



# C4P-PA2103S001

deTec

SAFETY LIGHT CURTAINS

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

deTec4 Prime

Resolution	Scanning range	Protective field height	System part	Type	Part no.
30 mm	30 m	2,100 mm	Set	C4P-PA2103S001	1081283

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

Other models and accessories → [www.sick.com/deTec](http://www.sick.com/deTec)



### Detailed technical data

#### Features

<b>Application</b>	Normal industrial environment
<b>System part</b>	Set
<b>Resolution</b>	30 mm
<b>Scanning range</b>	30 m
<b>Protective field height</b>	2,100 mm
<b>Response time</b>	14 ms (Uncoded) 27 ms (code 1 or code 2)
<b>No blind zones</b>	Yes
<b>Synchronization</b>	Optical synchronisation
<b>Integrated laser alignment aid</b>	✓
<b>Items supplied</b>	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

#### Safety-related parameters

<b>Type</b>	Type 4 (IEC 61496-1)
<b>Safety integrity level</b>	SIL3 (IEC 61508) SILCL3 (IEC 62061)
<b>Category</b>	Category 4 (ISO 13849-1)
<b>Performance level</b>	PL e (ISO 13849-1)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	
Single device	$9.6 \times 10^{-9}$
Cascade with one guest	$1.9 \times 10^{-8}$
Cascade with two guest devices	$2.9 \times 10^{-8}$

<b>T<sub>M</sub> (mission time)</b>	20 years (ISO 13849-1)
<b>Safe state in the event of a fault</b>	At least one OSSD is in the OFF state.

### Functions

<b>Protective operation</b>	✓
<b>Automatic calibration of the protective field width</b>	✓
<b>Beam coding</b>	✓
<b>Restart interlock</b>	✓
<b>External device monitoring (EDM)</b>	✓
<b>Cascading</b>	✓

### Interfaces

<b>System connection</b>	Male connector M12, 5-pin
<b>Configuration method</b>	DIP switch on system plug
<b>Display elements</b>	LEDs
<b>Application diagnostic output (ADO)</b>	✓
<b>Fieldbus, industrial network</b> Integration via Flexi Soft safety controller	CANopen <sup>1)</sup> DeviceNet™ EtherCAT® EtherNet/IP™ Modbus TCP PROFIBUS DP PROFINET

<sup>1)</sup> For additional information on Flexi Soft -> [www.sick.com/Flexi\\_Soft](http://www.sick.com/Flexi_Soft).

### Electrical data

<b>Protection class</b>	III (IEC 61140)
<b>Supply voltage V<sub>S</sub></b>	24 V DC (19.2 V ... 28.8 V)
<b>Ripple</b>	≤ 10 %
<b>Output signal switching devices (OSSDs)</b>	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored <sup>1)</sup>
ON state, switching voltage HIGH	24 V DC (V <sub>S</sub> - 2.25 V DC ... V <sub>S</sub> )
OFF state, switching voltage LOW	≤ 2 V DC
Current-carrying capacity per OSSD	≤ 500 mA
<b>Application diagnostic output (ADO)</b>	
Type of output	PNP semiconductor, short-circuit protected <sup>1)</sup>
Output voltage HIGH (active)	≥ V <sub>S</sub> - 3 V
Output voltage LOW (deactivated)	High resistance
Output current HIGH (active)	≤ 100 mA

<sup>1)</sup> Applies to the voltage range between -30 V and +30 V.

### Mechanical data

<b>Dimensions</b>	See dimensional drawing
<b>Housing material</b>	Aluminum extruded profile

## Ambient data

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

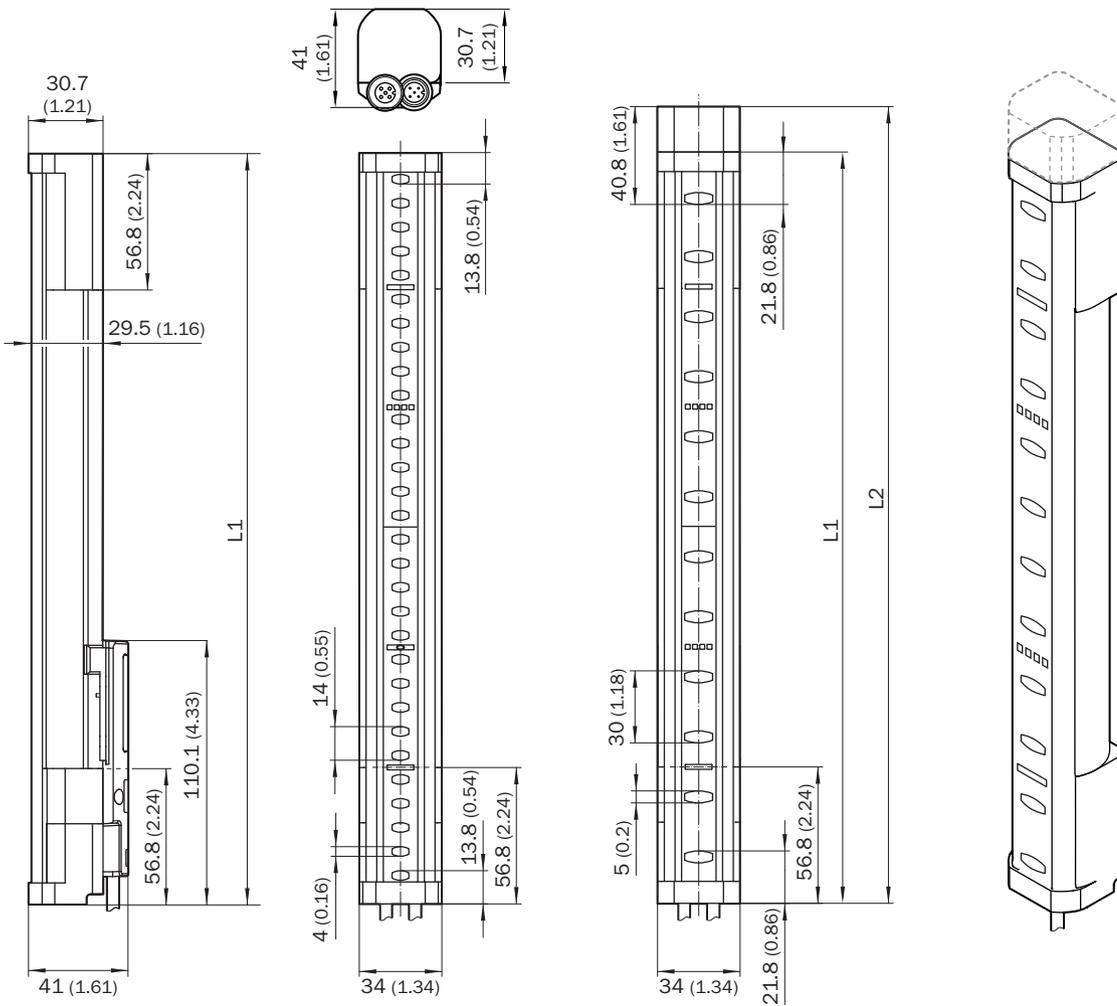
## Other information

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

## Classifications

<b>ECl@ss 5.0</b>	27272704
<b>ECl@ss 5.1.4</b>	27272704
<b>ECl@ss 6.0</b>	27272704
<b>ECl@ss 6.2</b>	27272704
<b>ECl@ss 7.0</b>	27272704
<b>ECl@ss 8.0</b>	27272704
<b>ECl@ss 8.1</b>	27272704
<b>ECl@ss 9.0</b>	27272704
<b>ECl@ss 10.0</b>	27272704
<b>ECl@ss 11.0</b>	27272704
<b>ETIM 5.0</b>	EC002549
<b>ETIM 6.0</b>	EC002549
<b>ETIM 7.0</b>	EC002549
<b>UNSPSC 16.0901</b>	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)

### Recommended accessories

Other models and accessories → [www.sick.com/deTec](http://www.sick.com/deTec)

	Description	Brief description	Type	Part no.
<b>Others</b>				
	deTec deTec system plug	1000	1000	2076832
		1100	1100	2076833
		1200	1200	2076834
		1300	1300	2076835
		IO-Link connector	IO-Link connector	2092757
		IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A	IOLA2US-01101 (SiLink2 Master)	1061790
		SIG200-0A0412200	SIG200-0A0412200	1089794
		SIG200-0A0G12200	SIG200-0A0G12200	1102605
<b>Plug connectors and cables</b>				
		Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A18-020UA5XLEAX	2095652

## 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](http://www.sick.com)