C40E-S133
C4000 Advanced ATEX II 3G/3D

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.

C40E-S133 | C4000 Advanced ATEX II 3G/3D
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Illustration may differ

Ordering information

Resolution	Scanning range	Protective field height	System part	Type	Part no.
40 mm	21 m	1,350 mm	Receiver	C40E-S133	1056824

Other models and accessories ➜ www.sick.com/C4000_Advanced_ATEX_II_3G_3D

Detailed technical data

Features

Application	Explosive areas
Ex-approvals	ATEX for gas: II 3G Ex nA op is IIC T4 Gc X ATEX for dust: II 3D Ex tc IIIC T135°C Dc
System part	Receiver
Resolution	40 mm
Scanning range	21 m
Protective field height	1,350 mm
Response time	12 ms (Uncoded) 18 ms (code 1 or code 2)
Synchronization	Optical synchronisation

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)	15×10^{-9} (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.

Functions

	Functions	Delivery status
Protective operation	✓	
Restart interlock	✓	External
External device monitoring (EDM)	✓	Deactivated

	Functions	Delivery status
Beam coding	✓	Uncoded
Configurable scanning range	✓	
Reduced resolution	✓	Deactivated
Fixed blanking	✓	Deactivated
Floating blanking	✓	Deactivated
Safe SICK device communication via EFI	✓	

Functions in combination with UE402

Bypass	✓
Operating mode switching	✓
PSDI mode	✓

Interfaces

System connection	Hirschmann male connector M26, 12-pin
Direction of cable connection	Straight
Conductor cross section	0.75 mm²
Permitted cable length	50 m [1]
Configuration connection	Female connector M8, 4-pin
Configuration method	PC with CDS (Configuration and Diagnostic Software)
Display elements	7-segment display

[1] Depending on load, power supply and wire cross-section. The technical specifications must be observed.

Electrical data

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V ... 28.8 V) [1]
Residual ripple	≤ 10 % [2]
Output signal switching devices (OSSDs)	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored [3]
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	≤ 500 mA
Application diagnostic output (ADO)	
Type of output	PNP semiconductor, short-circuit protected [3]
Output voltage HIGH (active)	24 V DC (V_S – 4.2 V DC ... V_S)
Output voltage LOW (deactivated)	High resistance
Output current HIGH (active)	≤ 100 mA

[1] 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.

[2] Within the limits of V_S.

[3] Applies to the voltage range between –30 V and +30 V.

Mechanical data

Dimensions	See dimensional drawing
Housing cross-section	48 mm x 40 mm

Housing material	Aluminum extruded profile

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 (EN 60068-2-6)
Shock resistance	10 g, 16 ms (EN 60068-2-27)

Other information

Wave length	850 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
eCl@ss 10.0	27272704
eCl@ss 11.0	27272704
eCl@ss 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))

Sliding nut groove
for side mounting
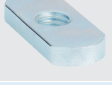
Cable sockets M26 x 11 + FE with crimp contacts

DIN 43651 plug
(M26 x 11 + FE)
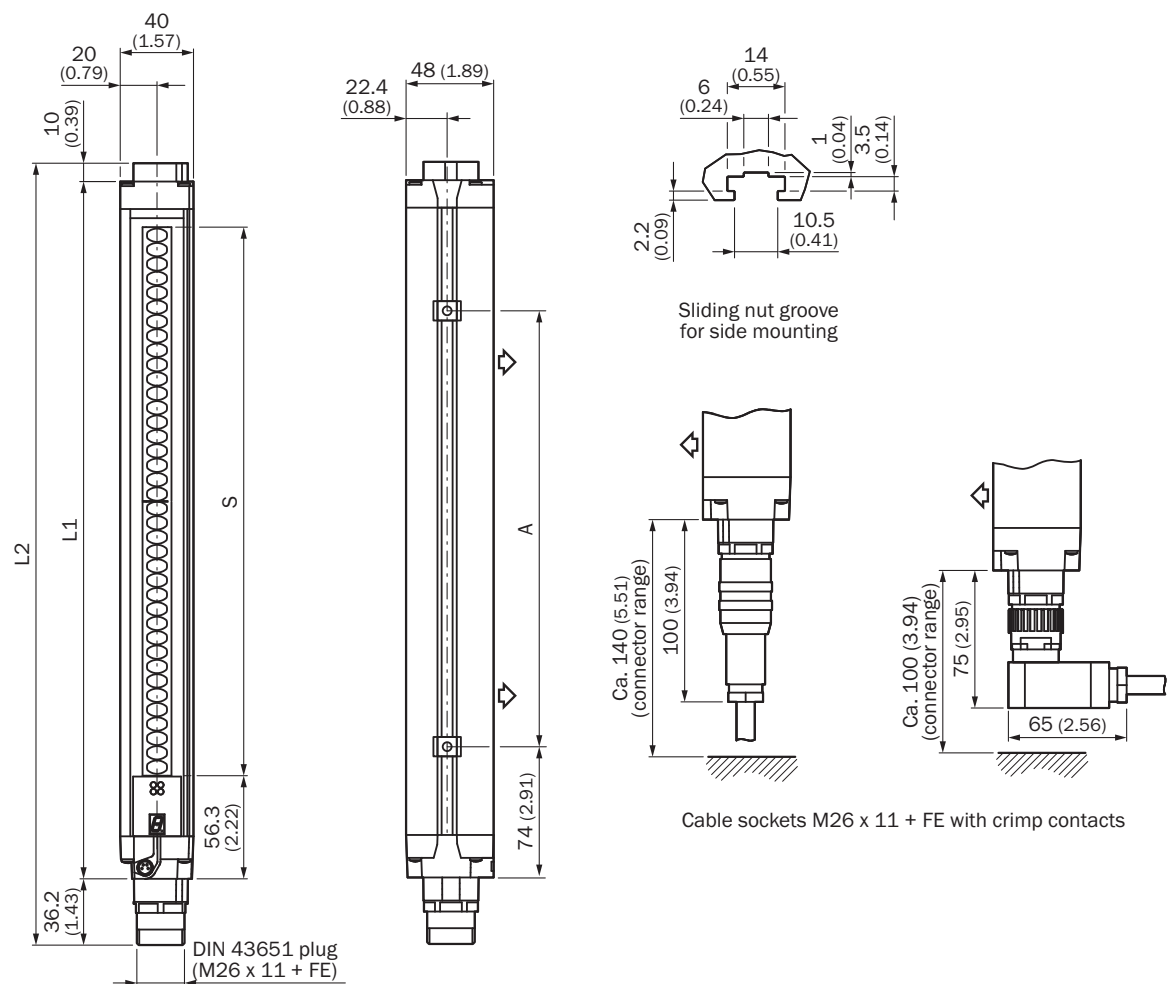
Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	427	224
450	532	578	374
600	682	728	524
750	833	879	674
900	984	1.030	824
1.050	1.134	1.180	974
1.200	1.283	1.329	1.124
1.350	1.435	1.481	1.274
1.500	1.586	1.632	1.424
1.650	1.736	1.782	1.574
1.800	1.887	1.933	1.724

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Recommended accessories

Other models and accessories ➜ www.sick.com/C4000_Advanced_ATEX_II_3G_3D

	Brief description	Type	Part no.
EFI gateways			
	PROFINET PROFIsafe	UE4740-22H0000	1046978
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
	Adapter AR60 for housing cross-section 48 mm x 40 mm	AR60 adapter, 48x40	4032461
	Adapter AR60 for housing cross-section 48 mm x 40 mm in PU3H device column	AR60 adapter, 48x40, PU3H	4056731
Optics cloths			
	Cloth for cleaning optical surfaces	Lens cloth	4003353
Test and monitoring tools			
	40 mm diameter, 250 mm length	Test rod 40 mm	2022604
Mounting brackets and plates			
	4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers	BEF-3WNGBAST4	7021352
	4 pieces, Mounting kit 11, exchangeable retainer, suitable for replacement of FGS	BEF-3WNGBCST4	2021646
Other mounting accessories			
	4 pieces, Sliding nut set, M5, 4x, Included in delivery	Sliding nuts	2017550
	6 pieces, suitable for PNS75 and PNS125	Sliding nuts for deflector mirror	2030600
Plug connectors and cables			
	Head A: Flying leads Head B: Flying leads Cable: PVC, unshielded max. 100 m, fitting for EFI connections	Connecting cable	6021437
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 5 m Without EFI: Pin 9 and 10 not connected	DOL-0610G05M075KM1	2046888

	Brief description	Type	Part no.
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 10 m Without EFI: Pin 9 and 10 not connected	DOL-0610G10M075KM1	2046889
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: PVC, unshielded, 20 m Without EFI: Pin 9 and 10 not connected	DOL-0610G20M075KM1	2046890
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	DOL-0612G05M075KM0	2022545
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m	DOL-0612G10M075KM0	2022547
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m	DOL-0612G15M075KM0	2022548
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m	DOL-0612G20M075KM0	2022549
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2.5 m	DOL-0612G2M5075KM0	2022544
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 30 m	DOL-0612G30M075KM0	2022550
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 50 m	DOL-0612G50M075KM0	2033548
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 7.5 m	DOL-0612G7M5075KM0	2022546
	Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 2 m	DSL-8U04G02M025KM1	6034574
	Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 10 m	DSL-8U04G10M025KM1	6034575
	Head A: female connector, M26, 12-pin, straight Cable: unshielded 12 crimping contacts enclosed	DOS-0612G000GA3KM0	6020757
	Head A: female connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed	DOS-0612W000GA3KM0	6020758
	Head A: male connector, M26, 12-pin, straight Cable: unshielded 12 crimping contacts enclosed	STE-0612G000GA3KM0	6021191
	Head A: male connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed	STE-0612W000GA3KM0	6021192
Terminal and alignment brackets			
	2 pieces, Mounting kit, rotatable, telescopic, swivel mount, Polyamide PA6	BEF-0SMMEA002	2046172

	Brief description	Type	Part no.
	4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast	BEF-1SHABAZN4	2019506
	4 pieces, Mounting kit 3, rotatable, with shock-absorber	BEF-1SHADAAL4	2017752
	4 pieces, Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount	BEF-2SMMEAAL4	2044847
	4 pieces, Stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301	BEF-2SMMEAES4	2023708
	4 pieces, Mounting kit 2, rotatable, swivel mount, Polyamide PA6	BEF-2SMMEAKU4	2019659
	4 pieces, Reinforced stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301	BEF-2SMMVAES4	2026850

Switching amplifiers

		Type	Part no.
	• **Applications:** Functionality upgrade • **Compatible sensor types:** C4000 safety light curtains • **Description:** Upgrades the C4000 Standard, Advanced, Palletizer, Entry/Exit, and Fusion to include the functions defined in the technical specifications, e.g., bypass, operating mode switching, and PSDI in the case of C4000 Standard, Advanced.	UE402	1023577

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."

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