

**SAFETY LIGHT CURTAINS** 



SAFETY LIGHT CURTAINS



#### Ordering information

C4000 Palletizer Advanced without extension connection

Illustration may differ

Resolution	Scanning range	Protective field height	System part	Туре	Part no.
30 mm	7 m	900 mm	Receiver	C40E- 0903FK010	1043156

Other models and accessories  $\rightarrow$  www.sick.com/C4000\_Palletizer



#### Detailed technical data

#### Features

Description	C4000 Palletizer Advanced without extension connection
Application	Normal industrial environment
System part	Receiver
Resolution	30 mm
Scanning range	7 m
Protective field height	900 mm
Synchronization	Optical synchronization
Items supplied	Receiver 8 sliding nuts for side mounting Test rod with diameter corresponding to the resolution of the safety light curtain Adhesive label with information on the daily check Operating instructions on CD-ROM CDS (Configuration & Diagnostic Software)

#### Safety-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)
$\ensuremath{PFH}\xspace_{D}$ (mean probability of a dangerous failure per hour)	15 * 10 <sup>-9</sup>
T <sub>M</sub> (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
Function range	Advanced	
Protective operation	1	
Restart interlock	1	Internal
External device monitoring (EDM)	1	Deactivated
Beam coding	1	Code 1

SAFETY LIGHT CURTAINS

	Functions	Delivery status	
Configurable scanning range	✓	0.5 m 7 m	
Reduced resolution	✓	2 beams	
Self-teaching dynamic blanking for goods detection	1		
Self-teaching dynamic blanking for pallet detection	1		
Multiple sampling	✓	2x evaluation	
Direction monitoring	✓		
Object entry monitoring	✓		
Safe SICK device communication via EFI	✓		
Functions in combination with UE402			
Bypass	4		
Operating mode switching	1		
Interfaces			
System connection	Hirschmann male connector M26, 12-pin		
Direction of cable connection	Straight		
Conductor cross section	0.75 mm <sup>2</sup>		
Permitted cable length	50 m <sup>1)</sup>		
Configuration connection	Female connector M8, 4-pin		
Configuration method	PC with CDS (Configuration and Diagnostic Software)		
Display elements	7-segment display		
<sup>1)</sup> Depending on load, power supply and wire cross-section. The technical specifications must be observed.			
Electrical data			
Protection class	III (IEC 61140)		

Protection class	III (IEC 61140)
Supply voltage V <sub>S</sub>	24 V DC (19.2 V 28.8 V) <sup>1)</sup>
Residual ripple	$\leq 10 \%^{2}$
Output signal switching devices (OSSDs)	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored <sup>3)</sup>
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)	
Output voltage HIGH (active)	24 V DC (15 V DC 28.8 V DC)
Output voltage LOW (deactivated)	High resistance
Output current HIGH (active)	≤ 100 mA

<sup>1)</sup> 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.

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

 $^{3)}$  Applies to the voltage range between –30 V and +30 V.

#### Mechanical data

Dimensions

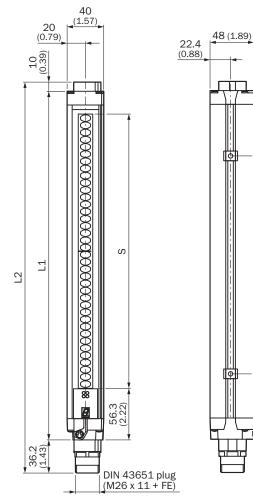
See dimensional drawing

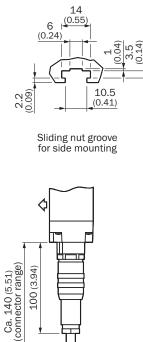
# C40E-0903FK010 | C4000 Palletizer SAFETY LIGHT CURTAINS

Housing cross-section	48 mm x 40 mm
Housing material	Aluminum extruded profile
Weight	1,990 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
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

SAFETY LIGHT CURTAINS

#### Dimensional drawing (Dimensions in mm (inch))



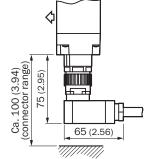


♦

∢

₿

74 (2.91)



Cable sockets M26 x 11 + FE with crimp contacts

Illustration sender (receiver mirror image)

	L1	L2	Α
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

SAFETY LIGHT CURTAINS

#### **Recommended accessories**

Other models and accessories -> www.sick.com/C4000\_Palletizer

	Brief description	Туре	Part no.
Alignment a	ids		
<b>V</b>	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 cloth	5		
SICK	Cloth for cleaning optical surfaces	Lens cloth	4003353
Test and mo	nitoring tools		
	30 mm diameter, 250 mm length	Test rod 30 mm	2022602
Mounting br	ackets and plates		
	4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers	BEF-3WNGBAST4	7021352
Terminal and	d alignment brackets		
	4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast	BEF-1SHABAZN4	2019506
Q	4 pieces, Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount	BEF-2SMMEAAL4	2044847
	4 pieces, Mounting kit 2, rotatable, swivel mount, Polyamide PA6	BEF-2SMMEAKU4	2019659
Others			
	<ul> <li>Connection type head A: Male connector, M26, 12-pin, angled, A-coded</li> <li>Description: Unshielded</li> <li>Connection systems: Crimp contacts</li> <li>Permitted cross-section: 0.5 mm<sup>2</sup> 1.5 mm<sup>2</sup></li> <li>Note: 12 crimping contacts enclosed</li> </ul>	STE- 0612W000GA3KM0	6021192
	<ul> <li>Connection type head A: Male connector, M26, 12-pin, straight, A-coded</li> <li>Description: Unshielded</li> <li>Connection systems: Crimp contacts</li> <li>Permitted cross-section: 0.5 mm<sup>2</sup> 1.5 mm<sup>2</sup></li> <li>Note: 12 crimping contacts enclosed</li> </ul>	STE- 0612G000GA3KM0	6021191
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, straight, A-coded</li> <li>Description: Unshielded</li> <li>Connection systems: Crimp contacts</li> <li>Permitted cross-section: 0.5 mm<sup>2</sup> 1.5 mm<sup>2</sup></li> </ul>	DOS- 0612G000GA3KM0	6020757

SAFETY LIGHT CURTAINS

	Brief description	Туре	Part no.
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, angled, A-coded</li> <li>Description: Unshielded</li> <li>Connection systems: Crimp contacts</li> <li>Permitted cross-section: 0.5 mm<sup>2</sup> 1.5 mm<sup>2</sup></li> <li>Note: 12 crimping contacts enclosed</li> </ul>	DOS- 0612W000GA3KM0	6020758
and the second s	<ul> <li>Connection type head A: Male connector, M8, 4-pin, straight</li> <li>Connection type head B: Male connector, USB-A, straight</li> <li>Cable: 2 m, 4-wire, PVC</li> <li>Description: Unshielded, Configuration cable with integrated RS-232 transducer on USB for connecting a sensor configuration connection (M8, 4-pin) to the USB interface of a PC</li> </ul>	DSL- 8U04G02M025KM1	6034574
and to	<ul> <li>Connection type head A: Male connector, M8, 4-pin, straight</li> <li>Connection type head B: Male connector, USB-A, straight</li> <li>Cable: 10 m, 4-wire, PVC</li> <li>Description: Unshielded, Configuration cable with integrated RS-232 transducer on USB for connecting a sensor configuration connection (M8, 4-pin) to the USB interface of a PC</li> </ul>	DSL- 8U04G10M025KM1	6034575
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, straight</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 20 m, 12-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Connection systems: Flying leads</li> </ul>	DOL- 0612G20M075KM0	2022549
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, straight</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 15 m, 12-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Connection systems: Flying leads</li> </ul>	DOL- 0612G15M075KM0	2022548
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, straight</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 10 m, 12-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Connection systems: Flying leads</li> </ul>	DOL- 0612G10M075KM0	2022547
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, straight</li> <li>Connection type head B: Flying leads</li> <li>Cable: 5 m, PVC</li> <li>Description: Unshielded</li> <li>Connection systems: Flying leads</li> <li>Note: Without EFI: Pin 9 and 10 not connected</li> </ul>	DOL- 0610G05M075KM1	2046888
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, straight</li> <li>Connection type head B: Flying leads</li> <li>Cable: 10 m, PVC</li> <li>Description: Unshielded</li> <li>Connection systems: Flying leads</li> <li>Note: Without EFI: Pin 9 and 10 not connected</li> </ul>	DOL- 0610G10M075KM1	2046889
	<ul> <li>Connection type head A: Female connector, M26, 12-pin, straight</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 5 m, 12-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Connection systems: Flying leads</li> </ul>	DOL- 0612G05M075KM0	2022545
Switching amplifiers			
	<ul> <li>Applications: Functionality upgrade</li> <li>Compatible sensor types: C4000 safety light curtains</li> <li>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.</li> </ul>	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:

Contacts and other locations -www.sick.com



Online data sheet

