C4P-EA09031CA0

deTec

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.

C4P-EA09031CA0 | deTec
SAFETY LIGHT CURTAINS

Ordering information

Note	Resolution	Scanning range	Protective field height	System part	Type	Part no.
System plug 1000 pre-assembled, system plug 1000 pre-assembled	30 mm	30 m	900 mm	Receiver	C4P-EA09031CA0	1116220

System plug 1000 pre-assembled

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

Illustration may differ

Detailed technical data

Features

Sub product family	deTec4
Application	Normal industrial environment
System part	Receiver
Resolution	30 mm
Scanning range	30 m
Protective field height	900 mm
Response time	11 ms (Uncoded) 17 ms (code 1 or code 2)
No blind zones	Yes
Synchronization	Optical synchronisation
Items supplied	Receiver with preassembled system plug 1000 (SP1, M12, 5-pin) Test rod with diameter corresponding to the resolution of the safety light curtain Safety instruction Mounting instructions Operating instructions for download

Safety-related parameters

Type	Type 4 (IEC 61496-1)
Safety integrity level	SIL 3 (IEC 61508)
Category	Category 4 (ISO 13849-1)
Performance level	PL e (ISO 13849-1)
PFH_D (mean probability of a dangerous failure per hour)	
Single device	15.3×10^{-9}
T_M (mission time)	20 years (ISO 13849-1)
Safe state in the event of a fault	At least one OSSD is in the OFF state.

Functions

Protective operation	✓
Automatic calibration of the protective field width	✓
Beam coding	✓

Interfaces

System connection	Male connector M12, 5-pin
Extension connection	–
Configuration method	DIP switch on system plug
Display elements	LEDs
Display of the synchronization status of the upper and lower beams	✓
Near Field Communication (NFC)	✓

Electrical data

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V … 28.8 V)
Ripple	≤ 10 %
Power consumption typical	3.5 W (DC)
Output signal switching devices (OSSDs)	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored [1]
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

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

Mechanical data

Dimensions	See dimensional drawing
Housing material	Aluminum extruded profile

Ambient data

Enclosure rating	IP65 (IEC 60529) IP67 (IEC 60529)
Ambient operating temperature	–30 °C … +55 °C
Storage temperature	–30 °C … +70 °C
Air humidity	15 % … 95 %, Non-condensing
Vibration resistance	5 g, 10 Hz … 55 Hz (IEC 60068-2-6)
Shock resistance	10 g, 16 ms (IEC 60068-2-27)

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))
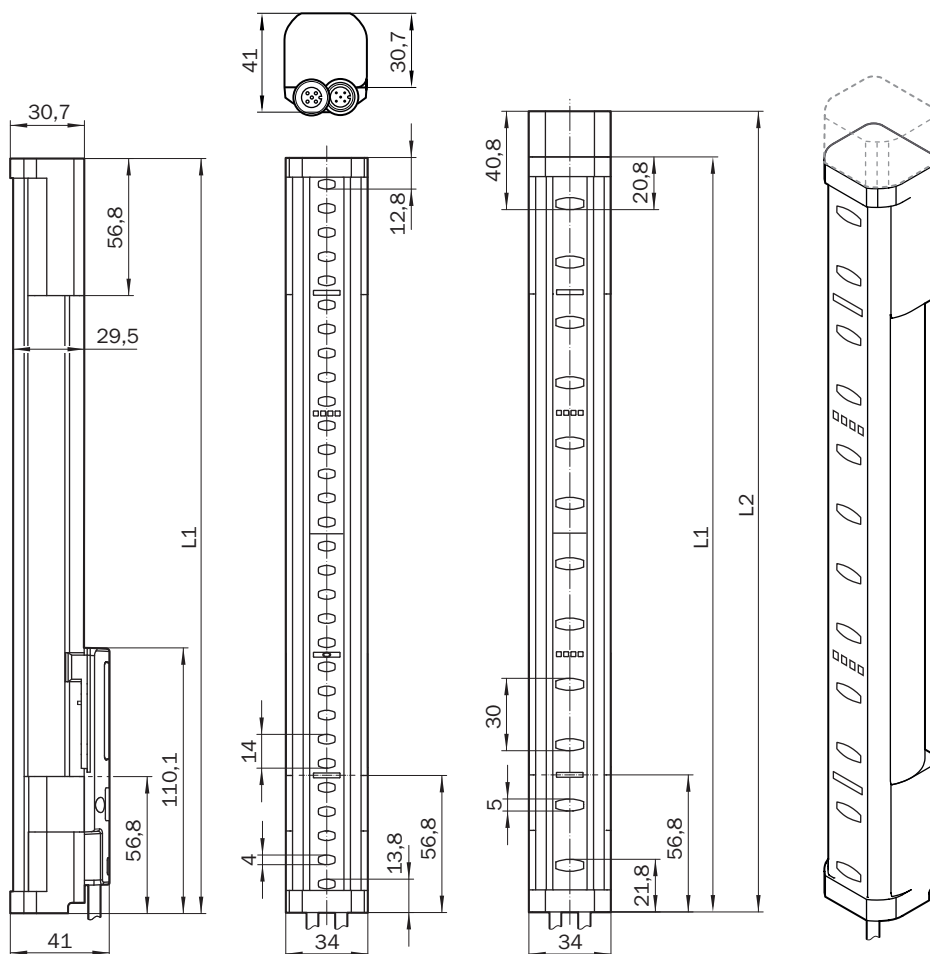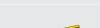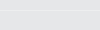
Protective field height	L1	L2
300 (11.81)	313 (12.32)	332 (13.07)
450 (17.72)	463 (18.23)	482 (18.98)
600 (23.62)	613 (24.13)	632 (24.88)

Protective field height	L1	L2
750 (29.53)	763 (30.04)	782 (30.79)
900 (35.43)	913 (35.94)	932 (36.69)
1,050 (41.34)	1,063 (41.85)	1,082 (42.6)
1,200 (47.24)	1,213 (47.75)	1,232 (48.5)
1,350 (53.15)	1,362 (53.62)	1,381 (54.37)
1,500 (59.06)	1,512 (59.53)	1,531 (60.28)
1,650 (64.96)	1,662 (65.43)	1,681 (66.18)
1,800 (70.87)	1,812 (71.34)	1,831 (72.09)
1,950 (76.77)	1,962 (77.24)	1,981 (77.99)
2,100 (82.68)	2,112 (83.15)	2,131 (83.9)

Recommended accessories

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

	Brief description	Type	Part no.
Connection modules			
	IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A	IOLA2US-01101 (SiLink2 Master)	1061790
	Connector for connecting an IO-Link master and up to 2 muting sensors to a safety light curtain or a multiple light beam safety device	IO-Link connector	2092757
	Connector for connecting 2 muting sensors and a muting lamp to a safety light curtain or a multiple light beam safety device	Muting connector	2092758
Muting accessories			
	Sensor bracket G6 and P250	BEF-2KHAAAKU1	2113145
	Universal holder for round steel arms and muting arms, for mounting sensors or reflectors	BEF-KHS-N01	2044953
	Muting arm bracket for deTec safety light curtain or deTem safety multibeam sensor	Muting arm bracket	2106455
	Muting arm, long	Muting arm, long	2111923
	Muting arm, short	Muting arm, short	2111924
Reflectors			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812

Brief description	Type	Part no.
Terminal and alignment brackets		
4 pieces, FlexFix bracket for 2 devices (e.g. sender and receiver), can be aligned ± 15°, including M5 screw, plastic	BEF-1SHABPKU4	2066614
4 pieces, QuickFix bracket for 2 devices (e.g. sender and receiver), plastic	BEF-3SHABPKU4	2098710
• **Connection type head A:** Female connector, M12, 5-pin, A-coded • **Connection type head B:** Male connector, M12, 5-pin, A-coded • **Connection type head C:** Female connector, M12, 5-pin, A-coded • **Description:** T-piece for simultaneous connection to sender and receiver, splits the cable from the control cabinet to the sender and receiver • **Note:** 5-pin	DSC-1205T000025KM0	6030664
• **Connection type head A:** Female connector, M12, 8-pin, A-coded • **Connection type head B:** Female connector, M12, 8-pin, A-coded • **Connection type head C:** Male connector, M12, 8-pin, A-coded • **Description:** T-distributor for simultaneous connection to sender and receiver, splits the cable from the control cabinet between the sender and receiver • **Note:** 8-pin	DSC-1208T000025KM0	6058647
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A15-020UB5XLEAX	2095617
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A15-050UB5XLEAX	2095618
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A15-100UB5XLEAX	2095619
• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A18-050UA5XLEAX	2095653
• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A18-100UA5XLEAX	2095654
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A15-020UB5M2A15	2096009

	Brief description	Type	Part no.
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A15-050UB5M2A15	2096010
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A15-100UB5M2A15	2096011
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 8-pin, straight, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A18-020UA5M2A18	2096033
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 8-pin, straight, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A18-050UA5M2A18	2096034
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 8-pin, straight, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A18-100UA5M2A18	2096035
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation, Robot	YF2A18-020UA5XLEAX	2095652

Photoelectric sensors

	Brief description	Type	Part no.
	• **Sensing range max.:** 0.15 m … 12 m0.15 m … 10 m • **Functional principle:** Photoelectric retro-reflective sensor • **Functional principle detail:** With minimum distance to reflector (dual lens system) • **Switching output:** PNP • **Switching mode:** Light/dark switching • **Connection type:** Male connector M12, 4-pin • **Light source:** PinPoint LED • **Adjustment:** None	GL10-P4151	1069860
	• **Sensing range max.:** 0.03 m … 6 m • **Functional principle:** Photoelectric retro-reflective sensor • **Connection type:** Cable with M12 male connector, 4-pin • **Type of light:** Visible red light • **Adjustment:** Potentiometer • **Housing:** Rectangular	GL6-P0211S49	1070568
	• **Sensing range max.:** 20 mm … 950 mm • **Functional principle:** Photoelectric proximity sensor • **Functional principle detail:** Background suppression • **Switching output:** PNP • **Switching mode:** Light switching • **Connection type:** Male connector M12, 4-pin • **Light source:** PinPoint LED • **Adjustment:** Potentiometer	GTB10-P4411S01	1066852

	Brief description	Type	Part no.
	• **Sensing range max.:** 5 mm ... 500 mm • **Functional principle:** Photoelectric proximity sensor • **Connection type:** Cable with M12 male connector, 4-pin, 300 mm • **Type of light:** Infrared light • **Adjustment:** Potentiometer • **Housing:** Rectangular	GTB6-P7441S56	1077541

Safety switching amplifier

	• **Applications:** Output expansion module for OSSDs • **Compatible sensor types:** Safety sensors with OSSDs • **Connection type:** Front connector with spring terminals • **Restart interlock:** no • **External device monitoring (EDM):** Via path • **Outputs:** 2 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe) • **Housing width:** 18 mm	RLY3-OSSD100	1085343
	• **Applications:** Output expansion module for OSSDs • **Compatible sensor types:** Safety sensors with OSSDs • **Connection type:** Front connector with spring terminals • **Restart interlock:** no • **External device monitoring (EDM):** Via path • **Outputs:** 4 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe), 1 signaling current path (not safe) • **Housing width:** 28 mm	RLY3-OSSD400	1099971

SP1 system plug

	• **System plug:** SP1 • **Connection type:** Male connector M12, 5-pin • **Extension connection:** –	SP1-1000	2076832
	• **System plug:** SP1 • **Connection type:** Male connector M12, 5-pin • **Extension connection:** Female connector M12, 5-pin	SP1-1100	2076833
	• **System plug:** SP1 • **Connection type:** Male connector M12, 8-pin • **Extension connection:** –	SP1-1200	2076834
	• **System plug:** SP1 • **Connection type:** Male connector M12, 8-pin • **Extension connection:** Female connector M12, 5-pin	SP1-1300	2076835

Sensor Integration Gateway

	• **Further functions:** Web server integrated, USB connection for easy configuration of the SIG200 Sensor Integration Gateway with SOPAS ET, the engineering tool from SICK, logic editor is available for easy configuration of logic functions • **Connection CONFIG:** 1 x M8, 4-pin female connector, USB 2.0 (USB-A) • **Logic editor:** yes • **Communication interface:** IO-Link, USB, Ethernet, PROFINET, REST API • **Product category:** IO-Link Master	SIG200-0A0412200	1089794
	• **Description:** The SIG200 Sensor Integration Gateway is an IO-Link master with 4 configurable ports through which the IO-Link devices or standard inputs or standard outputs can be connected to a PLC or cloud application using the REST API. • **Further functions:** Web server integrated, USB connection for easy configuration of the SIG200 Sensor Integration Gateway with SOPAS ET, the engineering tool from SICK, logic editor is available for easy configuration of logic functions • **Connection CONFIG:** 1 x M8, 4-pin female connector, USB 2.0 (USB-A) • **Logic editor:** yes • **Communication interface:** IO-Link, USB, Ethernet, EtherNet/IP™, REST API • **Product category:** IO-Link Master	SIG200-0A0512200	1089796

	Brief description	Type	Part no.
	• **Further functions:** Web server integrated, USB connection for easy configuration of the SIG200 Sensor Integration Gateway with SOPAS ET, the engineering tool from SICK, logic editor is available for easy configuration of logic functions • **Connection CONFIG:** 1 x M8, 4-pin female connector, USB 2.0 (USB-A) • **Logic editor:** yes • **Communication interface:** IO-Link, USB, Ethernet, REST API • **Product category:** IO-Link Master	SIG200-0A0G12200	1102605

2024-11-26 23:31:26 | Product data sheet
Subject to change without notice
SAFETY LIGHT CURTAINS | SICK   9

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**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.