



C40S-0401CA020

C4000 Standard

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
C40S-0401CA020	1026737

Other models and accessories → www.sick.com/C4000_Standard

Illustration may differ



Detailed technical data

Features

Application	Normal industrial environment
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	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) 43 * 10 ⁻⁹ (EN ISO 13849) 63 * 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 device monitoring (EDM)	✓	
Beam coding	✓	Uncoded

Configurable scanning range	✓	0 m ... 2.5 m
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	Angled
Conductor cross section	0.75 mm ²
Permitted cable length	50 m ¹⁾
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⁾

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
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
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Certificates

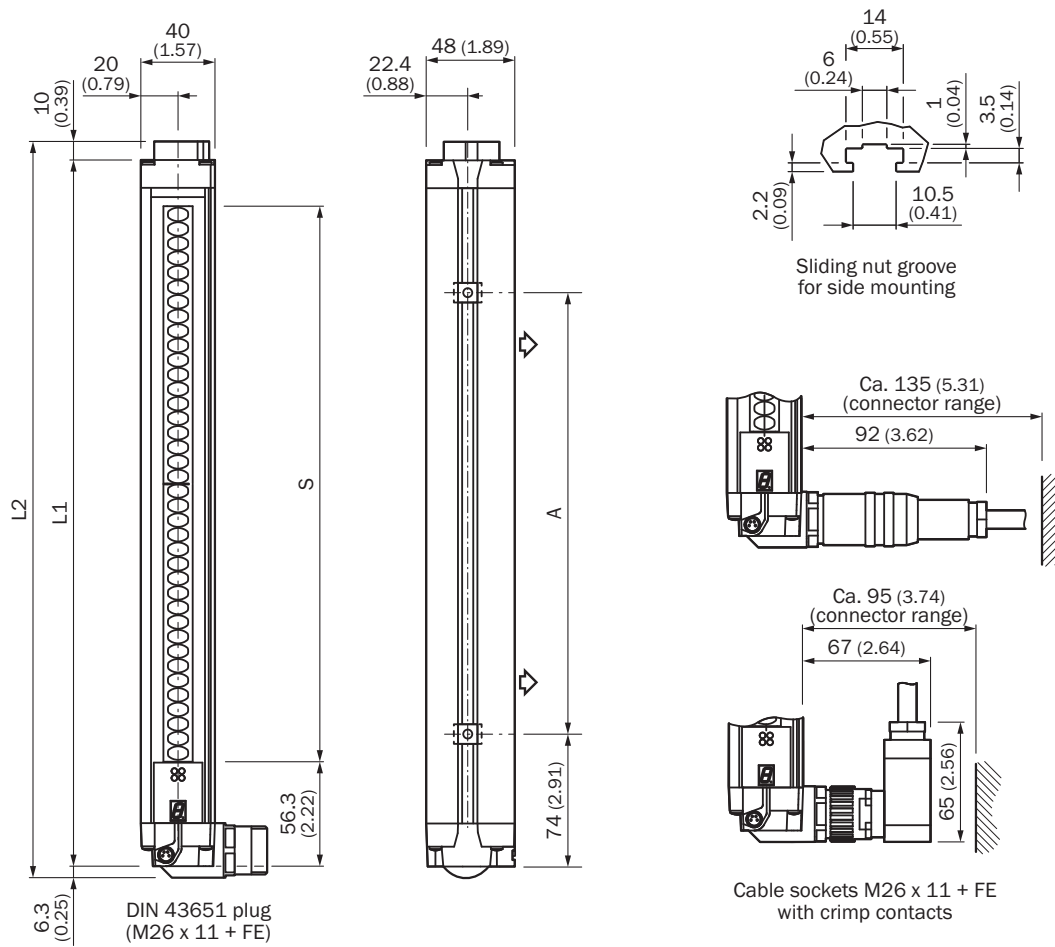
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ULus approval	✓

cUL approval	✓
EC-Type-Examination approval	✓
China GB certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

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	46171620

Dimensional drawing



Dimensions in mm (inch)
illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	397	224
450	532	548	374
600	682	698	524
900	984	1.000	824
1.050	1.134	1.150	974

Connection diagram C4000 safety light curtain to UE10-30S safety relay



E101776/00/2015-03-25

Task

Connection of a C4000 Standard/Advanced/Palletizer/Fusion safety light curtain to UE10-30S. Operating mode with restart interlock and external device monitoring.

Function

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the yellow LED on the receiver and the H3 lamp flash. The system is ready to be switched on. The system is enabled by pressing S1 (button is pressed and released). The OSSD1 and OSSD2 outputs are live, and the UE10-30S is switched on. Upon the interruption of one of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

Possible faults

Cross-circuits and short-circuits of the OSSDs are detected and lead to the inhibited state (lock-out). The incorrect functioning of the UE10-30S will be detected, but will not result in the loss of the shutdown function. Jamming of the S1 button prevents the output circuit from enabling. H2 lamp is illuminated if there is contamination (adjustable parameter).

Comments

¹⁾ Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and taking the risk analysis into account.




²⁾ PELV as required in EN 60204-1 / 6.4

The related operating instructions for the integrated devices must be observed.

Recommended accessories

Other models and accessories → www.sick.com/C4000_Standard

	Brief description	Type	part no.
device protection and care			
	<ul style="list-style-type: none"> Product family: Cleaning agents Description: Cloth for cleaning optical surfaces 	Lens cloth	4003353
Mounting systems			
	<ul style="list-style-type: none"> Description: Mounting kit 6, side bracket, rotatable Material: Zinc diecast Details: Zinc diecast Packing unit: 4 pieces Suitable for: All protective field heights 	BEF-1SHABAZN4	2019506
	<ul style="list-style-type: none"> Description: Mounting kit 2, rotatable, swivel mount Material: Plastic Details: Polyamide PA6 Packing unit: 4 pieces Suitable for: All protective field heights 	BEF-2SMMEAKU4	2019659
	<ul style="list-style-type: none"> Description: Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers Packing unit: 4 pieces Suitable for: All protective field heights 	BEF-3WNGBAST4	7021352
	<ul style="list-style-type: none"> Description: Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount Packing unit: 4 pieces Suitable for: All protective field heights in large housing 	BEF-2SMMEAAL4	2044847
Commissioning aids and test equipment			
	<ul style="list-style-type: none"> Product: Alignment aids Dimensions (W x H x L): 19 mm 67.3 mm 66.9 mm Description: Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam! 	AR60	1015741
	<ul style="list-style-type: none"> Product: Alignment aids Description: Adapter AR60 for housing cross-section 48 mm x 40 mm 	AR60 adapter, 48x40	4032461
	<ul style="list-style-type: none"> Product: Alignment aids Description: Adapter AR60 for housing cross-section 48 mm x 40 mm in PU3H device column 	AR60 adapter, 48x40, PU3H	4056731

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M8, 4-pin, straight • Connection type head B: Male connector, USB-A, straight • Cable: 2 m, 4-wire, PVC • Description: Unshielded 	DSL-8U04G02M025KM:	6034574
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M8, 4-pin, straight • Connection type head B: Male connector, USB-A, straight • Cable: 10 m, 4-wire, PVC • Description: Unshielded 	DSL-8U04G10M025KM:	6034575
system plugs and extension modules			
	<ul style="list-style-type: none"> • Applications: Functionality upgrade • Compatible sensor types: C4000 safety light curtains 	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.”

WORLDWIDE PRESENCE:

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