deTec IP69K / deTem IP69K
SAFEST UNDER HIGH PRESSURE

Safety light curtains, multiple light beam safety devices

SICK
Sensor Intelligence.

A SAFE AND REWARDING INVESTMENT

Safety and quality are paramount in the production and processing of food: Supply contaminated or inedible goods, and you will be faced with considerable financial losses and damage to your reputation. That is why hygienic packaging and cleaning processes as well as a safe machine design are so important in the food industry.

Measurement, detecting, identification, protection: SICK offers a wide range of solutions which are tested and certified for use in the food industry.

ECOLAB®   **Diversey™**

The use of safety light curtains and multiple light beam safety devices have a wide range of advantages compared to mechanical protective devices: Easy access to the machine, shorter cleaning times, lower consumption of cleaning agents, water and energy, and thereby much lower costs.

That is why we are equipping our newest generation of safety light curtains and multiple light beam safety devices with an easy-to-clean protective housing with enclosure rating IP69K.

Ensure safety on all levels

Design your machine to be safe and reliable – even in wet zones. Thanks to the high IP69K enclosure rating, your system works reliably, even under extreme conditions.

Save time and money

Minimize effort when cleaning your system. Thanks to the easy-to-clean housing design, cleaning is quick and efficient.

New opportunities for more productivity

Achieve short downtimes and increased machine availability through rugged and resistant product components.

deTec IP69K AND deTem IP69K:
BECAUSE WE ARE RETHINKING SAFETY

The introduction of the deTec safety light curtains and the deTem multiple light beam safety devices has made protecting hazardous points and access points easier than ever. All of our application knowledge has been packed into the optimized protective housing with enclosure rating IP69K, resulting in a high degree of productivity.

Simple commissioning with completely pre-assembled devices

⊕ Time and money savings during commissioning

Start during installation from the pole position. The safety light curtains and multiple light beam safety devices are delivered from the factory with protective housing and connecting cable with uniform enclosure rating IP69K. This makes it possible to quickly install and put them into operation. This saves a lot of time and money. The profitability of an investment begins with quick and easy commissioning.

IP69K-certified entire system for safe production

➕ Safety guaranteed thanks to high enclosure rating IP69K
➕ Increased productivity thanks to long service life and high resistance

Water pressure up to 100 bar and water temperatures up to 80 °C are typical conditions for systems in the food and beverage industry. That is why the protective housing and the connecting cables satisfy the requirements of enclosure rating IP69K, thereby creating a certified entire system. For safe production and more productivity.

Reduction of cleaning times for increasing productivity

➕ Easy and efficient cleaning increases availability and lowers costs
➕ High process reliability due to low risk of contamination

Contamination due to product deposits impair the production process. That is why we have optimized the protective housing once again: Seamless transition from the end cap to pipes and an optimized cable gland. The result is a protective housing without edges and gaps which can be cleaned quickly and easily and does not leave any space for contamination. Less product deposits means less cleaning effort and higher productivity.

Quick replacement of the protective housing ensures a high level of flexibility

➕ High plant availability due to short downtimes during servicing
➕ Flexibility during servicing saves time and money

Easy means quick. Quicks means flexible. That is why it is so easy to change the new protective housing - right on-site. This means even more flexibility in the application and especially during servicing.

➜ www.sick.com/Tutorial_deTec_deTem_IP69K

VERSATILE APPLICATION - SAFETY AT ALL TIMES

For our newest generation of safety light curtains and multiple light beam safety devices with enclosure rating IP69K, we did not only rethink the design. We also kept in mind the wish for more flexibility in the application. You can see this in a variety of different applications.

Access protection on a pick robot

deTec4 Core IP69K safety light curtains are ideally suited for protecting the hazardous point of a pick robot (infeed and outfeed). Resistant material, smooth surfaces, and a resistance to high-pressure cleaning help to prevent the accumulation of bacteria – a requirement for use in hygienic environments.

Protecting a cutter or filler

When processing meat or sausage products, both hygiene and safety have the highest priority. The deTec4 Core IP69K safety light curtain reliably protects the hopper opening of a cutter or a filler. Daily high-pressure cleaning is no problem.
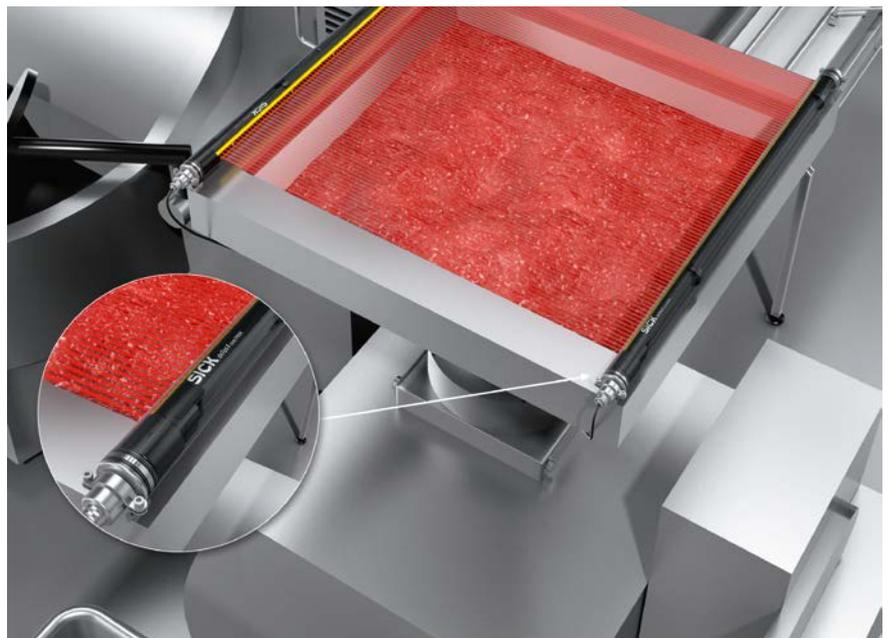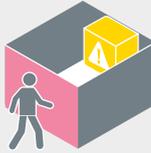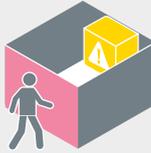
Access protection in cheese production

Rough environmental conditions prevail in cheese factory washing systems due to the frequent use of hot water, cleaning agents and steam cleaners. The impermeability and ruggedness of a safety light curtain play a decisive role here.
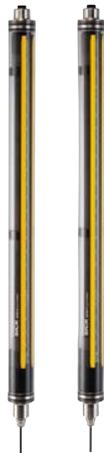

deTec IP69K and deTem IP69K: the new standard for the food and beverage industry

With the deTec IP69K and deTem IP69K, you can take advantage of the entire range of the newest generation of safety light curtains and multiple light beam safety devices - with the newest standard in protective housings with enclosure rating IP69K. For nearly any application:

Safety task			
	Hazardous point protection with finger detection	Hazardous point protection with hand detection	Access protection
deTec4 Core IP69K	■	■		→ 8
deTec2 Core IP69K		■		→ 8
deTem4 Core IP69K			■	→ 14
deTem2 Core IP69K			■	→ 14

SAFEST UNDER HIGH PRESSURE

Product description

The food and beverage industry places stringent requirements on the cleaning of system components. Since it has no edges or gaps, the design of the deTec4 Core IP69K and deTec2 Core IP69K safety light curtains is particularly suitable for situations with stringent hygiene requirements. It boasts impressive features – it's rugged, easy to clean, and made with food-friendly plastic and stainless steel. The protective housing and the connecting cable satisfy enclosure rating IP69K, thereby offering a certified overall system for rough industrial environments. This ensures the highest level of protection water penetration – even under high pressure.

At a glance

- The entire system satisfies enclosure rating IP69K
- Resistance certified in accordance with Ecolab and Diversey
- Easy-to-clean design without edges and gaps
- Protective housing designed to be replaceable
- Breathable membrane prevents protective housing from steaming up

Your benefits

- Enclosure rating IP69K offers high resistance and long service life, making it more economical
- Certified material resistance for maximum reliability
- The ideal design for efficient cleaning in the food industry – it ensures high process and production quality while reducing the risk of contamination
- Replaceable protective housing offers flexibility and saves money in the event that service is needed
- Breathable membrane ensures the highest availability
- Reduction of cleaning times and costs compared to a mechanical protective device

Additional information

→ www.sick.com/deTec4_Core_IP69K | www.sick.com/deTec2_Core_IP69K

For more information, simply enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples, and much more.

Detailed technical data

Features

	deTec4 Core IP69K	deTec2 Core IP69K
Resolution	14 mm / 30 mm (depending on type)	30 mm
Protective field height	300 mm ... 1,800 mm (depending on type)	
Protective field width		
Minimum	0 m ... 6.5 m / 0 m ... 10 m	0 m ... 10 m
Typical	0 m ... 8.5 m / 0 m ... 12.5 m	0 m ... 12.5 m
Response time		
Resolution 14 mm	11 ms ... 20 ms (depending on type)	-
Resolution 30 mm	10 ms ... 13 ms (depending on type)	
Synchronization	Optical synchronisation	

Safety-related parameters

	deTec4 Core IP69K	deTec2 Core IP69K
Type	Type 4 (IEC 61496)	Type 2 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (EN 62061)	SIL1 (IEC 61508) SILCL1 (EN 62061)
Category	Category 4 (EN ISO 13849)	Category 2 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)	PL c (EN ISO 13849)
PFH_D (mean probability of a dangerous failure per hour)	$3,7 \times 10^{-9}$ (EN ISO 13849)	3.1×10^{-8} (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.	

Interfaces

System connection	
Connection type	flying leads, 5 pin
Cable length	15 m
Status display	LEDs
Fieldbus, industrial network	
Integration via Flexi Soft safety controller	CANopen, DeviceNet™, EtherCAT®, EtherNet/IP™, Modbus TCP, PROFIBUS DP, PROFINET [1]

[1] For additional information on Flexi Soft ➜ www.sick.com/Flexi_Soft.

Electrical data

		deTec4 Core IP69K	deTec2 Core IP69K
Protection class		III (IEC 61140)	
Supply voltage V_s		24 V DC (19.2 V DC … 28.8 V DC)	
Ripple		± 10 % [1]	
Power consumption typical			
	Sender	0.82 W … 2.16 W (depending on type)	0.82 W … 1.30 W (depending on type)
	Receiver	1.63 W … 4.32 W (depending on type)	1.63 W … 2.59 W (depending on type)
Safety outputs (OSSD)			
	Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored [2]	
	Switching voltage HIGH	24 V DC (V_s – 2.25 V DC … V_s)	
	Switching voltage LOW	≤ 2 V DC	
	Switching current	≤ 300 mA	

[1] Within the limits of V_s.

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

Mechanical data

Housing diameter		50 mm
Material		
	Protective housing	Acrylic glass (PMMA)
	End caps	Stainless steel 1.4404
	Compensating element (membrane)	PA 6
	Cable glands	Stainless steel 1.4404 including silicone seal
Weight		
	Sender	1,480 g … 3,090 g (± 50 g)
	Receiver	1,490 g … 3,100 g (± 50 g)

Ambient data

Enclosure rating	IP65 (IEC 60529)
	IP66 (IEC 60529)
	IP67 (IEC 60529)
	IP69K (ISO 20653)
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 (EN 60068-2-6)
Shock resistance	10 g, 16 ms (EN 60068-2-29)

Other information

Wave length	Near-infrared (NIR), invisible

Ordering information

Items supplied deTec IP69K:

- Safety light curtain consisting of a sender and a receiver, each inside an IP69K protective housing
- Test rod with diameter corresponding to the resolution of the safety light curtain
- Safety instruction
- Mounting instructions
- Operating instructions for download ➜ www.sick.com/deTec4_Core_IP69K
- Operating instructions for download ➜ www.sick.com/deTec2_Core_IP69K

deTec4 Core IP69K

- **Resolution:** 14 mm
- **Minimum protective field width:** 0 m … 6.5 m
- **Typical protective field width:** 0 m … 8.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C4C-SB03010A10000	1219531	C4C-EB03010A10000	1219058
450 mm	C4C-SB04510A10000	1219532	C4C-EB04510A10000	1219533
600 mm	C4C-SB06010A10000	1219534	C4C-EB06010A10000	1219535
750 mm	C4C-SB07510A10000	1219536	C4C-EB07510A10000	1219537
900 mm	C4C-SB09010A10000	1219538	C4C-EB09010A10000	1219539
1,050 mm	C4C-SB10510A10000	1219540	C4C-EB10510A10000	1219541
1,200 mm	C4C-SB12010A10000	1219542	C4C-EB12010A10000	1219543
1,350 mm	C4C-SB13510A10000	1219544	C4C-EB13510A10000	1219545
1,500 mm	C4C-SB15010A10000	1219546	C4C-EB15010A10000	1219547
1,650 mm	C4C-SB16510A10000	1219548	C4C-EB16510A10000	1219549
1,800 mm	C4C-SB18010A10000	1219550	C4C-EB18010A10000	1219551

- **Resolution:** 30 mm
- **Minimum protective field width:** 0 m … 10 m
- **Typical protective field width:** 0 m … 12.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C4C-SB03030A10000	1219552	C4C-EB03030A10000	1219553
450 mm	C4C-SB04530A10000	1219554	C4C-EB04530A10000	1219555
600 mm	C4C-SB06030A10000	1219556	C4C-EB06030A10000	1219557
750 mm	C4C-SB07530A10000	1219558	C4C-EB07530A10000	1219559
900 mm	C4C-SB09030A10000	1219560	C4C-EB09030A10000	1219561
1,050 mm	C4C-SB10530A10000	1219562	C4C-EB10530A10000	1219563
1,200 mm	C4C-SB12030A10000	1219564	C4C-EB12030A10000	1219565
1,350 mm	C4C-SB13530A10000	1219566	C4C-EB13530A10000	1219567
1,500 mm	C4C-SB15030A10000	1219568	C4C-EB15030A10000	1219569
1,650 mm	C4C-SB16530A10000	1219570	C4C-EB16530A10000	1219571
1,800 mm	C4C-SB18030A10000	1219059	C4C-EB18030A10000	1219572

deTec2 Core IP69K

- **Resolution:** 30 mm
- **Minimum protective field width:** 0 m ... 10 m
- **Typical protective field width:** 0 m ... 12.5 m

| Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C2C-SB03030A10000	1219509	C2C-EB03030A10000	1219510
450 mm	C2C-SB04530A10000	1219511	C2C-EB04530A10000	1219512
600 mm	C2C-SB06030A10000	1219513	C2C-EB06030A10000	1219514
750 mm	C2C-SB07530A10000	1219515	C2C-EB07530A10000	1219516
900 mm	C2C-SB09030A10000	1219517	C2C-EB09030A10000	1219518
1,050 mm	C2C-SB10530A10000	1219519	C2C-EB10530A10000	1219520
1,200 mm	C2C-SB12030A10000	1219521	C2C-EB12030A10000	1219522
1,350 mm	C2C-SB13530A10000	1219523	C2C-EB13530A10000	1219524
1,500 mm	C2C-SB15030A10000	1219525	C2C-EB15030A10000	1219526
1,650 mm	C2C-SB16530A10000	1219527	C2C-EB16530A10000	1219528
1,800 mm	C2C-SB18030A10000	1219529	C2C-EB18030A10000	1219530

Dimensional drawing (Dimensions in mm (inch))
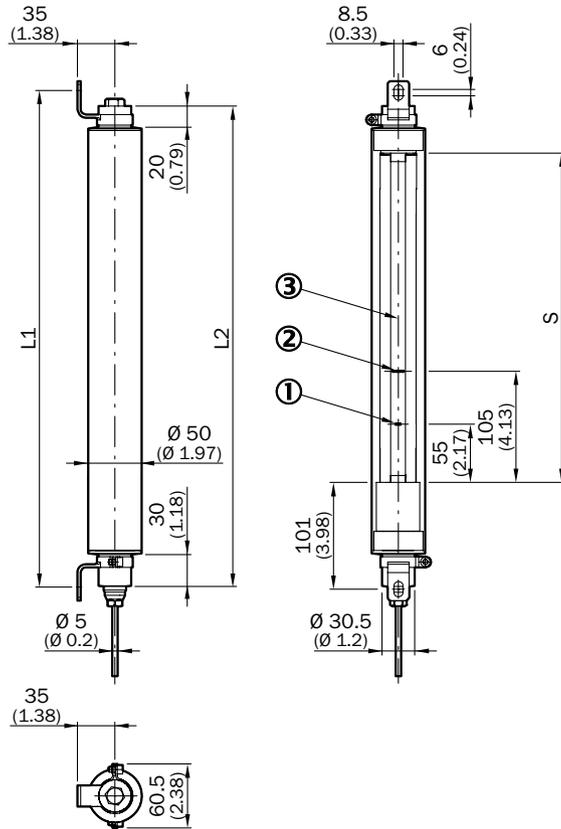
① Operating indicator
② Alignment indicator
③ Optical axis

| Protective field height	S	L1	L2
300 (11.81)	311 (12.24)	469 (18.46)	454 (17.87)
450 (17.72)	461 (18.15)	619 (24.37)	604 (23.78)
600 (23.62)	611 (24.06)	769 (30.28)	754 (29.67)
750 (29.53)	761 (29.96)	919 (36.18)	904 (35.59)
900 (35.43)	911 (35.87)	1,069 (42.09)	1,054 (41.50)
1,050 (41.34)	1,061 (41.77)	1,219 (47.99)	1,204 (47.40)
1,200 (47.24)	1,211 (47.68)	1,369 (53.90)	1,354 (53.31)
1,350 (53.15)	1,361 (53.58)	1,519 (59.80)	1,504 (59.21)
1,500 (59.06)	1,511 (59.49)	1,669 (65.71)	1,654 (65.12)
1,650 (64.96)	1,661 (65.39)	1,819 (71.61)	1,804 (71.02)
1,800 (70.87)	1,811 (71.30)	1,969 (77.52)	1,954 (76.93)

Accessories required for commissioning

Description	Number	Items supplied	Further information
Alignment brackets	2	–	➜ Terminal and alignment brackets

Suitable accessories ➜ page 19

SAFEST UNDER HIGH PRESSURE
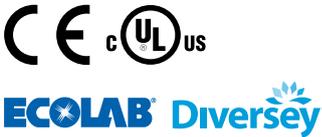
Product description

The food and beverage industry places stringent requirements on the cleaning of system components. Since it has no edges or gaps, the design of the deTem4 Core IP69K multiple light beam safety device is particularly suitable for situations with stringent hygiene requirements. It boasts impressive features – it's rugged, easy to clean, and made with food-friendly plastic and stainless steel. The protective housing and the connecting cable satisfy enclosure rating IP69K, thereby offering a certified overall system for rough industrial environments. This ensures the highest level of protection water penetration – even under high pressure.

At a glance

- The entire system satisfies enclosure rating IP69K
- Resistance certified in accordance with Ecolab and Diversey
- Easy-to-clean design without edges and gaps
- Protective housing designed to be replaceable
- Breathable membrane prevents protective housing from steaming up

Your benefits

- Enclosure rating IP69K offers high resistance and long service life, making it more economical
- Certified material resistance for maximum reliability
- The ideal design for efficient cleaning in the food industry – it ensures high process and production quality while reducing the risk of contamination
- Replaceable protective housing offers flexibility and saves money in the event that service is needed
- Breathable membrane ensures the highest availability
- Reduction of cleaning times and costs compared to a mechanical protective device

Additional information

➜ **www.sick.com/deTem4_Core_IP69K | www.sick.com/deTem2_Core_IP69K**
For more information, simply enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples, and much more.

Detailed technical data

Features

Dimension of the light path	
Minimum	0.5 m ... 12.5 m
Typical	0.5 m ... 15.5 m
Number of beams	2 / 3 / 4 (depending on type)
Beam separation	500 mm / 400 mm / 300 mm (depending on type)
Response time	20 ms
Synchronization	Optical synchronisation

Safety-related parameters

	deTem4 Core IP69K	deTem2 Core IP69K
Type	Type 4 (IEC 61496)	Type 2 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	SIL1 (IEC 61508) SILCL1 (IEC 62061)
Category	Category 4 (ISO 13849)	Category 2 (ISO 13849)
Performance level	PL e (ISO 13849)	PL c (ISO 13849)
PFH$_D$ (mean probability of a dangerous failure per hour)	$3 * 10^{-9}$	
T$_M$ (mission time)	20 years (ISO 13849)	
Safe state in the event of a fault	At least one OSSD is in the OFF state.	

Interfaces

System connection	
Connection type	flying leads, 5 pin
Cable length	15 m
Status display	LEDs
Fieldbus, industrial network	
Integration via Flexi Soft safety controller	CANopen, DeviceNet™, EtherCAT®, EtherNet/IP™, Modbus TCP, PROFIBUS DP, PROFINET [1]

[1] For additional information on Flexi Soft ➜ www.sick.com/Flexi_Soft.

Electrical data

Protection class	III (IEC 61140) [1]
Supply voltage V$_s$	24 V DC (19.2 V DC ... 28.8 V DC) [2]
Residual ripple	± 10 % [3]
Power consumption	50 mA / 150 mA (depending on type)
Power consumption	1.44 W (DC) / 4.32 W (DC) (depending on type)
Safety outputs (OSSD)	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored [4]
Switching voltage HIGH	24 V DC (V$_s$ – 2.25 V DC ... V$_s$)
Switching voltage LOW	≤ 2 V DC
Switching current	≤ 300 mA

[1] SELV/PELV safety/protective extra-low voltage.

[2] 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.

[3] Within the limits of V$_s$.

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

Mechanical data

Housing diameter	50 mm
Material	
Protective housing	Acrylic glass (PMMA)
End caps	Stainless steel 1.4404
Compensating element (membrane)	PA 6
Cable glands	Stainless steel 1.4404 including silicone seal
Weight	
Sender	1,860 g … 2,290 g (± 50 g)
Receiver	1,870 g … 2,300 g (± 50 g)

Umgebungsdaten

Enclosure rating	IP65 (IEC 60529) IP66 (IEC 60529) IP67 (IEC 60529) IP69K (ISO 20653)
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)

Other information

Wave length	Near-infrared (NIR), invisible

Ordering information

Items supplied deTem IP69K:

- Multiple light beam safety device consisting of a sender and a receiver, each inside an IP69K protective housing
- Safety instruction
- Mounting instructions
- Operating instructions for download ➜ **www.sick.com/deTem4_Core_IP69K**
- Operating instructions for download ➜ **www.sick.com/deTem2_Core_IP69K**

deTem4 Core IP69K

Number of beams	Beam separation	Sender		Receiver	
		Type	Part no.	Type	Part no.
2	500 mm	M4C-SB0250LA10	1089977	M4C-EB02500A10	1089978
3	400 mm	M4C-SB0340LA10	1089979	M4C-EB03400A10	1089980
4	300 mm	M4C-SB0430LA10	1089981	M4C-EB04300A10	1089982

deTem2 Core IP69K

Number of beams	Beam separation	Sender		Receiver	
		Type	Part no.	Type	Part no.
2	500 mm	M2C-SB0250LA10	1089984	M2C-EB02500A10	1089985
3	400 mm	M2C-SB0340LA10	1089986	M2C-EB03400A10	1089987
4	300 mm	M2C-SB0430LA10	1089988	M2C-EB04300A10	1089989

Dimensional drawing (Dimensions in mm (inch))

① Operating indicator
② Alignment indicator
③ Optical axis
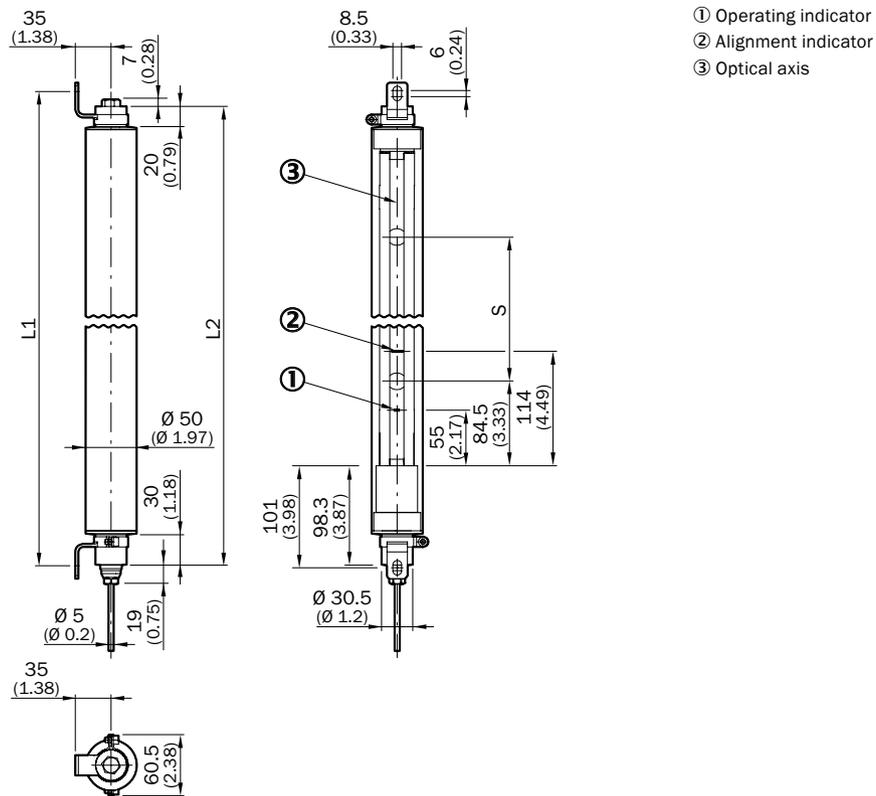
Number of beams	Beam separation	L1	L2
2	500	828 (32.60)	813 (32.01)
3	400	1,128 (44.10)	1,113 (43.82)
4	300	1,228 (48.35)	1,213 (47.76)

Accessories required for commissioning

Description	Number	Items supplied	Further information
Alignment brackets	2	–	➜ Terminal and alignment brackets

Suitable accessories ➜ **page 19**

Accessories

Mounting systems

Terminal and alignment brackets

Alignment brackets

Figure	Description	Packing unit	Type	Part no.	deTec IP69K	deTem IP69K
	Reinforced stainless steel bracket, rotatable, Stainless steel	4 pieces	BEF-2SMMVAES4	2026850	●	●
	Stainless steel bracket, rotatable, Stainless steel	4 pieces	BEF-2SMMEAES4	2023708	●	●
	Stainless steel support bracket, Stainless steel	2 pieces	BEF-2AAAADES2	2026849	●	●

Connection systems

Power supply units and power supply cables

Figure	Input voltage	Output voltage	Output current	Type	Part no.		
Illustration may differ	100 V AC … 240 V AC	24 V DC	≤ 2.1 A	PS50WE24V	7028789	●	●
			≤ 3.9 A	PS95WE24V	7028790	●	●

Reflectors and optics

Optics cloths

Figure	Description	Type	Part no.		
	Cloth for cleaning the front screen	Lens cloth	4003353	●	●

Further accessories

Test and monitoring tools

Figure	Description	Type	Part no.	deTec IP69K	deTem IP69K
	14 mm diameter	Test rod 14 mm	2022599	●	–
	30 mm diameter	Test rod 30 mm	2022602	●	–
	Test rod holder	BEF-3WNAAAAL1	2052249	●	–

Cleaning agent

Figure	Description	Type	Part no.		
	Plastic cleaner and care product, anti-static, 0.5 liter	Plastic cleaner	5600006	●	●

Spare parts

Figure	Description	Protective field height	Number of beams	Type	Part no.	deTec IP69K	deTem IP69K
	Protective housing spare part, deTec IP69K	300 mm	–	Protective housing spare part, deTec IP69K	2096384	●	–
		450 mm	–	Protective housing spare part, deTec IP69K	2096385	●	–
		600 mm	–	Protective housing spare part, deTec IP69K	2096386	●	–
		750 mm	–	Protective housing spare part, deTec IP69K	2096387	●	–
		900 mm	–	Protective housing spare part, deTec IP69K	2096388	●	–
		1,050 mm	–	Protective housing spare part, deTec IP69K	2096389	●	–
		1,200 mm	–	Protective housing spare part, deTec IP69K	2096390	●	–
		1,350 mm	–	Protective housing spare part, deTec IP69K	2096391	●	–
		1,500 mm	–	Protective housing spare part, deTec IP69K	2096392	●	–
		1,650 mm	–	Protective housing spare part, deTec IP69K	2096393	●	–
		1,800 mm	–	Protective housing spare part, deTec IP69K	2096394	●	–
	Protective housing spare part, deTem IP69K	–	2	Protective housing spare part, deTem IP69K	2096395	–	●
		–	3	Protective housing spare part, deTem IP69K	2096396	–	●
		–	4	Protective housing spare part, deTem IP69K	2096397	–	●

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☑ Overview of all quotations and orders.

☑ Direct ordering: submit even very complex orders in moments.

☑ View the status of quotations and orders at any time. Receive e-mail notifications of status changes.

☑ Easily repeat previous orders.

☑ Conveniently export quotations and orders to work with your systems.
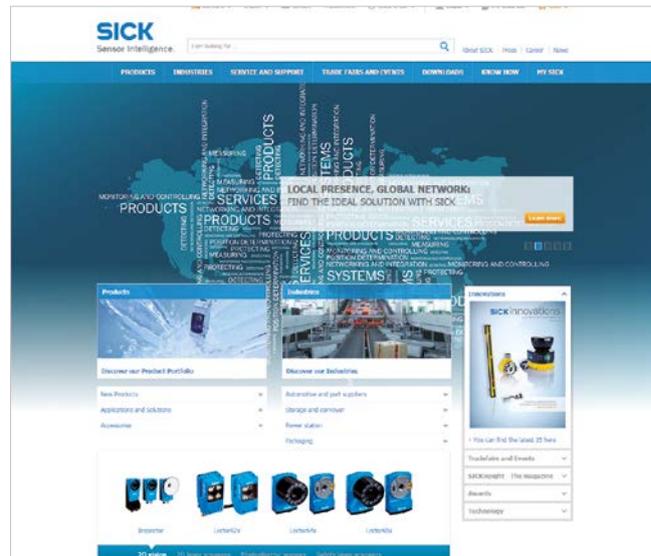
SERVICES FOR MACHINES AND SYSTEMS: SICK LifeTime Services

Our comprehensive and versatile LifeTime Services are the perfect addition to the comprehensive range of products from SICK. The services range from product-independent consulting to traditional product services.

Consulting and design
Safe and professional

Product and system support
Reliable, fast and on-site

Verification and optimization
Safe and regularly inspected

Upgrade and retrofits
Easy, safe and economical

Training and education
Practical, focused and professional

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 8,000 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, we are always close to our customers. 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 various 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 round out 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:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Hong Kong, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and further locations ➜ **www.sick.com**

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