8.27) | 223 (8.78) |
| 315 (12.40) | 327 (12.87) |
| 420 (16.53) | 431 (16.97) |
| 525 (20.67) | 535 (21.06) |
| 630 (24.80) | 639 (25.16) |
| 735 (28.94) | 743 (29.25) |

| Protective field height, rounded | Protective field height (housing length L), exact value |
|----------------------------------|---|
| 840 (33.07) | 847 (33.35) |
| 945 (37.20) | 951 (37.44) |
| 1,050 (41.34) | 1,055 (41.54) |

Recommended accessories

Other models and accessories → www.sick.com/mac4

| | Brief description | Type | part no. |
|---|--|----------------|----------|
| Safety relays | | | |
|  | <ul style="list-style-type: none"> Applications: Evaluation unit Compatible sensor types: Opto-electronic protective devices, Pressure sensitive mats in 4 wire technology, safety command devices, Safety switches Restart interlock: yes External device monitoring (EDM): Integrated Supply voltage: 24 V AC/DC Number of enable current contacts: 2 Housing width: 22.5 mm | UE48-20S3D2 | 6024916 |
|  | <ul style="list-style-type: none"> Applications: Evaluation unit Compatible sensor types: Opto-electronic protective devices, Pressure sensitive mats in 4 wire technology, safety command devices, Safety switches Restart interlock: yes External device monitoring (EDM): Integrated Supply voltage: 24 V AC/DC Number of enable current contacts: 2 Housing width: 22.5 mm | UE48-20S2D2 | 6024915 |
| Commissioning aids and test equipment | | | |
|  | <ul style="list-style-type: none"> Product: Test equipment Description: 30 mm diameter, 250 mm length | Test rod 30 mm | 2069275 |

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:

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