

C20E-090302A11

C2000 Standard

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Housing cross-section	Protective field height	System part	Type	Part no.
34 mm x 29 mm	900 mm	Receiver	C20E-090302A11	1016585

Important notes: 1.) Concerns installation as a spare part: This type 2 device may be used as per section 1, paragraph (2a) of Machinery Directive 2006/42/EC within the EU as a spare part for identical PL d/SIL2 devices only if the machine was put on the market before May 10, 2015. Keep this note with your machine documentation. If the machine is resold, this note must be passed on to the next buyer. 2.) Concerns installation in new machines: Due to the amendment to the EN/IEC 61496-1 standard, this type 2 device may only be installed on new machines up to PLc/SIL1 as of May 10, 2015.

Other models and accessories → www.sick.com/C2000_Standard

Detailed technical data

Features

Resolution	20 mm
Protective field height	900 mm
Response time	≤ 34 ms
Synchronization	Optical synchronisation

Safety-related parameters

Type	Type 2 (IEC 61496-1)
Safety integrity level	SIL 1 (IEC 61508)
Category	Category 2 (EN ISO 13849)
Test rate (internal test)	13 /s (EN ISO 13849) ¹⁾
Maximum demand rate	≤ 8 min ⁻¹ (EN ISO 13849) ²⁾
Performance level	PL c (EN ISO 13849)
PFH_D (mean probability of a dangerous failure per hour)	2.2 x 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.

¹⁾ Internal test. The test rate may not be exceeded if an external test is performed.

²⁾ Between two requirements on a safety-related response of the device, at least 100 internal or external tests must be carried out.

Functions

	Functions	Delivery status
External device monitoring (EDM)	✓	Activated
Beam coding	✓	Uncoded

Interfaces

System connection	Male connector M12, 8-pin
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¹⁾ The length of the connecting cable is limited, because wire resistance max. 4 Ohm.

Conductor cross section	0.25 mm ²
Permitted cable length	≤ 15 m ¹⁾
Configuration method	Hard wired
Display elements	7-segment display
Status display	LEDs

¹⁾ The length of the connecting cable is limited, because wire resistance max. 4 Ohm.

Electrical data

Protection class	III (EN 50178)
Output signal switching devices (OSSDs)	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored ¹⁾
ON state, switching voltage HIGH	24 V DC ($V_S - 2.25 \text{ V DC} \dots V_S$)
OFF state, switching voltage LOW	≤ 3.5 V DC
Current-carrying capacity per OSSD	≤ 500 mA

¹⁾ Applies to the voltage range between -30 V and +30 V.

Mechanical data

Housing cross-section	34 mm x 29 mm
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Ambient data

Enclosure rating	IP65 (EN 60529)
Ambient operating temperature	0 °C ... +55 °C
Storage temperature	-25 °C ... +70 °C
Air humidity	15 % ... 95 %, Non-condensing
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
Shock resistance	10 g, 16 ms (EN 60068-2-29)

Classifications

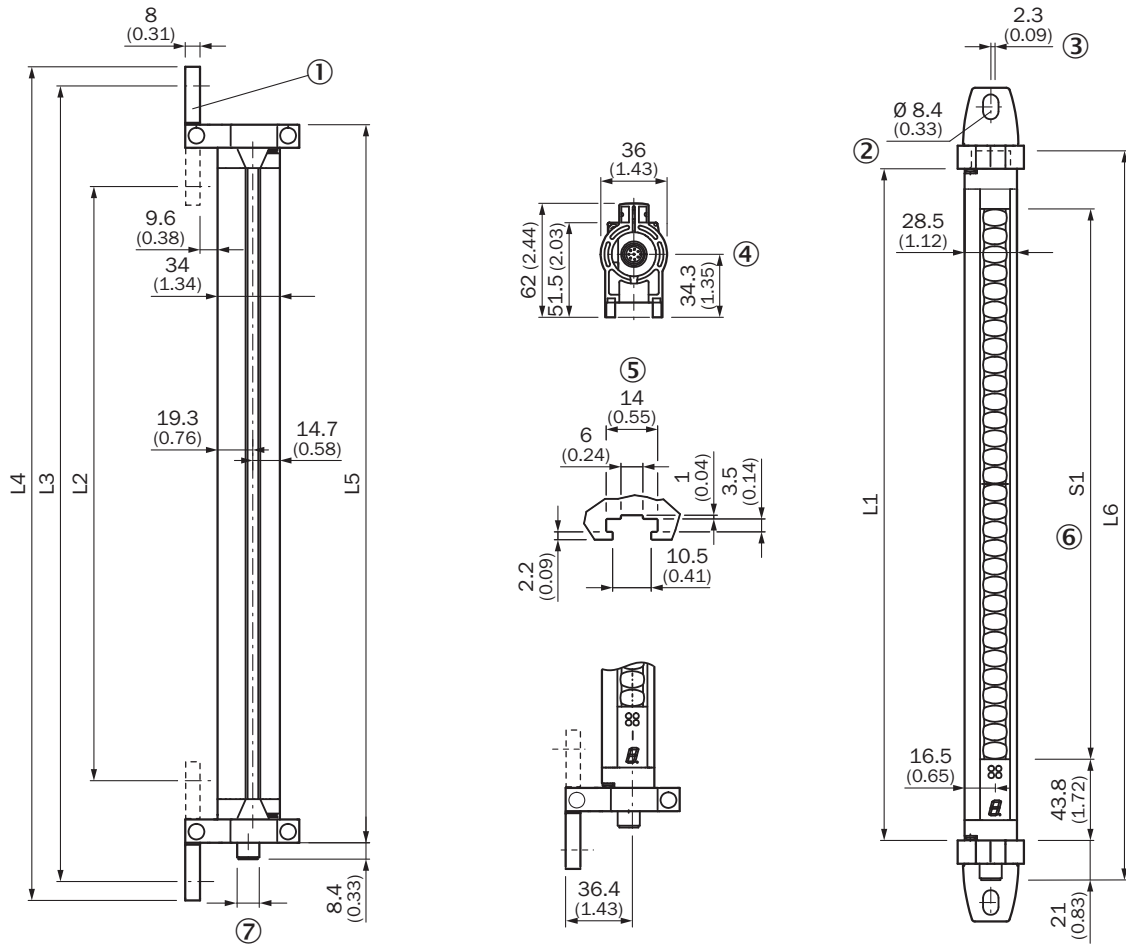
ECLASS 5.0	27272704
ECLASS 5.1.4	27272704
ECLASS 6.0	27272704
ECLASS 6.2	27272704
ECLASS 7.0	27272704
ECLASS 8.0	27272704
ECLASS 8.1	27272704
ECLASS 9.0	27272704
ECLASS 10.0	27272704
ECLASS 11.0	27272704
ECLASS 12.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549

UNSPSC 16.0901

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Dimensional drawing (Dimensions in mm (inch))

Protective field heights 150 mm to 1200 mm

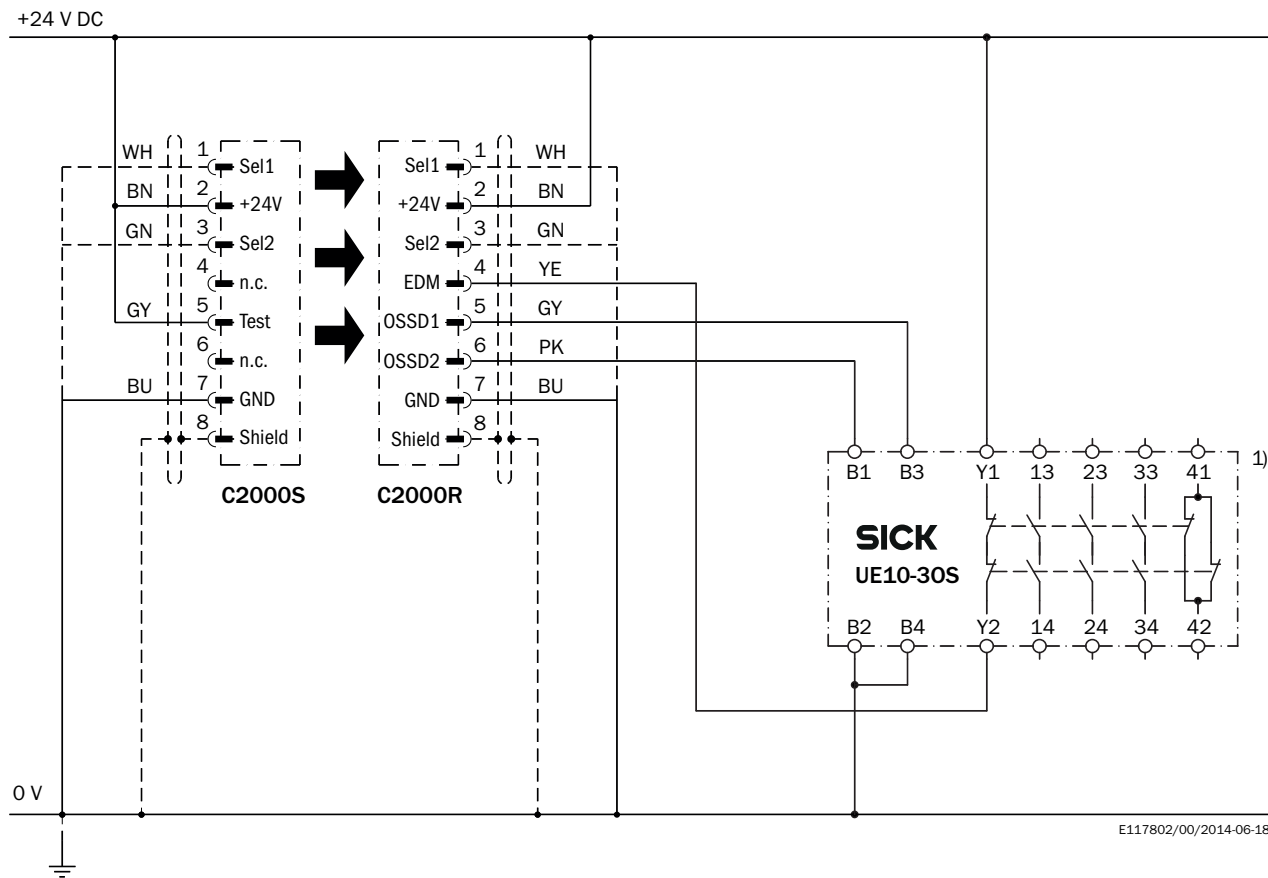


Sender with swivel mount, small housing (receiver mirror image)

- ① Mounting clamp
- ② M8 hexagon screw, DIN 933 with DIN 9021 washer (not included with delivery)
- ③ Center of light beam offset
- ④ Adjustment
- ⑤ Sliding nut groove for side mounting
- ⑥ Protective field height
- ⑦ Male connector M12, 8-pin

Connection diagram




C2000 Standard to UE10-30S safety relay



E117802/00/2014-06-18

Recommended accessories

Other models and accessories → www.sick.com/C2000_Standard

	Brief description	Type	Part no.
Alignment aids			
	Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!, 19 mm x 67.3 mm x 66.9 mm	AR60	1015741
Plug connectors and cables			
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 8-pin, straight • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: 0.25 mm² ... 0.5 mm² 	DOS-1208-G	6028422
Terminal and alignment brackets			
	4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast	BEF-1SHABAZN4	2019506

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