



M2C-EB04300A10

deTem

SAFETY MULTIBEAM SENSORS

SICK
Sensor Intelligence.



Ordering information

deTem2 Core IP69K

Scanning range	Number of beams	Beam separation	System part	Type	Part no.
15.5 m	4	300 mm	Receiver	M2C-EB04300A10	1089989

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



Detailed technical data

Features

Application	Areas with special hygiene requirements				
Functional principle	Sender/receiver				
System part	Receiver				
Scanning range category	Low scanning range				
Scanning range	15.5 m				
Dimension of the light path	<table border="0"> <tr> <td>Minimum</td> <td>0.5 m ... 12.5 m</td> </tr> <tr> <td>Typical</td> <td>0.5 m ... 15.5 m</td> </tr> </table>	Minimum	0.5 m ... 12.5 m	Typical	0.5 m ... 15.5 m
Minimum	0.5 m ... 12.5 m				
Typical	0.5 m ... 15.5 m				
Number of beams	4				
Beam separation	300 mm				
Response time	20 ms				
Synchronization	Optical synchronisation				
Items supplied	Receiver in IP69K protective housing with connecting cable, 15 m Safety instruction Mounting instructions Operating instructions for download				

Safety-related parameters

Type	Type 2 (IEC 61496-1)
Safety integrity level	SIL 1 (IEC 61508)
Category	Category 2 (ISO 13849-1)

Performance level	PL c (ISO 13849-1)
PFH_D (mean probability of a dangerous failure per hour)	3×10^{-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	Connecting cable, 5-wire
Length of cable	15 m
Cable diameter	5 mm
Cable material	PUR, halogen-free
Conductor cross section	0.34 mm ²
Display elements	LEDs

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	≤ 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.

Mechanical data

Dimensions	See dimensional drawing
Housing diameter	50 mm
Material	
Housing	PMMA
End caps	Stainless steel 1.4404
Compensating element (membrane)	PA 6
Cable glands	Stainless steel 1.4404 including silicone seal
Weight	2,300 g (± 50 g)

Ambient data

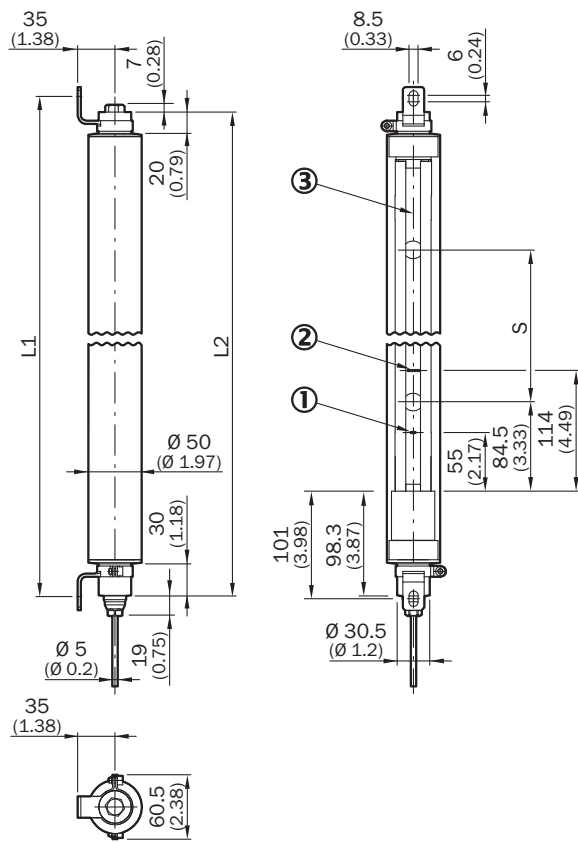
Enclosure rating	IP65 (IEC 60529) IP66 (IEC 60529) IP67 (IEC 60529) IP69K (ISO 20653)
Ambient operating temperature	-30 °C ... +55 °C
Storage temperature	-30 °C ... +70 °C

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)

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))








- ① Operating indicator
- ② Alignment indicator
- ③ Optical axis

		L1	L2
2	500	828	813
3	400	1,128	1,113
4	300	1,228	1,213

Con- nec- tion	Col- or-cod- ed con- nect- ing cable	Sender	Receiver
4	Black	Reserved	OSSD 2
5	Gray	-	-

Recommended accessories

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

	Brief description	Type	Part no.
Terminal and alignment brackets			
	2 pieces, Stainless steel support bracket, stainless steel 1.4350	BEF-2AAAADES2	2026849
	4 pieces, Stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301	BEF-2SMMEAES4	2023708
	4 pieces, Reinforced stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301	BEF-2SMMVAES4	2026850
Safety switching amplifier			
	<ul style="list-style-type: none"> • Applications: Evaluation unit • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: yes • External device monitoring (EDM): Integrated • Outputs: 2 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe) • Housing width: 18 mm 	RLY3-OSSD200	1085344
	<ul style="list-style-type: none"> • Applications: Evaluation unit • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: yes • External device monitoring (EDM): Integrated • Outputs: 3 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe) • 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