Data sheet



C4M-SB0221A1BA0

mac4

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
C4M-SB0221A1BA0	1060617

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

Detailed technical data

Features

Module	Base module
Resolution	17 mm
Protective field height	210 mm
Scanning range	0.4 m ... 3.2 m
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]
Power consumption	2 W (DC)

[1] Within the limits of V_S.

Mechanical data

Housing cross-section	25 mm x 30 mm
Weight	133 g (± 12 g) ... 589 g (± 32 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)

Other information

Wave length	850 nm

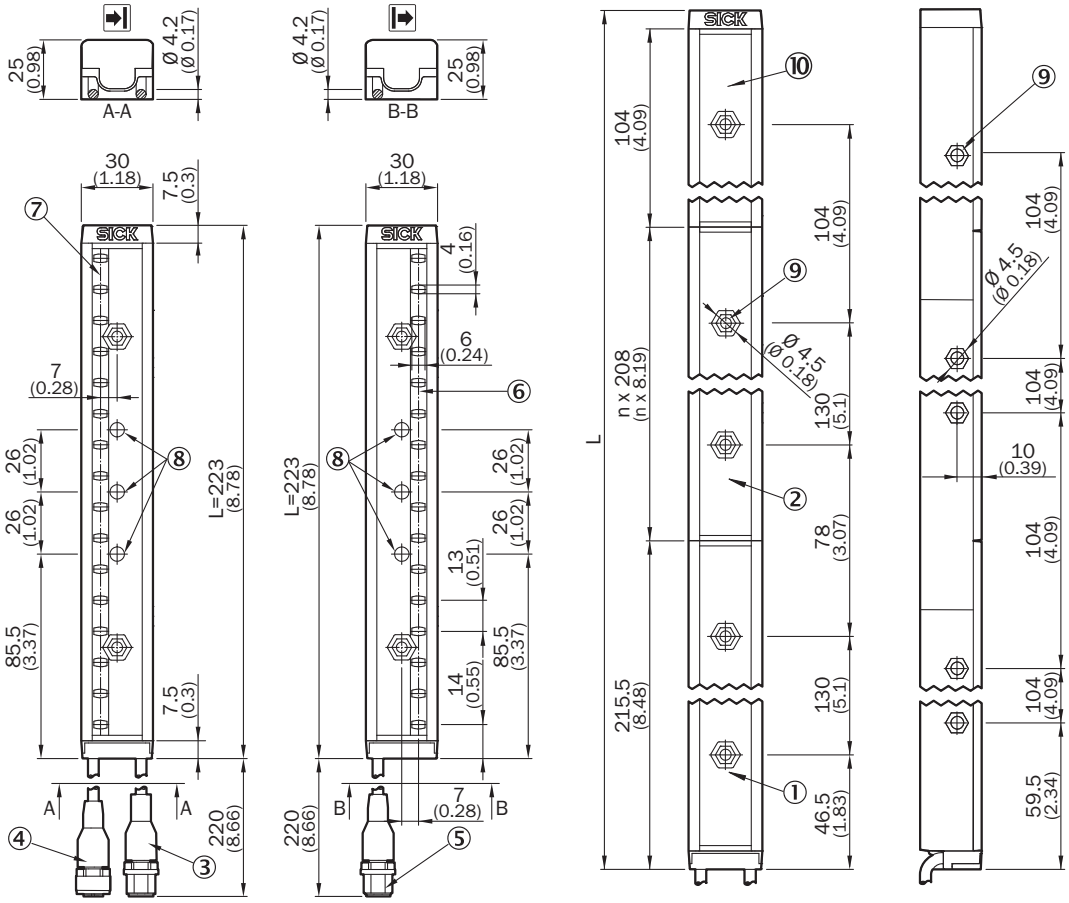
Certificates

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	46171620

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)
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			
	• **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	UE48-2OS3D2	6024916
	• **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	UE48-2OS2D2	6024915
Commissioning aids and test equipment			
	• **Product:** Test equipment • **Description:** 17 mm diameter, 250 mm length	Test rod 17 mm	2066238

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