



C40S-S144

C4000 Standard ATEX II 3G/3D

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Ordering information

Resolution	Scanning range	Protective field height	System part	Type	Part no.
14 mm	10 m	450 mm	Sender	C40S-S144	1071158

Other models and accessories → www.sick.com/C4000_Standard_ATEX_II_3G_3D

Illustration may differ



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	Sender
Resolution	14 mm
Scanning range	10 m
Protective field height	450 mm
Synchronization	Optical synchronisation

Safety-related parameters

Type	Type 4 (IEC 61496-1)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (EN 62061)
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

Protective operation	✓
Restart interlock	✓
External device monitoring (EDM)	✓
Beam coding	✓
Safe SICK device communication via EFI	✓

Interfaces

System connection	
Connection type	Hirschmann male connector M26, 12-pin
Configuration connection	
Connection type	Female connector M8, 4-pin
Configuration method	PC with CDS (Configuration and Diagnostic Software)
Display elements	7-segment display
Fieldbus, industrial network	
Integration via EFI gateways	CANopen ¹⁾ Ethernet PROFIBUS DP PROFIBUS PROFI-safe PROFINET PROFI-safe
Integration via Flexi Soft safety controller	CANopen ²⁾ DeviceNet™ EtherCAT® EtherNet/IP™ Modbus TCP PROFIBUS DP PROFINET

¹⁾ For a suitable EFI-gateway see modules and gateways in the accessory section of connection systems.

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

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⁾

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.

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
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	950 nm
Type of light	Near-infrared (NIR), invisible

Classifications

ECI@ss 5.0	27272704
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ECI@ss 5.1.4	27272704
ECI@ss 6.0	27272704
ECI@ss 6.2	27272704
ECI@ss 7.0	27272704
ECI@ss 8.0	27272704
ECI@ss 8.1	27272704
ECI@ss 9.0	27272704
ECI@ss 10.0	27272704
ECI@ss 11.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
UNSPSC 16.0901	46171620

Dimensional drawing (Dimensions in mm (inch))

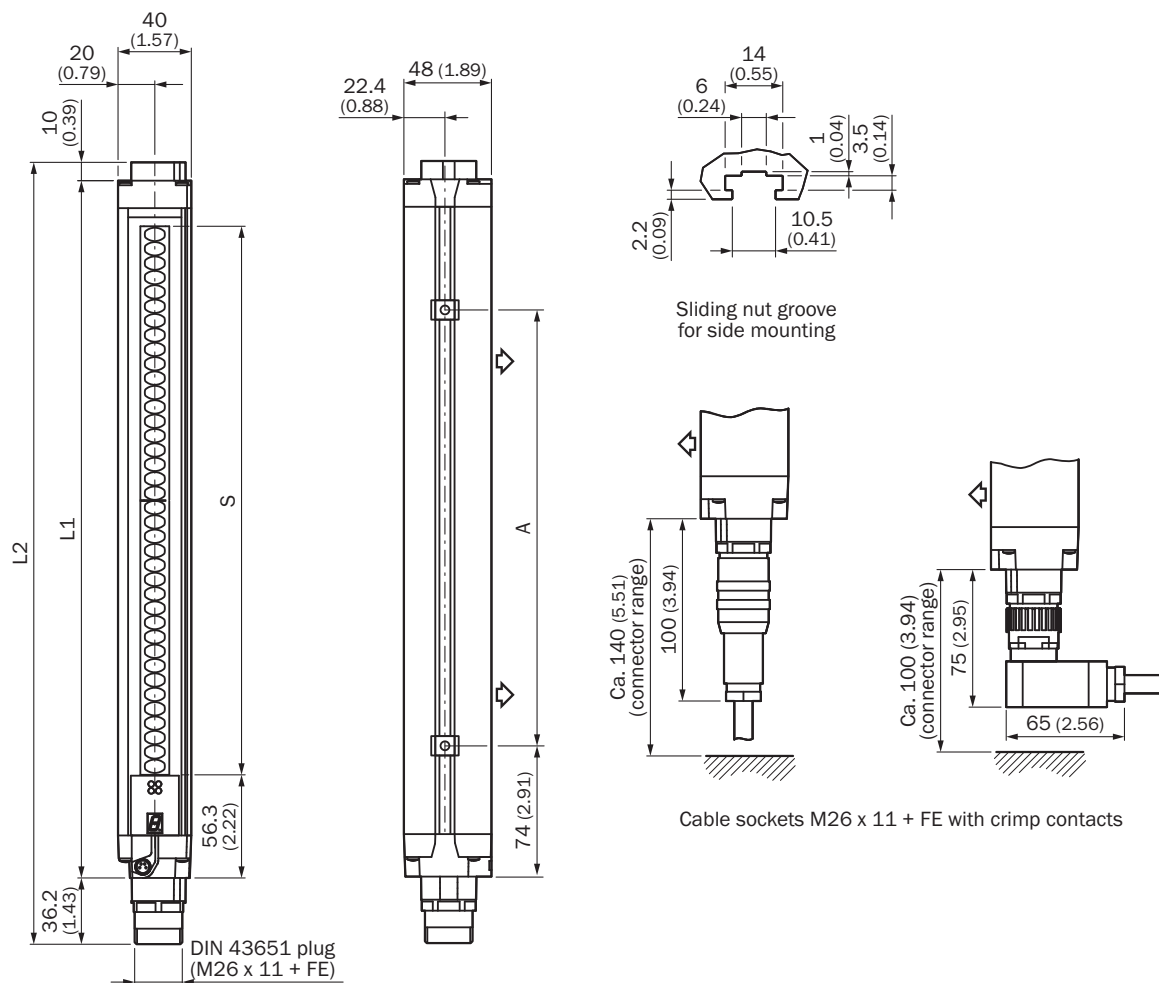
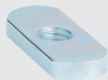


Illustration sender (receiver mirror image)

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

Recommended accessories

Other models and accessories → www.sick.com/C4000_Standard_ATEX_II_3G_3D

	Brief description	Description	Type	Part no.
Mounting brackets and plates				
	4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers	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	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	4 pieces, Sliding nut set, M5, 4x, Included in delivery	Sliding nuts	2017550
	6 pieces, suitable for PNS75 and PNS125	6 pieces, suitable for PNS75 and PNS125	Sliding nuts for deflector mirror	2030600
Terminal and alignment brackets				
	2 pieces, Mounting kit, rotatable, telescopic, swivel mount, Polyamide PA6	2 pieces, Mounting kit, rotatable, telescopic, swivel mount, Polyamide PA6	BEF-0SMMEA002	2046172
	4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast	4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast	BEF-1SHABAZN4	2019506
	4 pieces, Mounting kit 3, rotatable, with shock-absorber	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	4 pieces, Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount	BEF-2SMMEAAL4	2044847

	Brief description	Description	Type	Part no.
	4 pieces, Stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301	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	4 pieces, Mounting kit 2, rotatable, swivel mount, Polyamide PA6	BEF-2SMMEA KU4	2019659
	4 pieces, Reinforced stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301	4 pieces, Reinforced stainless steel bracket, rotatable, stainless steel 1.4350, stainless steel 1.4301	BEF-2SMMVAES4	2026850
Alignment aids				
	Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!	Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!	AR60	1015741
	Adapter AR60 for housing cross-section 48 mm x 40 mm	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	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	Cloth for cleaning optical surfaces	Lens cloth	4003353
EFI gateways				
	PROFIBUS DP	PROFIBUS DP	UE1140-22I0000	1029099
	Ethernet TCP/IP	Ethernet TCP/IP	UE1840-22H0000	1029100
	CANopen	CANopen	UE1940-22I0000	1040397
	PROFIBUS PROFIsafe	PROFIBUS PROFIsafe	UE4140-22I0000	1029098
	PROFINET PROFIsafe	PROFINET PROFIsafe	UE4740-22H0000	1046978
Cleaning agent				
	Plastic cleaner and care product, anti-static, 0.5 liter	Plastic cleaner and care product, anti-static, 0.5 liter	Plastic cleaner	5600006
Switching amplifiers				
	UE402	UE402	UE402	1023577

	Brief description	Description	Type	Part no.
Plug connectors and cables				
 	Head A: Flying leads Head B: Flying leads Cable: PVC, unshielded max. 100 m, fitting for EFI connections	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	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
	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	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	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	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	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	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	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	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	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	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 50 m	DOL-0612G50M075KM0	2033548

	Brief description	Description	Type	Part no.
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 7.5 m	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	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	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	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	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	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	Head A: male connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed	STE-0612W000GA3KM0	6021192

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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