

C20S-090202A21

C2000 Cascadable

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
C20S-090202A21	1018110

1.) Concerns installation as a replacement part for previous type 2 device in machine: Regarding Machinery Directive 2006/42/EC, Article 1, Paragraph (2a) this type 2 device may only be used as a replacement part for identical PL d / SIL2 devices within the EU if the machine was put into circulation before 2015-05-10. Keep this note with your machine documentation. If the machine is sold on, this note and the information it contains must be passed on to every subsequent buyer. 2.) Concerns installation on 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 PL c / SIL1 as of 2015-05-10.

Other models and accessories → www.sick.com/C2000_Cascadable



Detailed technical data

Features

Resolution	20 mm
Protective field height	900 mm
Scanning range	2.5 m ... 19 m
Synchronization	Optical synchronisation

Safety-related parameters

Type	Type 2 (IEC 61496-1)
Safety integrity level	SIL1 (IEC 61508) SILCL1 (EN 62061)
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.

Interfaces

System connection	
Connection type	Male connector M12, 8-pin
Permitted cable length	≤ 15 m ¹⁾
Conductor cross-section	0.25 mm ²
Extension connection	

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

²⁾ For additional information on Flexi Soft -> www.sick.com/Flexi_Soft.

Connection type	Female connector M12, 8-pin
Configuration method	Hard wired
Display elements	LED/7-segment
Fieldbus, industrial network	
Integration via Flexi Soft safety controller	CANopen, DeviceNet™, EtherCAT®, EtherNet/IP™, Modbus TCP, PROFIBUS DP, PROFINET ²⁾

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

²⁾ For additional information on Flexi Soft -> www.sick.com/Flexi_Soft.

Electrical data

Protection class	III (EN 50178)
-------------------------	----------------

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)

Other information

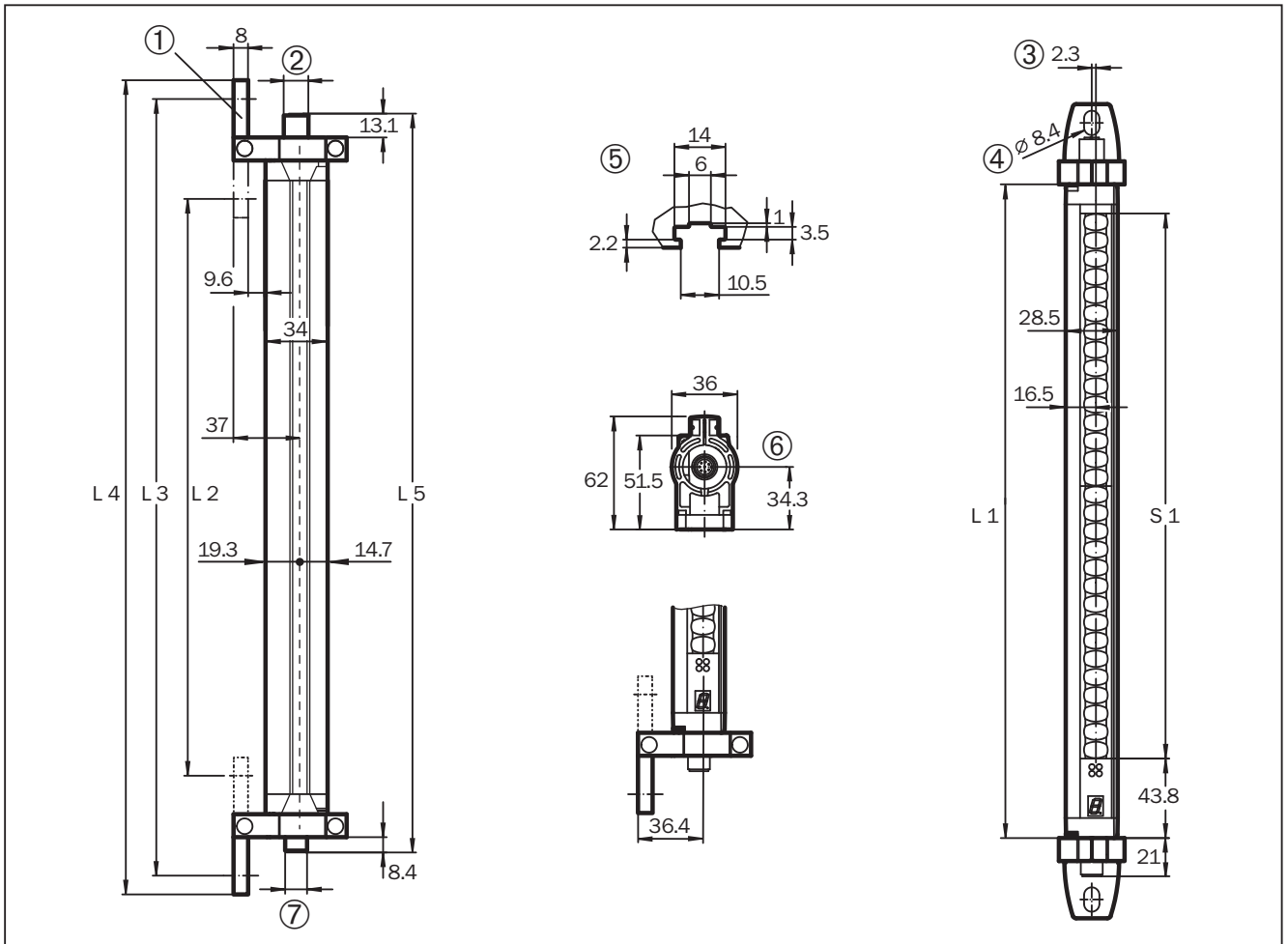
Wave length	950 nm
--------------------	--------

Classifications

ECl@ss 5.0	27272704
ECl@ss 5.1.4	27272704
ECl@ss 6.0	27272704
ECl@ss 6.2	27272704
ECl@ss 7.0	27272704
ECl@ss 8.0	27272704
ECl@ss 8.1	27272704
ECl@ss 9.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
UNSPSC 16.0901	46171620

Dimensional drawing (Dimensions in mm (inch))

Protective field heights 150 mm to 1200 mm





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

S1	L1	L2	L3	L4	L5
300 (11.81)	364 (14.33)	322 (12.68)	432 (17.01)	452 (17.80)	411 (16.18)
450 (17.72)	515 (20.28)	473 (18.62)	582 (22.91)	603 (23.74)	562 (22.13)
600 (23.62)	666 (26.22)	623 (24.53)	733 (28.86)	754 (29.69)	712 (28.03)
750 (29.53)	816 (32.13)	774 (30.47)	884 (34.80)	904 (35.59)	863 (33.98)
900 (35.43)	967 (38.07)	924 (36.38)	1,034 (40.71)	1,055 (41.54)	1,013 (39.88)
1,050 (41.34)	1,117 (43.98)	1,075 (42.32)	1,185 (46.65)	1,205 (47.44)	1,164 (45.83)
1,200 (47.24)	1,266 (49.84)	1,224 (48.19)	1,334 (52.52)	1,354 (53.31)	1,313 (51.69)

Recommended accessories

Other models and accessories → www.sick.com/C2000_Cascadable

	Brief description	Type	Part no.
Terminal and alignment brackets			
	4 pieces, Mounting kit 6, side bracket, rotatable, Zinc diecast	BEF-1SHABAZN4	2019506
Alignment aids			
	Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!	AR60	1015741

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