

C40S-1001DA010

C4000 Advanced

SAFETY LIGHT CURTAINS





Ordering information

Туре	part no.
C40S-1001DA010	1018698

Other models and accessories → www.sick.com/C4000_Advanced





Detailed technical data

Features

Application	Normal industrial environment
System part	Sender
Resolution	14 mm
Scanning range	10 m
Protective field height	1,050 mm
Synchronization	Optical synchronisation

Safety-related parameters

carety related parameters	
Туре	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)
$\operatorname{PFH}_{\operatorname{D}}$ (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

T directions		
	Functions	Delivery status
Protective operation	1	
Restart interlock	1	
External device monitoring (EDM)	1	Deactivated
Beam coding	1	Uncoded

Configurable scanning range	1	0 m 2.5 m
Fixed blanking	✓	Deactivated
Floating blanking	1	Deactivated
Safe SICK device communication via EFI	1	

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 mm ²
Permitted cable length	50 m ¹⁾
Extension connection	Hirschmann female connector M26, 12 pin
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.

Mechanical data

Dimensions	See dimensional drawing
Housing cross-section	48 mm x 40 mm
Housing material	Aluminum extruded profile
Weight	2,250 g

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

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓

 $^{^{2)}}$ Within the limits of V_S .

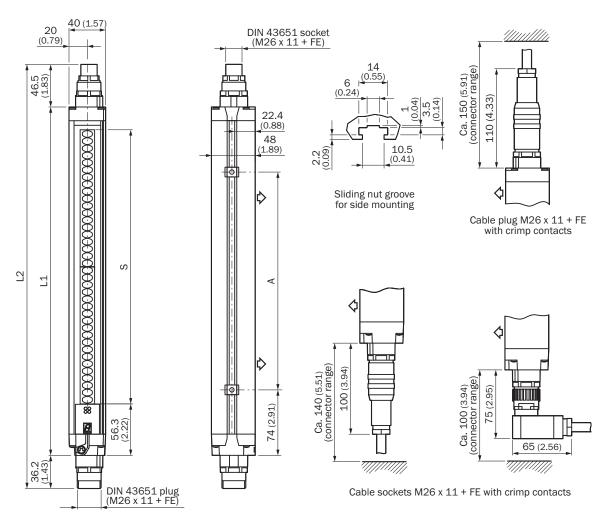
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ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ULus approval	✓
cUL approval	✓
Taiwan OSHA certificate	✓
EC-Type-Examination approval	✓
China GB certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

EQL 400 E Q	07070704
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

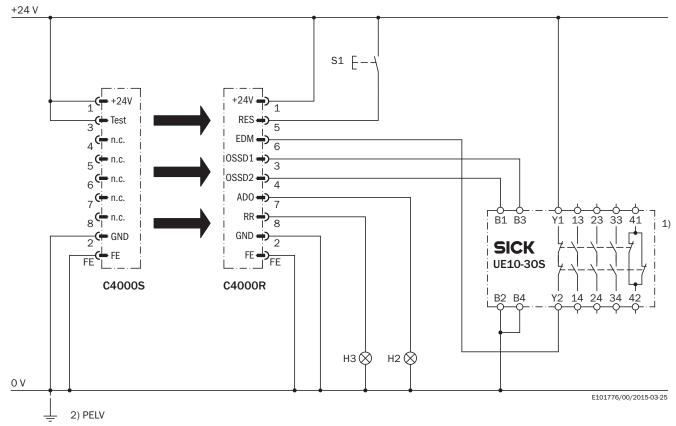


Dimensions in mm (inch)

illustration sender (receiver mirror image)

	L1	L2	A
300	381	464	224
450	532	614	374
600	682	765	524
750	833	915	674
900	984	1.066	824
1.050	1.134	1.216	974
1.200	1.283	1.366	1.124
1.350	1.435	1.517	1.274
1.500	1.586	1.669	1.424
1.650	1.736	1.818	1.574
1.800	1.887	1.969	1.724

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



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.

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

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

Recommended accessories

Other models and accessories → www.sick.com/C4000_Advanced

	Brief description	Туре	part no.
device prote	ction and care		
SICK	 Product family: Cleaning agents Description: Cloth for cleaning optical surfaces 	Lens cloth	4003353
Mounting sys	stems		
	 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
	 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
	 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
	 Description: Stainless steel bracket, rotatable Material: Stainless steel Details: Stainless steel 1.4350, stainless steel 1.4301 Packing unit: 4 pieces 	BEF-2SMMEAES4	2023708
Q	 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
Commission	ng aids and test equipment		
	 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
	 Product: Alignment aids Description: Adapter AR60 for housing cross-section 48 mm x 40 mm 	AR60 adapter, 48x40	4032461
T	 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	Туре	part no.
connectors ar	nd cables		
No.	 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
No.	 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
	 Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads 	DOL-0612G05M075KM(2022545
	 Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads 	DOL-0612G10M075KM(2022547
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 15 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads	DOL-0612G15M075KM(2022548
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 20 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads	DOL-0612G20M075KM(2022549
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Cable: 5 m, PVC Description: Unshielded Connection systems: Flying leads Note: Without EFI: Pin 9 and 10 not connected	DOL-0610G05M075KM:	2046888
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Cable: 10 m, PVC Description: Unshielded Connection systems: Flying leads Note: Without EFI: Pin 9 and 10 not connected	DOL-0610G10M075KM:	2046889
	Connection type head A: Female connector, M26, 12-pin, straight, A-coded Description: Unshielded Connection systems: Crimp contacts Permitted cross-section: 0.5 mm² 1.5 mm² Note: 12 crimping contacts enclosed	DOS-0612G000GA3KM(6020757
	Connection type head A: Female connector, M26, 12-pin, angled, A-coded Description: Unshielded Connection systems: Crimp contacts Permitted cross-section: 0.5 mm² 1.5 mm² Note: 12 crimping contacts enclosed	DOS-0612W000GA3KM(6020758
	Connection type head A: Male connector, M26, 12-pin, straight, A-coded Description: Unshielded Connection systems: Crimp contacts Permitted cross-section: 0.5 mm² 1.5 mm² Note: 12 crimping contacts enclosed	STE-0612G000GA3KMC	6021191
	Connection type head A: Male connector, M26, 12-pin, angled, A-coded Description: Unshielded Connection systems: Crimp contacts Permitted cross-section: 0.5 mm² 1.5 mm² Note: 12 crimping contacts enclosed	STE-0612W000GA3KM(6021192

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Brief description	Туре	part no.
system plugs and extension modules		
 Applications: Functionality upgrade Description: Upgrades the C4000 Standard, Advanced, Palletizer, Entry/Exit, and Fusion to clude the functions defined in the technical specifications, e.g., bypass, operating mode sing, and PSDI in the case of C4000 Standard, Advanced. Compatible sensor types: C4000 safety light curtains 		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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Contacts and other locations -www.sick.com

