



C4P-PA2103S001

deTec

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
C4P-PA2103S001	1081283

Included in delivery: C4P-SA2103S001 (1), C4P-EA2103S001 (1), T-connector with pushbutton for laser alignment aid, M12, 5-pin (1), BEF-1SHABPKU4S09 (1), C-Fix bracket (1), FlexFix adapter plate (1)

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

Detailed technical data

Features

Product version	deTec4 Prime
Application	Normal industrial environment
System part	Set
Resolution	30 mm
Scanning range	30 m
Protective field height	2,100 mm
Response time	14 ms (Uncoded) 27 ms (code 1 or code 2)
No blind zones	Yes
Synchronization	Optical synchronization
Integrated laser alignment aid	✓
Items supplied	Sender Receiver 2 system plugs, pre-mounted 4 FlexFix brackets T-connector with pushbutton for laser alignment aid Test rod with diameter corresponding to the resolution of the safety light curtain Safety instruction Mounting instructions Operating instructions for download C-Fix bracket

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	9.6×10^{-9}
Cascade with one guest	1.9×10^{-8}
Cascade with two guest devices	2.9×10^{-8}
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	✓
Restart interlock	✓
External device monitoring (EDM)	✓
Cascading	✓

Interfaces

System connection	Plug, M12, 5-pin
Length of cable	200 mm
Cable diameter	5 mm
Extension connection	–
Configuration method	DIP switch on system plug
Display elements	LEDs
Application diagnostic output (ADO)	✓

Electronics

Protection class	III (IEC 61140)
Supply voltage V_s	24 V DC (19.2 V ... 28.8 V)
Ripple	$\leq 10 \%$
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 ($V_s - 2.25 \text{ V DC} \dots V_s$)
OFF state, switching voltage LOW	$\leq 2 \text{ V DC}$
Current-carrying capacity per OSSD	$\leq 500 \text{ mA}$
Application diagnostic output (ADO)	
Type of output	PNP semiconductor, short-circuit protected ¹⁾
Output voltage HIGH (active)	$\geq V_s - 3 \text{ V}$
Output voltage LOW (deactivated)	High resistance
Output current HIGH (active)	$\leq 100 \text{ mA}$

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

Mechanics

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)
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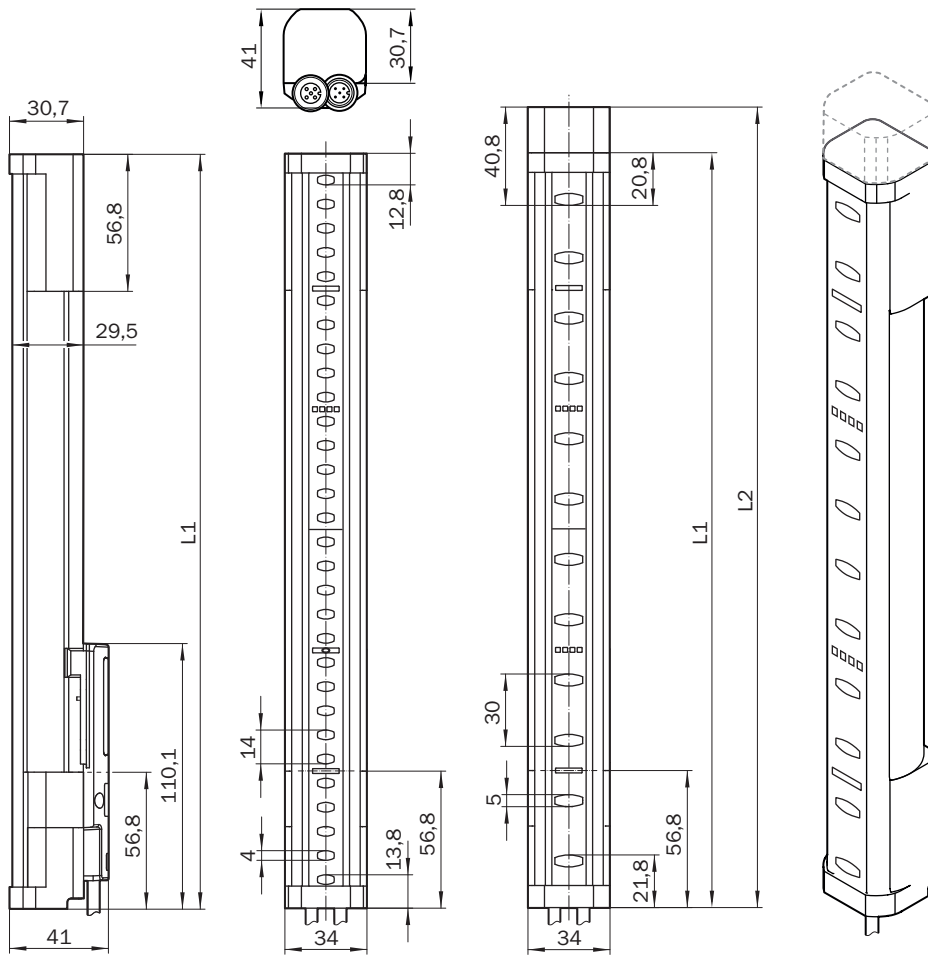
Other information

Wave length	850 nm
Type of light	Near-infrared (NIR), invisible
Integrated laser alignment aid	✓
Laser class	1
Wave length	650 nm
Type of light	Visible red light

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

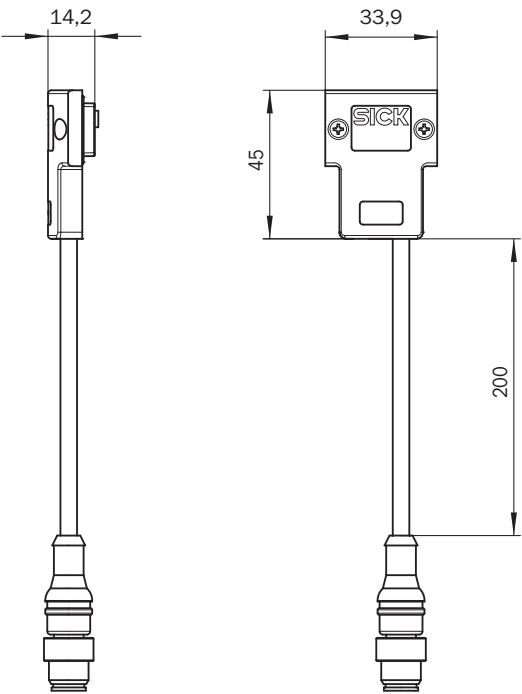
Dimensional drawing



Dimensions in mm (inch)

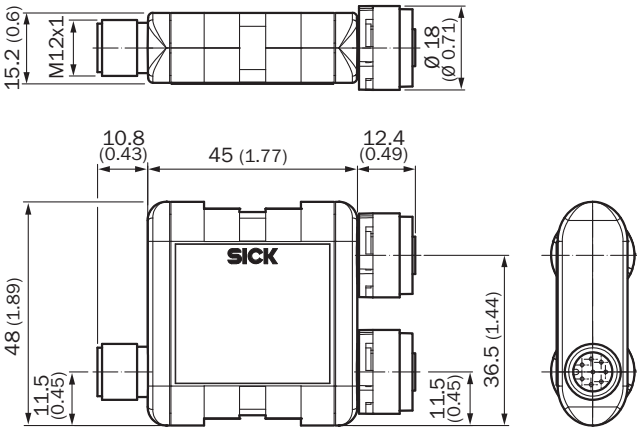
Protective field height	L1	L2
300 (11.81)	313 (12.32)	332 (13.07)
450 (17.72)	463 (18.23)	482 (18.98)
600 (23.62)	613 (24.13)	632 (24.88)
750 (29.53)	763 (30.04)	782 (30.79)
900 (35.43)	913 (35.94)	932 (36.69)
1,050 (41.34)	1,063 (41.85)	1,082 (42.6)
1,200 (47.24)	1,213 (47.75)	1,232 (48.5)
1,350 (53.15)	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)

Dimensional drawing



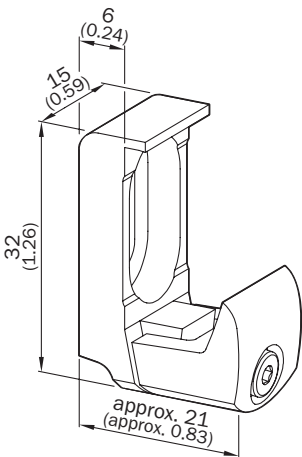
Dimensions in mm (inch)

Dimensional drawing



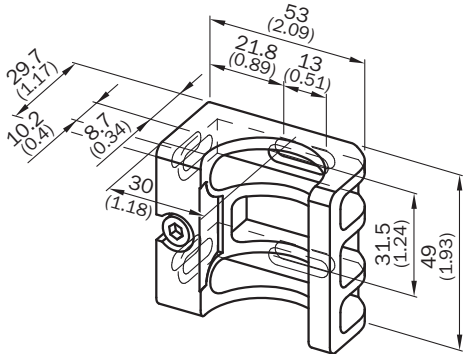
Dimensions in mm (inch)

Dimensional drawing



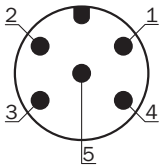
Dimensions in mm (inch)

Dimensional drawing



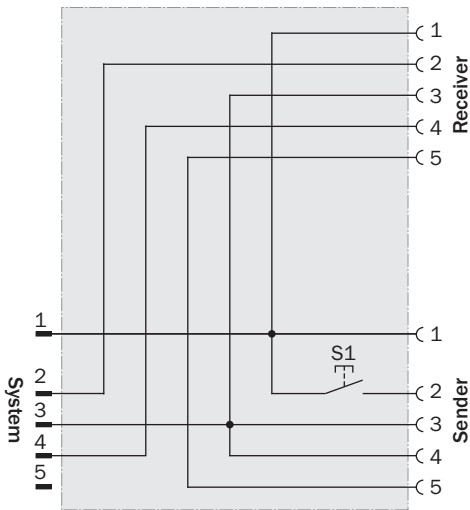
Dimensions in mm (inch)

Pinouts deTec4 system connection



Pin	Sender	Receiver
1	+24 V DC	+24 V DC
2	In2Laser alignment aid button	OSSD1
3	0 V DC	0 V DC
4	In1Laser alignment aid switch	OSSD2
5	MFP1	MFP1
For details see operating instructions		

Pinouts



Recommended accessories

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

	Brief description	Type	part no.
system plugs and extension modules			
	• Function range: SP1 • System connection: Plug, M12, 5-pin • Extension connection: Without extension connection	SP1-1000	2076832
	• Function range: SP1 • System connection: Plug, M12, 5-pin • Extension connection: Female connector M12, 5-pin	SP1-1100	2076833
	• Function range: SP1 • System connection: Male connector M12, 8-pin • Extension connection: Without extension connection	SP1-1200	2076834
	• Function range: SP1 • System connection: Male connector M12, 8-pin • Extension connection: Female connector M12, 5-pin	SP1-1300	2076835

	Brief description	Type	part no.
network devices			
		IOLA2US-01101 (SiLink2 Master)	1061790
		SIG200-0A0G12200	1102605
		SIG200-0A0412200	1089794
		SIG200-0A0512200	1089796
connectors and cables			
		IO-Link connector	2092757
	• 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: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF2A18-020UA5XLEAX	2095652

	Brief description	Type	part no.
Safety relays			
	• 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

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