

# C20S-045203A11, C20E-045303A31

C2000 RES/EDM

**SAFETY LIGHT CURTAINS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

System part	Type	Part no.
Sender	C20S-045203A11	1016460
Receiver	C20E-045303A31	1041571

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 10/5/2015. 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 5/10/2015.

Other models and accessories → [www.sick.com/C2000\\_RES\\_EDM](http://www.sick.com/C2000_RES_EDM)

### Detailed technical data

#### Features

<b>Resolution</b>	30 mm
<b>Protective field height</b>	450 mm
<b>Scanning range</b>	2.5 m ... 19 m
<b>Synchronization</b>	Optical synchronisation

#### Safety-related parameters

<b>Type</b>	Type 2 (IEC 61496-1)
<b>Safety integrity level</b>	SIL1 (IEC 61508)
<b>Category</b>	Category 2 (EN ISO 13849)
<b>Test rate (internal test)</b>	13 /s (EN ISO 13849) <sup>1)</sup>
<b>Maximum demand rate</b>	≤ 8 min <sup>-1</sup> (EN ISO 13849) <sup>2)</sup>
<b>Performance level</b>	PL c (EN ISO 13849)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	2.2 × 10 <sup>-8</sup> (EN ISO 13849)
<b>T<sub>M</sub> (mission time)</b>	20 years (EN ISO 13849)
<b>Safe state in the event of a fault</b>	At least one OSSD is in the OFF state.

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

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

#### Interfaces

<b>System connection</b>	Male connector M12, 8-pin
Conductor cross section	0.25 mm <sup>2</sup>
Permitted cable length	≤ 15 m <sup>1)</sup>
<b>Configuration method</b>	Hard wired
<b>Display elements</b>	LED/7-segment
<b>Status display</b>	LEDs

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

## Electrical data

<b>Protection class</b>	III (EN 50178)
<b>Output signal switching devices (OSSDs)</b>	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored

## Ambient data

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

## Other information

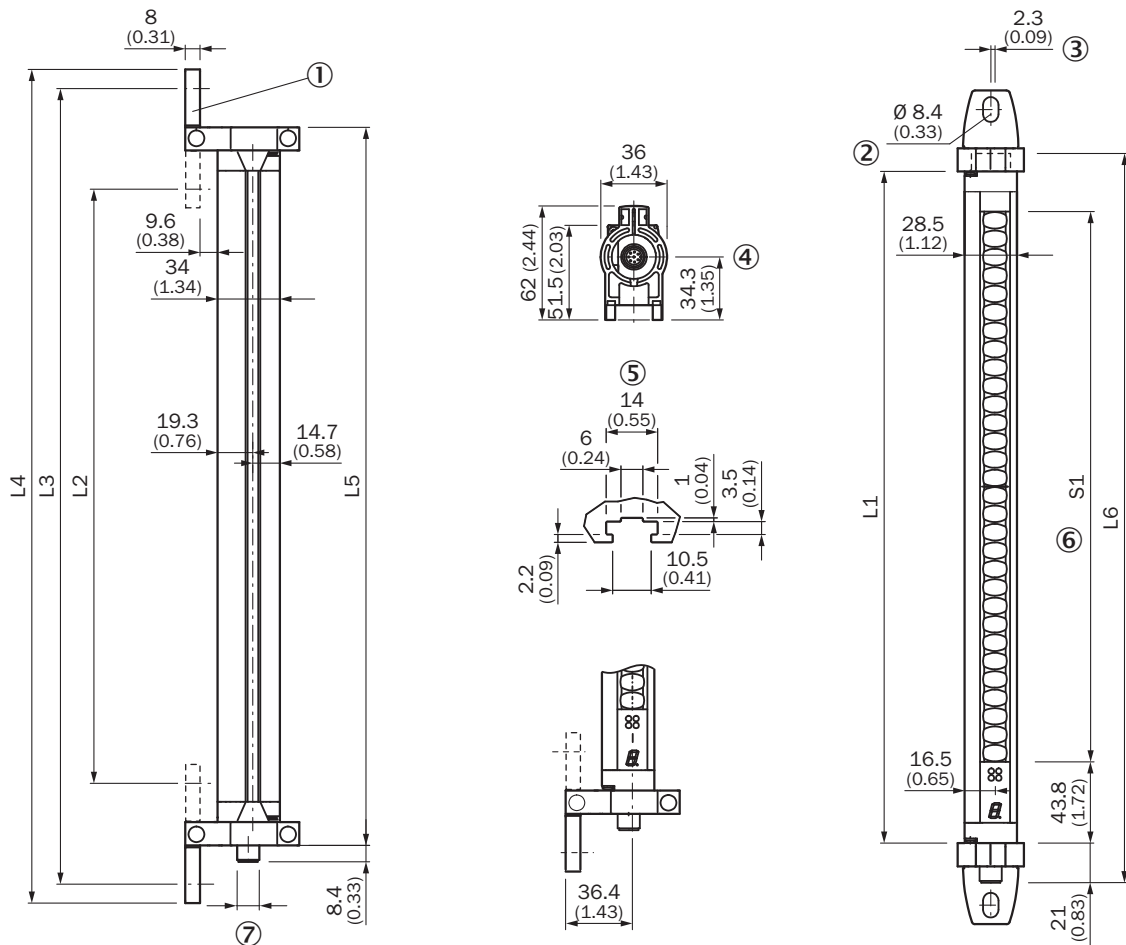
<b>Wave length</b>	950 nm
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## Classifications

<b>eCl@ss 5.0</b>	27272704
<b>eCl@ss 5.1.4</b>	27272704
<b>eCl@ss 6.0</b>	27272704
<b>eCl@ss 6.2</b>	27272704
<b>eCl@ss 7.0</b>	27272704
<b>eCl@ss 8.0</b>	27272704
<b>eCl@ss 8.1</b>	27272704
<b>eCl@ss 9.0</b>	27272704
<b>eCl@ss 10.0</b>	27272704
<b>eCl@ss 11.0</b>	27272704
<b>eCl@ss 12.0</b>	27272704
<b>ETIM 5.0</b>	EC002549
<b>ETIM 6.0</b>	EC002549
<b>ETIM 7.0</b>	EC002549
<b>ETIM 8.0</b>	EC002549
<b>UNSPSC 16.0901</b>	46171620

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

Protective field heights 150 mm to 1200 mm

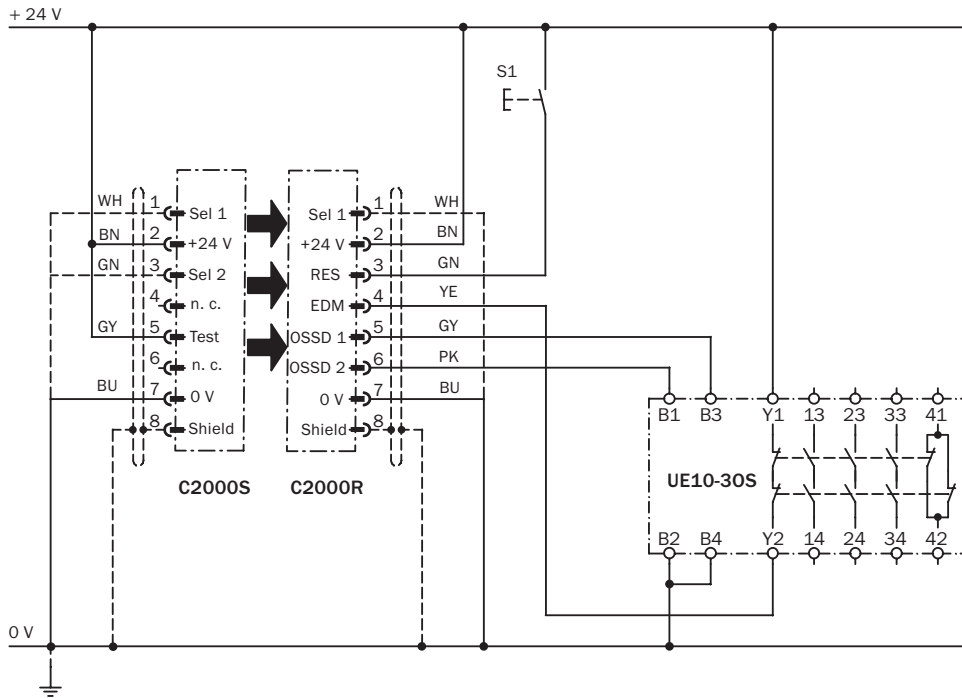


Sender with swivel mount, small housing (receiver mirror image)

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





### Connection diagram

C2000 RES/EDM safety light curtain to UE10-30S safety relay



### Recommended accessories

Other models and accessories → [www.sick.com/C2000\\_RES\\_EDM](http://www.sick.com/C2000_RES_EDM)

	Brief description	Type	Part no.
<b>Alignment aids</b>			
	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
<b>Test and monitoring tools</b>			
	30 mm diameter	Test rod 30 mm	2022602
<b>Terminal and alignment brackets</b>			
	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](http://www.sick.com)