

deTec HG

SAFETY FOR ENVIRONMENTS WHERE COOLANTS,
LUBRICANTS AND CLEANING AGENTS ARE USED

Safety light curtains

SICK
Sensor Intelligence.



IN THE MACHINE TOOL INDUSTRY, THERE ARE STRICT MACHINING REQUIREMENTS ON THE RESISTANCE OF THE COMPONENTS USED TO CHEMICALS IN THE FORM OF COOLANTS, LUBRICANTS AND CLEANING AGENTS.

The chemicals used in machine building can lead to premature aging of common plastics such as polycarbonate. The formation of oil mist means that even machine components which are not located in the processing chamber come into contact with these materials. For this reason, the resistance of the components to chemicals plays an important role regarding processing quality and productivity.

RUGGED AND RESISTANT – EVEN IN EXTREME CONDITIONS

The deTec Core HG safety light curtains from SICK therefore have a front screen made of hardened glass. This ensures maximum reliability and a long service life even in extreme conditions, making this product even more economically efficient.

Measurement, detecting, identification, protection: SICK offers a wide range of products which are perfectly suited for use in the machine tool industry.



High resistance and long service life

Reliable against coolants or lubricants. The deTec HG complies with strict requirements on resistance to chemicals in the form of cooling lubricants and cleaning agents with its front screen made of chemically hardened float glass.

- + High level of safety with maximized machine uptime



Intelligent protection for more productivity

The „dynamic protective field widths“ function offers high flexibility for machines in which the protective field width varies during operation. The „smart presence detection“ ignore chips, weld sparks, etc. which fall into the protective field.

- + Safety and availability using intelligent evaluation algorithms



Future-proof investment

With the NFC technology, you have entirely new options for on-site diagnosis using a smartphone. IO-Link also offers the option of continuously reading out diagnostic data.

- + Increased productivity due to quick configuration and innovative diagnostic options



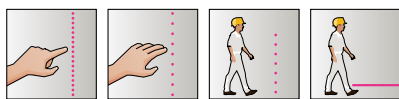
Versatile automation options

The provision of information via IO-Link enables the use of data for downstream processes, e.g. height measurement or predictive maintenance.

- + Machine safety and transparency of the processes in your machine enable economic system design



SAFETY FOR ENVIRONMENTS WHERE COOLANTS, LUBRICANTS AND CLEANING AGENTS ARE USED



Product description

In the machine tool industry, there are strict requirements on the resistance of safety light curtains to chemicals in the form of coolants, lubricants and cleaning agents. In order to fulfill these requirements, SICK offers the deTec HG special variants with a chemically-hardened front screen made of float glass.

Thanks to the high resistance to aggressive chemicals, they are perfectly suited for use under harsh industrial conditions. The deTec HG therefore provides maximum reliability and a very high level of safety for employees - even in environments where coolants, lubricants and cleaning agents are used.

At a glance

- Front screen made of chemically hardened float glass
- NFC diagnosis and smartphone app
- Diagnostics and automation via IO-Link
- Smart presence detection
- 2-signal-muting
- Reduced resolution: 1 or 2 beams
- Dynamic protective field widths
- Configuration of all functions without software

Your benefits

- The hardened glass front screen offers high resistance to coolants, lubricants and cleaning agents and therefore maximum reliability
- Increased productivity and short downtimes thanks to extensive and innovative diagnostic options
- Safety and automation combined: IO-Link makes cost-effective system design possible
- Muting provides maximum productivity and safety in differentiating between people and material
- High availability: smart presence detection prevents unwanted switch-offs
- Easy commissioning and configuration without the need for software, saving time and money



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→ www.sick.com/deTec

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

More detailed data can be found in the operating instructions. Download → www.sick.com

Features

	deTec4 HG		deTec Core HG	
	Resolution 14 mm	Resolution 30 mm	Resolution 14 mm	Resolution 30 mm
Protective field height	300 mm ... 2,100 mm (depending on type)			
Scanning range	20 m	30 m	10 m	15 m
No blind zones	Yes			
Synchronization	Optical synchronisation			
Integrated laser alignment aid	✓		–	

Safety-related parameters

	deTec4 HG	deTec Core HG	
		deTec4 Core	deTec2 Core HG
Type	Type 4 (IEC 61496-1)	Type 4 (IEC 61496-1)	Type 2 (IEC 61496-1)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	SIL3 (IEC 61508) SILCL3 (IEC 62061)	SIL1 (IEC 61508) SILCL1 (IEC 62061)
Category	Category 4 (ISO 13849-1)	Category 4 (ISO 13849-1)	Category 2 (ISO 13849-1)
Performance level	PL e (ISO 13849-1)	PL e (ISO 13849-1)	PL c (ISO 13849-1)
PFH _D (mean probability of a dangerous failure per hour)			
Single device	1.53 x 10 ⁻⁸	3.7 x 10 ⁻⁹	3.1 x 10 ⁻⁸
Cascade with one guest	3.05 x 10 ⁻⁸	–	–
Cascade with two guest devices	4.56 x 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

	deTec4 HG		deTec Core HG
	System plug SP1	System plug SP2	
Protective operation	✓		
Automatic calibration of the protective field width	✓		
Beam coding	✓		–
Restart interlock	✓		–
External device monitoring (EDM)	✓		–
Cascading	✓		–
Smart presence detection	–	✓	–
Reduced resolution	–	✓	–
Dynamic protective field width during operation	–	✓	–
Sender with reduced scanning range	–	✓	–
Differentiation between man and material (muting)	–	✓	–

Interfaces

	deTec4 HG	deTec Core HG
Connection type	System connection	Male connector M12, 5-pin / male connector M12, 8-pin (depending on system plug) ¹⁾
	Extension connection	Female connector M12, 5-pin (depending on system plug) ¹⁾
Configuration method	DIP switch on the system plug	–
Display elements	LEDs	
Display of the synchronization status of the upper and lower beams	✓	–
End cap with integrated LED	✓ (depending on type)	–
Application diagnostic output (ADO)	✓ (depending on system plug) ¹⁾	–
IO-Link	✓ (depending on system plug) ¹⁾	–
Near Field Communication (NFC)	✓	–
Fieldbus, industrial network	CANopen, DeviceNet™, EtherCAT®, EtherNet/IP™, Modbus TCP, PROFIBUS DP, PROFINET ²⁾	
Integration via Flexi Soft safety controller		

¹⁾ System plugs have to be ordered separately.

²⁾ For additional information on Flexi Soft → www.sick.com/Flexi_Soft.

Electrical data

	deTec4 HG	deTec Core HG
Protection class	III (IEC 61140)	
Supply voltage V_s	24 V DC (19.2 V ... 28.8 V)	
Ripple	≤ 10 %	
Output signal switching devices (OSSDs)	2 PNP semiconductors, short-circuit protected, cross-circuit monitored ¹⁾	
Type of output		
ON state, switching voltage HIGH		
OFF state, switching voltage LOW		
Current-carrying capacity per OSSD	≤ 500 mA	≤ 300 mA
Diagnostic outputs	PNP semiconductor, short-circuit protected ¹⁾	
Type of output		
Output voltage HIGH (active)		
Output voltage LOW (deactivated)		
Output current HIGH (active)		

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)

Other information

	deTec4 HG	deTec Core HG
Wave length	850 nm	
Integrated laser alignment aid	✓	-
Laser class	1	-
Type of light	Visible red light	-
Wave length	650 nm	-

Ordering information

deTec4 HG

A deTec4 HG safety light curtain consists of:

- Sender
- Receiver
- System plug sender (always SP1)
- System plug receiver (SP1 or SP2) → The receiver system plug defines the available functions of the deTec4 HG.

Selection aid deTec4 HG system plugs

System plugs for **stand-alone**:

- Sender: SP1
- Receiver: SP1 or SP2 (defines the available functions)

Options:

- System connection 5-pin or 8-pin (e.g. for RES, EDM, ADO, Muting)
- Receiver without or with extension connection (e.g. for RES, EDM, ADO, IO-Link, muting)

System plugs for **host/guest cascade**:

- Host sender: SP1 with extension connection
- Host receiver: SP1 or SP2 (defines the available functions) with extension connection
- Guest sender: SP1 with system connection M12, 5-pin
- Guest receiver: SP1 with system connection M12, 5-pin

Options:

- Host system connection 5-pin or 8-pin (e.g. for RES, EDM, ADO)
- Guest receiver without or with extension connection (e.g. for RES, EDM, ADO, IO-Link)

System plugs for **host/guest/guest cascade**:

- Host sender: SP1 with extension connection
- Host receiver: SP1 or SP2 (defines the available functions) with extension connection
- Guest1 sender: SP1 with system connection M12, 5-pin with extension connection
- Guest1 receiver: SP1 with system connection M12, 5-pin with extension connection
- Guest2 sender: SP1 with system connection M12, 5-pin
- Guest2 receiver: SP1 with system connection M12, 5-pin

Options:

- Host system connection 5-pin or 8-pin (e.g. for RES, EDM, ADO)
- Guest2 receiver without or with extension connection (e.g. for RES, EDM, ADO, IO-Link)

deTec4 HG system plugs

Functions	Usage	System connection	Extension connection	Type	Part no.
SP1	Sender and receiver	Male connector M12, 5-pin	–	1000	2076832
			Female connector M12, 5-pin (RES, EDM, ADO, IO-Link, cascading)	1100	2076833
		Male connector M12, 8-pin (RES, EDM, ADO)	–	1200	2076834
			Female connector M12, 5-pin (RES, EDM, ADO, IO-Link, cascading)	1300	2076835
SP2	Receiver	Male connector M12, 5-pin	–	2000	2093097
			Female connector M12, 5-pin (RES, EDM, ADO, IO-Link, cascading, smart presence detection, muting)	2100	2093098
		Male connector M12, 8-pin (RES, EDM, ADO, muting)	–	2200	2093099
			Female connector M12, 5-pin (RES, EDM, ADO, IO-Link, cascading, smart presence detection, muting)	2300	2093100

deTec4 HG: sender with regular scanning range, receiver without LED indicator lamp

- **Please note:** Scope of delivery without system plug. System plugs have to be ordered separately.
- **Please note:** For products with “On request” please contact your SICK representative.

Resolution	Scanning range	Protective field height	Sender		Receiver	
			Type	Part no.	Type	Part no.
14 mm	20 m	300 mm	C4P-SG03011A00	1222441	C4P-EG03011C00	1222453
		450 mm	C4P-SG04511A00	On request	C4P-EG04511C00	On request
		600 mm	C4P-SG06011A00	On request	C4P-EG06011C00	On request
		750 mm	C4P-SG07511A00	1222442	C4P-EG07511C00	1222452
		900 mm	C4P-SG09011A00	On request	C4P-EG09011C00	On request
		1,050 mm	C4P-SG10511A00	On request	C4P-EG10511C00	On request
		1,200 mm	C4P-SG12011A00	On request	C4P-EG12011C00	On request
		1,350 mm	C4P-SG13511A00	On request	C4P-EG13511C00	On request
		1,500 mm	C4P-SG15011A00	1222443	C4P-EG15011C00	1222454
		1,650 mm	C4P-SG16511A00	On request	C4P-EG16511C00	On request
		1,800 mm	C4P-SG18011A00	1222444	C4P-EG18011C00	1222455
		1,950 mm	C4P-SG19511A00	On request	C4P-EG19511C00	On request
		2,100 mm	C4P-SG21011A00	On request	C4P-EG21011C00	On request
30 mm	30 m	300 mm	C4P-SG03031A00	1222445	C4P-EG03031C00	1222456
		450 mm	C4P-SG04531A00	1222446	C4P-EG04531C00	1222457
		600 mm	C4P-SG06031A00	On request	C4P-EG06031C00	On request
		750 mm	C4P-SG07531A00	On request	C4P-EG07531C00	On request
		900 mm	C4P-SG09031A00	On request	C4P-EG09031C00	On request
		1,050 mm	C4P-SG10531A00	On request	C4P-EG10531C00	On request
		1,200 mm	C4P-SG12031A00	On request	C4P-EG12031C00	On request
		1,350 mm	C4P-SG13531A00	On request	C4P-EG13531C00	On request
		1,500 mm	C4P-SG15031A00	On request	C4P-EG15031C00	On request
		1,650 mm	C4P-SG16531A00	On request	C4P-EG16531C00	On request
		1,800 mm	C4P-SG18031A00	On request	C4P-EG18031C00	On request
		1,950 mm	C4P-SG19531A00	On request	C4P-EG19531C00	On request
		2,100 mm	C4P-SG21031A00	On request	C4P-EG21031C00	On request

deTec4 HG: sender with regular scanning range, receiver with integrated LED indicator lamp

- **Please note:** Scope of delivery without system plug. System plugs have to be ordered separately.
- **Please note:** For products with “On request” please contact your SICK representative.
- **Special feature on the receiver:** Receiver with integrated LED indicator lamp.

Resolution	Scanning range	Protective field height	Sender		Receiver	
			Type	Part no.	Type	Part no.
14 mm	20 m	300 mm	C4P-SG03011A00	1222441	C4P-EG03011D00	On request
		450 mm	C4P-SG04511A00	On request	C4P-EG04511D00	On request
		600 mm	C4P-SG06011A00	On request	C4P-EG06011D00	On request
		750 mm	C4P-SG07511A00	1222442	C4P-EG07511D00	On request
		900 mm	C4P-SG09011A00	On request	C4P-EG09011D00	On request
		1,050 mm	C4P-SG10511A00	On request	C4P-EG10511D00	On request
		1,200 mm	C4P-SG12011A00	On request	C4P-EG12011D00	On request
		1,350 mm	C4P-SG13511A00	On request	C4P-EG13511D00	On request
		1,500 mm	C4P-SG15011A00	1222443	C4P-EG15011D00	On request
		1,650 mm	C4P-SG16511A00	On request	C4P-EG16511D00	On request
		1,800 mm	C4P-SG18011A00	1222444	C4P-EG18011D00	On request
		1,950 mm	C4P-SG19511A00	On request	C4P-EG19511D00	On request
		2,100 mm	C4P-SG21011A00	On request	C4P-EG21011D00	On request
30 mm	30 m	300 mm	C4P-SG03031A00	1222445	C4P-EG03031D00	1222458
		450 mm	C4P-SG04531A00	1222446	C4P-EG04531D00	On request
		600 mm	C4P-SG06031A00	On request	C4P-EG06031D00	On request
		750 mm	C4P-SG07531A00	On request	C4P-EG07531D00	On request
		900 mm	C4P-SG09031A00	On request	C4P-EG09031D00	On request
		1,050 mm	C4P-SG10531A00	On request	C4P-EG10531D00	On request
		1,200 mm	C4P-SG12031A00	On request	C4P-EG12031D00	On request
		1,350 mm	C4P-SG13531A00	On request	C4P-EG13531D00	On request
		1,500 mm	C4P-SG15031A00	On request	C4P-EG15031D00	On request
		1,650 mm	C4P-SG16531A00	On request	C4P-EG16531D00	On request
		1,800 mm	C4P-SG18031A00	On request	C4P-EG18031D00	On request
		1,950 mm	C4P-SG19531A00	On request	C4P-EG19531D00	On request
		2,100 mm	C4P-SG21031A00	On request	C4P-EG21031D00	On request

deTec4 HG: sender with reduced scanning range, receiver without LED indicator lamp

- **Please note:** Scope of delivery without system plug. System plugs have to be ordered separately.
- **Please note:** For products with “On request” please contact your SICK representative.
- **Special feature on the sender:** Sender with reduced scanning range to avoid mutual interference between nearby deTec4 safety light curtains.

Resolution	Scanning range	Protective field height	Sender		Receiver	
			Type	Part no.	Type	Part no.
14 mm	2.5 m	300 mm	C4P-SG03011C00	On request	C4P-EG03011C00	1222453
		450 mm	C4P-SG04511C00	On request	C4P-EG04511C00	On request
		600 mm	C4P-SG06011C00	On request	C4P-EG06011C00	On request
		750 mm	C4P-SG07511C00	On request	C4P-EG07511C00	1222452
		900 mm	C4P-SG09011C00	On request	C4P-EG09011C00	On request
		1,050 mm	C4P-SG10511C00	On request	C4P-EG10511C00	On request
		1,200 mm	C4P-SG12011C00	On request	C4P-EG12011C00	On request
		1,350 mm	C4P-SG13511C00	On request	C4P-EG13511C00	On request
		1,500 mm	C4P-SG15011C00	On request	C4P-EG15011C00	1222454
		1,650 mm	C4P-SG16511C00	On request	C4P-EG16511C00	On request
		1,800 mm	C4P-SG18011C00	On request	C4P-EG18011C00	1222455
		1,950 mm	C4P-SG19511C00	On request	C4P-EG19511C00	On request
		2,100 mm	C4P-SG21011C00	On request	C4P-EG21011C00	On request

deTec4 HG: sender with reduced scanning range, receiver with integrated LED indicator lamp

- **Please note:** Scope of delivery without system plug. System plugs have to be ordered separately.
- **Please note:** For products with “On request” please contact your SICK representative.
- **Special feature on the sender:** Sender with reduced scanning range to avoid mutual interference between nearby deTec4 safety light curtains.
- **Special feature on the receiver:** Receiver with integrated LED indicator lamp.

Resolution	Scanning range	Protective field height	Sender		Receiver	
			Type	Part no.	Type	Part no.
14 mm	2.5 m	300 mm	C4P-SG03011C00	On request	C4P-EG03011D00	On request
		450 mm	C4P-SG04511C00	On request	C4P-EG04511D00	On request
		600 mm	C4P-SG06011C00	On request	C4P-EG06011D00	On request
		750 mm	C4P-SG07511C00	On request	C4P-EG07511D00	On request
		900 mm	C4P-SG09011C00	On request	C4P-EG09011D00	On request
		1,050 mm	C4P-SG10511C00	On request	C4P-EG10511D00	On request
		1,200 mm	C4P-SG12011C00	On request	C4P-EG12011D00	On request
		1,350 mm	C4P-SG13511C00	On request	C4P-EG13511D00	On request
		1,500 mm	C4P-SG15011C00	On request	C4P-EG15011D00	On request
		1,650 mm	C4P-SG16511C00	On request	C4P-EG16511D00	On request
		1,800 mm	C4P-SG18011C00	On request	C4P-EG18011D00	On request
		1,950 mm	C4P-SG19511C00	On request	C4P-EG19511D00	On request
		2,100 mm	C4P-SG21011C00	On request	C4P-EG21011D00	On request

deTec4 Core HG

- **Please note:** System connection M12, 5-pin included.

Resolution	Scanning range	Protective field height	Sender		Receiver	
			Type	Part no.	Type	Part no.
14 mm	10 m	300 mm	C4C-SG03010A10000	1220365	C4C-EG03010A10000	1220376
		450 mm	C4C-SG04510A10000	1220366	C4C-EG04510A10000	1220377
		600 mm	C4C-SG06010A10000	1220367	C4C-EG06010A10000	1220378
		750 mm	C4C-SG07510A10000	1220368	C4C-EG07510A10000	1220379
		900 mm	C4C-SG09010A10000	1220369	C4C-EG09010A10000	1220380
		1,050 mm	C4C-SG10510A10000	1220370	C4C-EG10510A10000	1220381
		1,200 mm	C4C-SG12010A10000	1220371	C4C-EG12010A10000	1220382
		1,350 mm	C4C-SG13510A10000	1220372	C4C-EG13510A10000	1220383
		1,500 mm	C4C-SG15010A10000	1220373	C4C-EG15010A10000	1220384
		1,650 mm	C4C-SG16510A10000	1220374	C4C-EG16510A10000	1220385
		1,800 mm	C4C-SG18010A10000	1220375	C4C-EG18010A10000	1220386
		1,950 mm	C4C-SG19510A10000	1221094	C4C-EG19510A10000	1221095
		2,100 mm	C4C-SG21010A10000	1221102	C4C-EG21010A10000	1221103
30 mm	15 m	300 mm	C4C-SG03030A10000	1220387	C4C-EG03030A10000	1220398
		450 mm	C4C-SG04530A10000	1220388	C4C-EG04530A10000	1220399
		600 mm	C4C-SG06030A10000	1220389	C4C-EG06030A10000	1220400
		750 mm	C4C-SG07530A10000	1220390	C4C-EG07530A10000	1220401
		900 mm	C4C-SG09030A10000	1220391	C4C-EG09030A10000	1220402
		1,050 mm	C4C-SG10530A10000	1220392	C4C-EG10530A10000	1220403
		1,200 mm	C4C-SG12030A10000	1220393	C4C-EG12030A10000	1220404
		1,350 mm	C4C-SG13530A10000	1220394	C4C-EG13530A10000	1220405
		1,500 mm	C4C-SG15030A10000	1220395	C4C-EG15030A10000	1220406
		1,650 mm	C4C-SG16530A10000	1220396	C4C-EG16530A10000	1220407
		1,800 mm	C4C-SG18030A10000	1220397	C4C-EG18030A10000	1220408
		1,950 mm	C4C-SG19530A10000	1221096	C4C-EG19530A10000	1221097
		2,100 mm	C4C-SG21030A10000	1221104	C4C-EG21030A10000	1221105

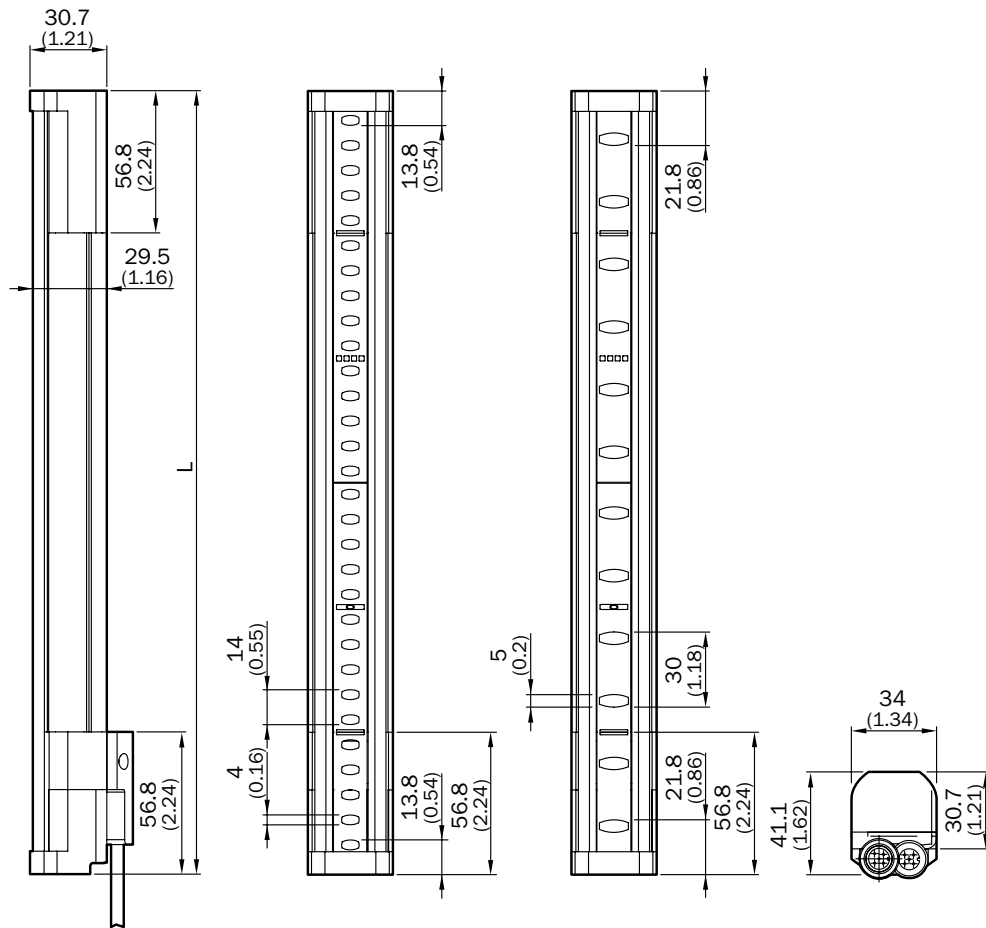
deTec2 Core HG

- **Please note:** System connection M12, 5-pin included.

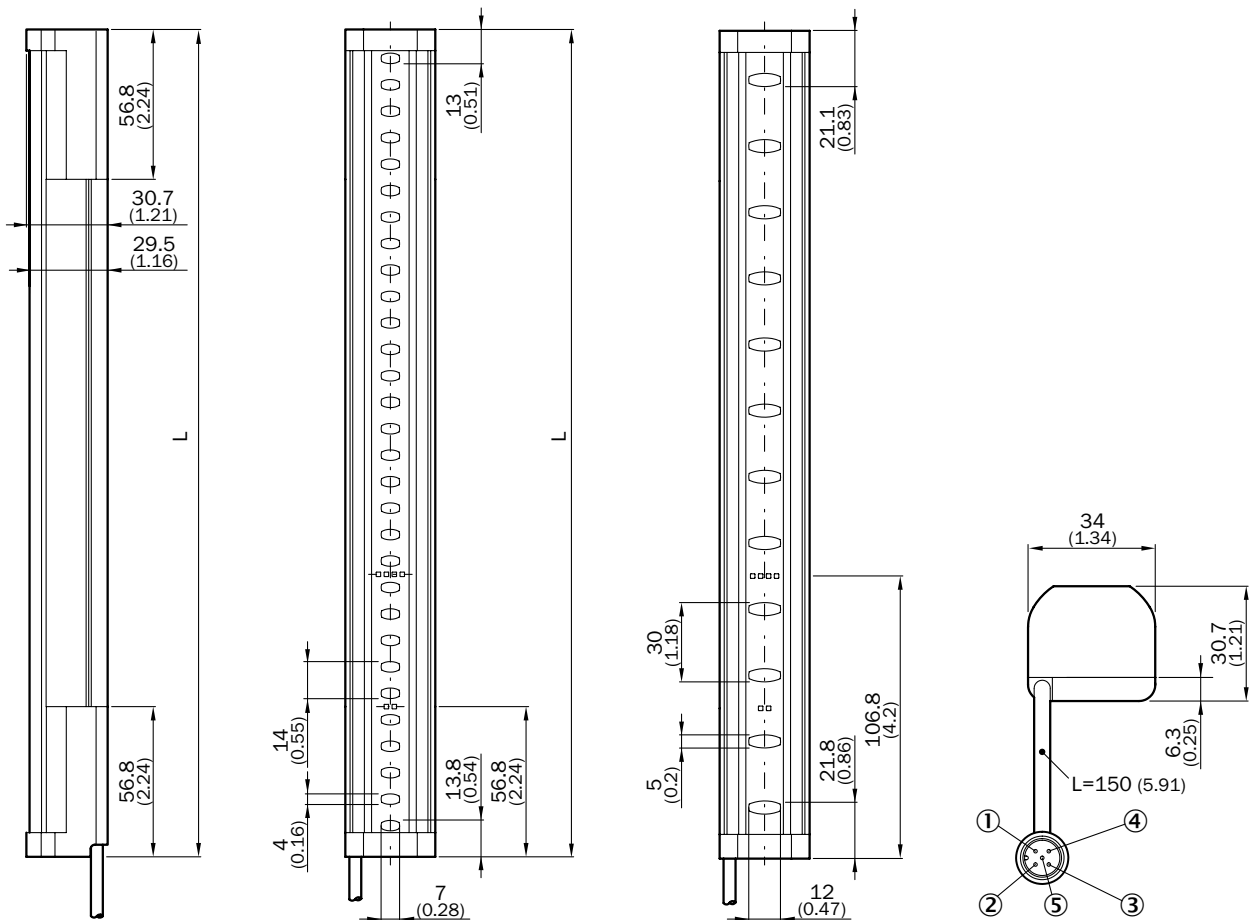
Resolution	Scanning range	Protective field height	Sender		Receiver	
			Type	Part no.	Type	Part no.
14 mm	10 m	300 mm	C2C-SG03010A10000	1220489	C2C-EG03010A10000	1220500
		450 mm	C2C-SG04510A10000	1220490	C2C-EG04510A10000	1220501
		600 mm	C2C-SG06010A10000	1220491	C2C-EG06010A10000	1220502
		750 mm	C2C-SG07510A10000	1220492	C2C-EG07510A10000	1220503
		900 mm	C2C-SG09010A10000	1220493	C2C-EG09010A10000	1220504
		1,050 mm	C2C-SG10510A10000	1220494	C2C-EG10510A10000	1220505
		1,200 mm	C2C-SG12010A10000	1220495	C2C-EG12010A10000	1220506
		1,350 mm	C2C-SG13510A10000	1220496	C2C-EG13510A10000	1220507
		1,500 mm	C2C-SG15010A10000	1220497	C2C-EG15010A10000	1220508
		1,650 mm	C2C-SG16510A10000	1220498	C2C-EG16510A10000	1220509
		1,800 mm	C2C-SG18010A10000	1220499	C2C-EG18010A10000	1220510
		1,950 mm	C2C-SG19510A10000	1221098	C2C-EG19510A10000	1221099
		2,100 mm	C2C-SG21010A10000	1221106	C2C-EG21010A10000	1221107
30 mm	15 m	300 mm	C2C-SG03030A10000	1220511	C2C-EG03030A10000	1220522
		450 mm	C2C-SG04530A10000	1220512	C2C-EG04530A10000	1220523
		600 mm	C2C-SG06030A10000	1220513	C2C-EG06030A10000	1220524
		750 mm	C2C-SG07530A10000	1220514	C2C-EG07530A10000	1220525
		900 mm	C2C-SG09030A10000	1220515	C2C-EG09030A10000	1220526
		1,050 mm	C2C-SG10530A10000	1220516	C2C-EG10530A10000	1220527
		1,200 mm	C2C-SG12030A10000	1220517	C2C-EG12030A10000	1220528
		1,350 mm	C2C-SG13530A10000	1220518	C2C-EG13530A10000	1220529
		1,500 mm	C2C-SG15030A10000	1220519	C2C-EG15030A10000	1220530
		1,650 mm	C2C-SG16530A10000	1220520	C2C-EG16530A10000	1220531
		1,800 mm	C2C-SG18030A10000	1220521	C2C-EG18030A10000	1220532
		1,950 mm	C2C-SG19530A10000	1221100	C2C-EG19530A10000	1221101
		2,100 mm	C2C-SG21030A10000	1221108	C2C-EG21030A10000	1221109

Dimensional drawings (Dimensions in mm (inch))

deTec4 HG



Protective field height	L
300	313
450	463
600	613
750	763
900	913
1,050	1,063
1,200	1,213
1,350	1,362
1,500	1,512
1,650	1,662
1,800	1,812
1,950	1,962
2,100	2112






deTec Core HG

Protective field height	L
300	313
450	463
600	613
750	763
900	913
1,050	1,063
1,200	1,213
1,350	1,362
1,500	1,512
1,650	1,662
1,800	1,812
1,950	1,962
2,100	2112

Accessories


Mounting systems

Terminal and alignment brackets


Figure	Description	Packing unit	Suitable for	Type	Part no.	deTec4 HG	deTec Core HG
	QuickFix bracket	2 pieces	1 device (sender or receiver)	BEF-3SHABPKU2	2066048	●	●
		4 pieces	2 devices (sender and receiver)	BEF-3SHABPKU4	2098710	●	●
	FlexFix bracket Sensor alignment $\pm 15^\circ$ Including screw M5	2 pieces	1 device (sender or receiver)	BEF-1SHABPKU2	2098709	●	●
		4 pieces	2 devices (sender and receiver)	BEF-1SHABPKU4	2066614	●	●
	Mounting kit FlexFix (FlexFix brackets, alignment tool and mounting material suitable for fastening to device columns PU3H)	2 pieces	1 device (sender or receiver)	BEF-1SHABBKU2	2073543	●	●
	FlexFix replacement kit (Mounting kit for replacement of swivel mount brackets 2019649 and 2019659 or side bracket 2019506 with the FlexFix bracket when using the wells provided)	4 pieces	2 devices (sender and receiver)	BEF-1SHABS004	2100345	●	●
	FlexFix replacement kit (Mounting kit for replacement of swivel mount brackets 2030510 or side bracket 2019506 with the FlexFix bracket when using the wells provided)	4 pieces	2 devices (sender and receiver)	BEF-1SHABU004	2099282	●	●

Dimensional drawings → page 22


Mounting tools

Figure	Description	Packing unit	Suitable for	Type	Part no.		
	Alignment tool for sensor alignment in areas with limited accessibility, e.g. device columns PU3H	1 piece	FlexFix bracket	Alignment tool	4084133	●	●

Front screen protection

Figure	Description	Packing unit	Suitable for	Type	Part no.		
	Self-adhesive protective film for the front screen (protects sensors from damage by flying sparks and welding beads)	1 piece	Sufficient for two sensors with a protective field height of 2.100 mm	Self-adhesive protective film	2069268	●	●

Protective caps





Figure	Description	Type	Part no.		
	For a deTec4 sender with extension connection that does not have an additional guest connected to it, the extension connection has no function and must be sealed with a protective cap.	Protective cap, M12 for female connector	5310772	●	-

Connection systems

Plug connectors and cables



Connecting cables

- **Model:** PUR, halogen-free, unshielded

Figure	Connection type		Conductor cross-section	Length of cable	Type	Part no.	deTec4 HG	deTec Core HG
	Female connector M12, 5-pin, straight	Flying leads	0.34 mm²	2 m	YF2A15-020UB5XLEAX	2095617	●	●
				5 m	YF2A15-050UB5XLEAX	2095618	●	●
				10 m	YF2A15-100UB5XLEAX	2095619	●	●
				15 m	YF2A15-150UB5XLEAX	2095620	●	●
				20 m	YF2A15-200UB5XLEAX	2095614	●	●
				30 m	YF2A15-300UB5XLEAX	2095621	●	●
	Female connector M12, 5-pin, angled	Flying leads	0.34 mm²	2 m	YG2A15-020UB5XLEAX	2095772	●	●
				5 m	YG2A15-050UB5XLEAX	2095773	●	●
				10 m	YG2A15-100UB5XLEAX	2095774	●	●
	Female connector M12, 8-pin, straight	Flying leads	0.25 mm²	2.5 m	YF2A18-025UA5XLEAX	2099229	●	-
				5 m	YF2A18-050UA5XLEAX	2095653	●	-
				7.5 m	YF2A18-075UA5XLEAX	2099230	●	-
				10 m	YF2A18-100UA5XLEAX	2095654	●	-
				15 m	YF2A18-150UA5XLEAX	2095679	●	-
				20 m	YF2A18-200UA5XLEAX	2095680	●	-
	Female connector M12, 8-pin, angled	Flying leads	0.25 mm²	30 m	YF2A18-300UA5XLEAX	2095681	●	-
				2 m	YG2A18-020UA5XLEAX	2095779	●	-
				5 m	YG2A18-050UA5XLEAX	2095780	●	-
				10 m	YG2A18-100UA5XLEAX	2095781	●	-







Connection cables

- **Model:** PUR, halogen-free, unshielded






Figure	Connection type		Conductor cross-section	Length of cable	Type	Part no.		
	Female connector M12, 5-pin, straight	Male connector, M12, 5-pin, straight	0.34 mm²	0.6 m	YF2A15-C60UB5M2A15	2096006	●	●
				1 m	YF2A15-010UB5M2A15	2096007	●	●
				2 m	YF2A15-020UB5M2A15	2096009	●	●
				5 m	YF2A15-050UB5M2A15	2096010	●	●
				10 m	YF2A15-100UB5M2A15	2096011	●	●
				15 m	YF2A15-150UB5M2A15	2096171	●	●
	Female connector M12, 8-pin, straight	Male connector, M12, 8-pin, straight	0.25 mm²	0.6 m	YF2A18-C60UA5M2A18	2096031	●	-
				1 m	YF2A18-010UA5M2A18	2096032	●	-
				2 m	YF2A18-020UA5M2A18	2096033	●	-
				5 m	YF2A18-050UA5M2A18	2096034	●	-
				10 m	YF2A18-100UA5M2A18	2096035	●	-

Replacement cables (replacement of C4000 with deTec4 HG)



- **Length of cable:** 0,25 m
- **Items supplied:** 2 cables

Figure	Connection type		Model	Conductor cross-section	Type	Part no.	deTec4 HG	deTec Core HG
	deTec system connection	Replacement C4000						
	Female connector M12, 5-pin, straight	Male connector M12, 8-pin, straight	PVC, unshielded	0.34 mm²	DSL-1285GM25034KM1	2070987	●	●
		Male connector M26, 12-pin, straight	PVC, unshielded	0.34 mm²	DSL-6182GM25034KM1	2070989	●	●
		Male connector M26, 7-pin, straight	PVC, unshielded	0.34 mm²	DSL-6187GM25034KM1	2070988	●	●
	Female connector M12, 8-pin, straight	Male connector, M12, 8-pin, straight	PUR, halogen-free, unshielded	0.25 mm²	DSL-6108GM25034KM1	2034865	●	–
		Male connector, M26, 12-pin, straight	PUR, halogen-free, unshielded	0.25 mm²	DSL-6129GM25034KM1	2081442	●	–
		Male connector M26, 7-pin, straight	PUR, halogen-free, unshielded	0.25 mm²	DSL-6130GM25034KM1	2081443	●	–


T-connectors and pushbuttons

Figure	Description	Type	Part no.		
	T-connector M12, 5-pin For simultaneous connection to sender and receiver. Splits the cable from the control cabinet to the sender and receiver.	DSC-1205T000025KM0	6030664	●	●
	T-connector M12, 8-pin For simultaneous connection to sender and receiver. Splits the cable from the control cabinet to the sender and receiver.	DSC-1208T000025KM0	6058647	●	–
	T-connector with pushbutton for laser alignment aid, M12, 5-pin For simultaneous connection to sender and receiver. Splits the cable from the control cabinet to the sender and receiver. The pushbutton makes it possible to switch on and off the laser alignment aid integrated into the deTec4 Prime sender.	T-connector with pushbutton for laser alignment aid, M12, 5-pin	2077933	●	–
	Pushbutton for laser alignment aid, M12, 5-pin The pushbutton makes it possible to switch on and off the laser alignment aid integrated into the deTec4 Prime sender.	Pushbutton for laser alignment aid, M12, 5-pin	2082166	●	–
	Pushbutton for laser alignment aid, M12, 8-pin The pushbutton makes it possible to switch on and off the laser alignment aid integrated into the deTec4 Prime sender.	Pushbutton for laser alignment aid, M12, 8-pin	2082167	●	–

Connectors



Figure	Description	Type	Part no.		
	The muting connector makes it possible to connect 2 muting sensors and one muting lamp.	Muting connector	2092758	●	–
	The IO-Link connector is used to establish a connection between suitable devices and an IO-Link master, enabling communication via IO-Link. The IO-Link connector can also be used to connect up to 2 muting sensors.	IO-Link connector	2092757	●	–

Power supply units and power supply cables

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



Reflectors and optics

Alignment aids

Figure	Description	Type	Part no.	deTec4 HG	deTec Core HG
	Laser alignment aid AR 60, Laser class 2 (IEC 60825). Do not look into the beam!	AR60	1015741	●	●
	Adapter AR60 for deTec, deTem and MLG-2	AR60 adapter, deTec, deTem, MLG-2	4070854	●	●

Deflector mirrors



- **Description:** Horizontal deflection
- **Mirror material:** Glass
- **Items supplied:** Inclusive mounting kit swivel mount
- **Dimensions:** See dimensional drawing

Figure	Mirror width	Mirror height	Suitable for protective field height	Type	Part no.		
	73 mm	340 mm	≤ 300 mm	PNS75-034	1019414	●	●
		490 mm	≤ 450 mm	PNS75-049	1019415	●	●
		640 mm	≤ 600 mm	PNS75-064	1019416	●	●
		790 mm	≤ 750 mm	PNS75-079	1019417	●	●
		940 mm	≤ 900 mm	PNS75-094	1019418	●	●
		1.090 mm	≤ 1.050 mm	PNS75-109	1019419	●	●
		1.240 mm	≤ 1.200 mm	PNS75-124	1019420	●	●
		1.390 mm	≤ 1.350 mm	PNS75-139	1019421	●	●
		1.540 mm	≤ 1.500 mm	PNS75-154	1019422	●	●
		1.690 mm	≤ 1.650 mm	PNS75-169	1019423	●	●
		1.840 mm	≤ 1.800 mm	PNS75-184	1019424	●	●
		1.990 mm	≤ 1.950 mm	PNS75-199	1092962	●	●
	123 mm	2.140 mm	≤ 2.100 mm	PNS75-214	1092963	●	●
		340 mm	≤ 300 mm	PNS125-034	1019425	●	●
		490 mm	≤ 450 mm	PNS125-049	1019426	●	●
		640 mm	≤ 600 mm	PNS125-064	1019427	●	●
		790 mm	≤ 750 mm	PNS125-079	1019428	●	●
		940 mm	≤ 900 mm	PNS125-094	1019429	●	●
		1.090 mm	≤ 1.050 mm	PNS125-109	1019430	●	●
		1.240 mm	≤ 1.200 mm	PNS125-124	1019431	●	●
		1.390 mm	≤ 1.350 mm	PNS125-139	1019432	●	●
		1.540 mm	≤ 1.500 mm	PNS125-154	1019433	●	●
		1.690 mm	≤ 1.650 mm	PNS125-169	1019434	●	●
		1.840 mm	≤ 1.800 mm	PNS125-184	1019435	●	●
		1.990 mm	≤ 1.950 mm	PNS125-199	1092964	●	●
		2.140 mm	≤ 2.100 mm	PNS125-214	1092965	●	●

Dimensional drawings → [page 25](#)

Further accessories

Test and monitoring tools

Figure	Description	Type	Part no.	deTec4 HG	deTec Core HG
	14 mm diameter	Test rod 14 mm	2022599	●	●
	24 mm diameter (An effective resolution of 24 mm can be achieved with a physical resolution of 14 mm using the function reduced resolution by 1 beam)	Test rod 24 mm	2045592	●	–
	30 mm diameter	Test rod 30 mm	2022602	●	●
	34 mm diameter (An effective resolution of 34 mm can be achieved with a physical resolution of 14 mm using the function reduced resolution by 2 beams)	Test rod 34 mm	2045593	●	–
	Test rod holder	BEF-3WNAAAAL1	2052249	●	●

Cleaning agent

Figure	Description	Type	Part no.		
	Cloth for cleaning the front screen	Lens cloth	4003353	●	●
	Plastic cleaner and care product, anti-static, 0.5 liter	Plastic cleaner	5600006	●	●


Safety command devices

Reset pushbuttons and multiple pushbuttons

Figure	Description	Items supplied	Type	Part no.		
	Reset pushbutton	Including retaining clip, "RESET" cover and "RESET/OVERRIDE" cover	ER12-SB3C5	6045316	●	–

Mirror columns and device columns

Mirror columns with protective field height mirror

Figure	Suitable for protective field height	Mirror length	Column height	Type	Part no.	deTec4 HG	deTec Core HG
	≤ 1,050 mm	1,082 mm	1,281.5 mm	PM3C13-00030000	1043453	●	●
	≤ 1,350 mm	1,382 mm	1,569 mm	PM3C15-00030000	1077525	●	●
	≤ 1,500 mm	1,532 mm	1,716.5 mm	PM3C17-00030000	1043454	●	●
	≤ 1,650 mm	1,682 mm	2,016.5 mm	PM3C19-00030000	1043455	●	●
	≤ 1,800 mm	1,832 mm	2,216.5 mm	PM3C20-00030000	1043456	●	●
	≤ 1,950 mm	1,982 mm	2,269 mm	PM3C22-00030000	1093216	●	●
	≤ 2,100 mm	2,132 mm	2,419 mm	PM3C24-00030000	1093217	●	●

Device columns with two external mounting grooves

Figure	Suitable for protective field height: deTec	Max. installation length	Column height	Type	Part no.		
	≤ 900 mm	965 mm	985 mm	PU3H96-00000000	2045490	●	●
	≤ 1,050 mm	1,165 mm	1,185 mm	PU3H11-00000000	2045641	●	●
	≤ 1,200 mm	1,265 mm	1,285 mm	PU3H13-00000000	2045642	●	●
	≤ 1,500 mm	1,550 mm	1,570 mm	PU3H15-00000000	2068813	●	●
	≤ 1,650 mm	1,720 mm	1,740 mm	PU3H17-00000000	2045643	●	●
	≤ 1,950 mm	2,020 mm	2,040 mm	PU3H21-00000000	2045644	●	●
	≤ 2,100 mm	2,250 mm	2,270 mm	PU3H22-00000000	2045645	●	●
		2,400 mm	2,420 mm	PU3H24-00000000	2045646	●	●

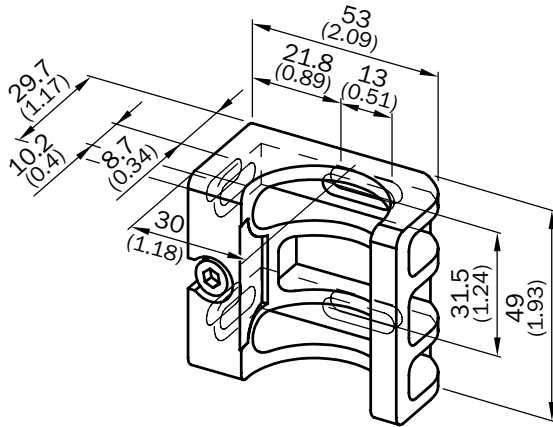
Dimensional drawings for accessories (Dimensions in mm (inch))

Terminal and alignment brackets

BEF-1SHABPKU2

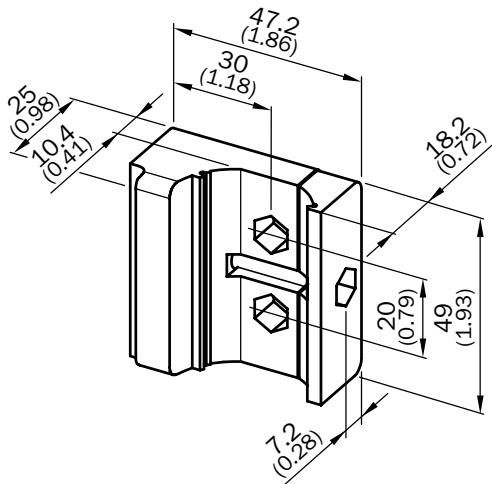
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BEF-1SHABBKU2

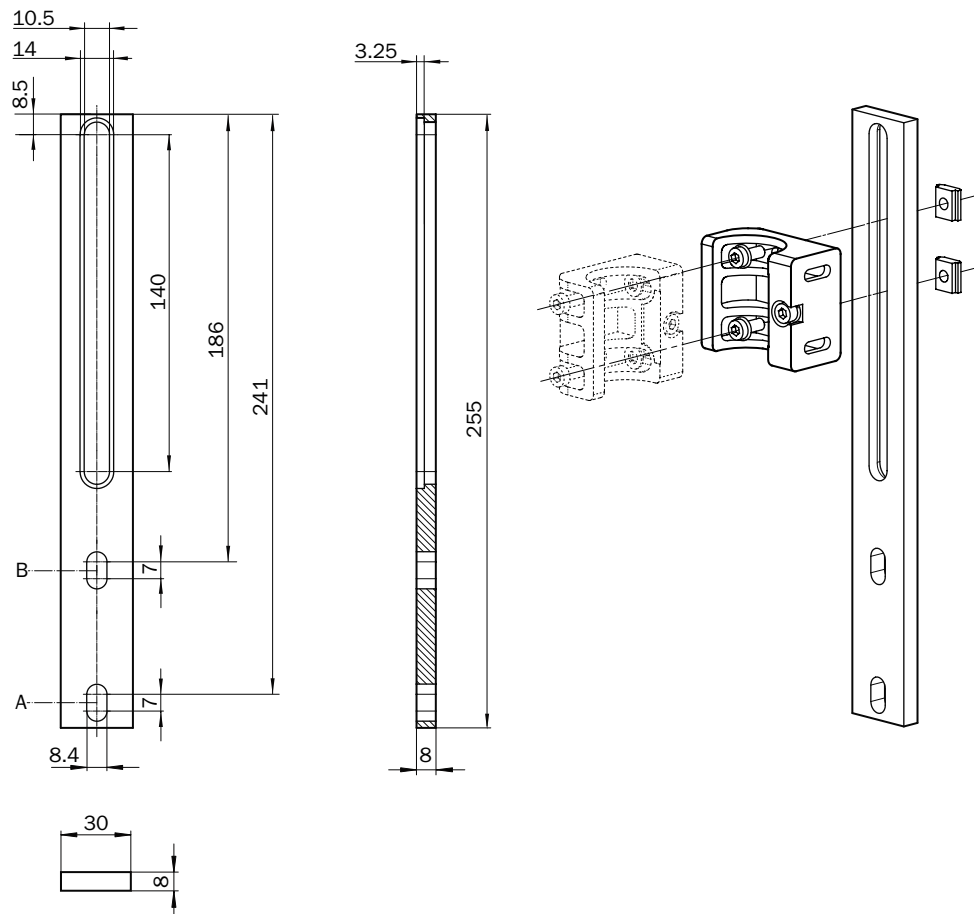
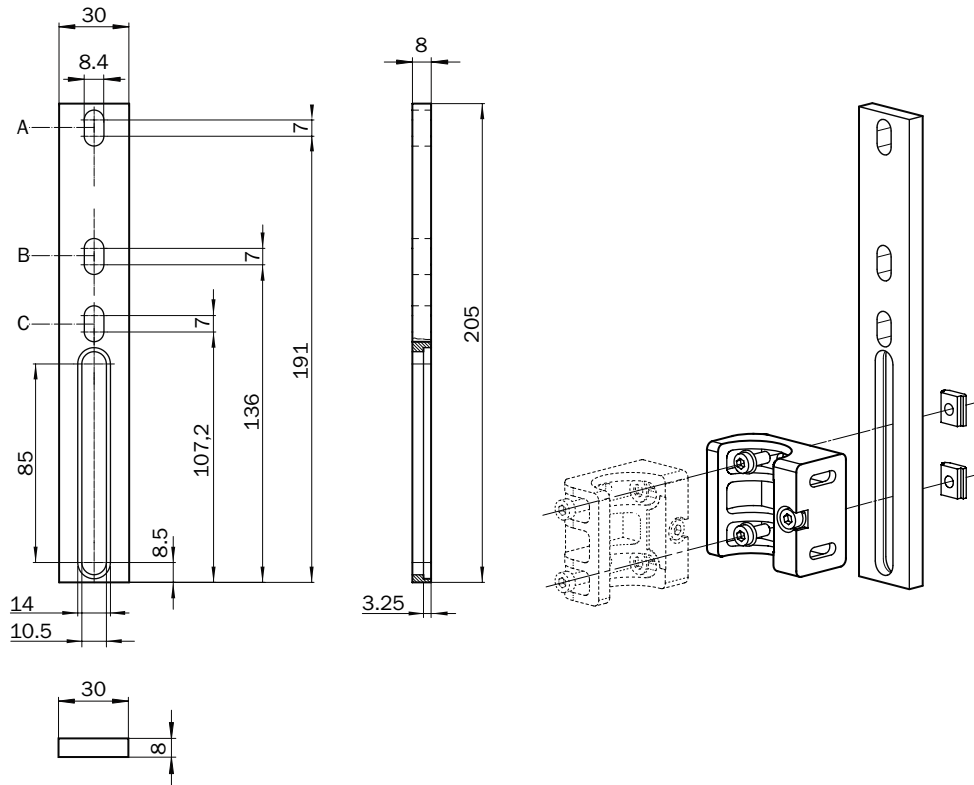


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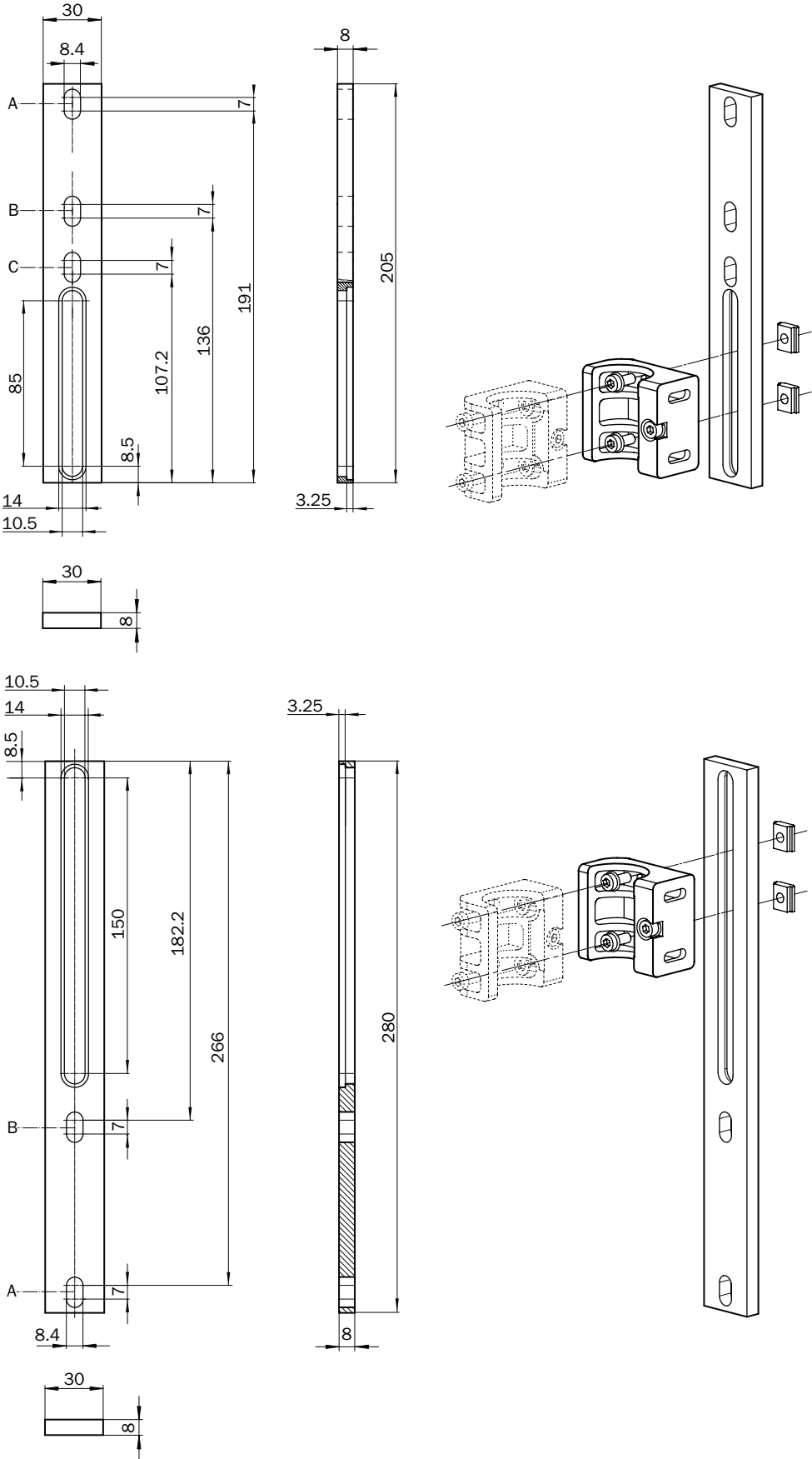
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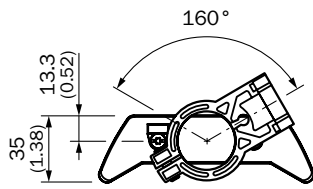


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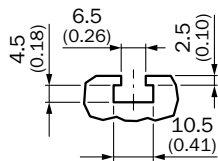


Deflector mirrors

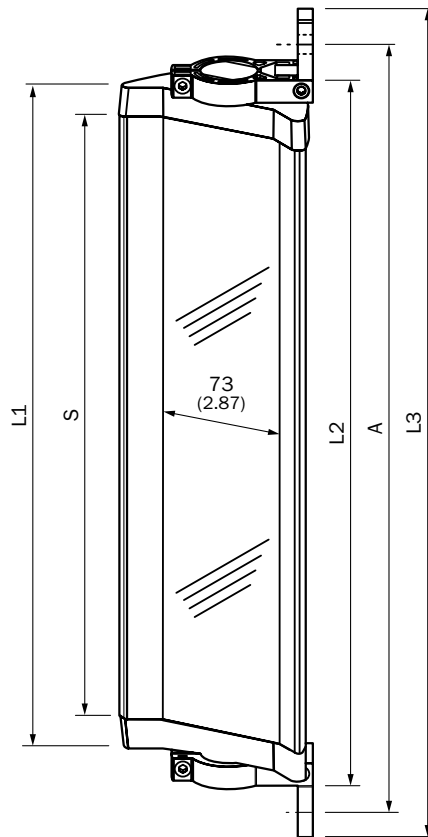
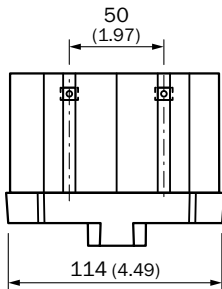
PNS75



Mounting with
swivel mount bracket
(Part no. 2019659)

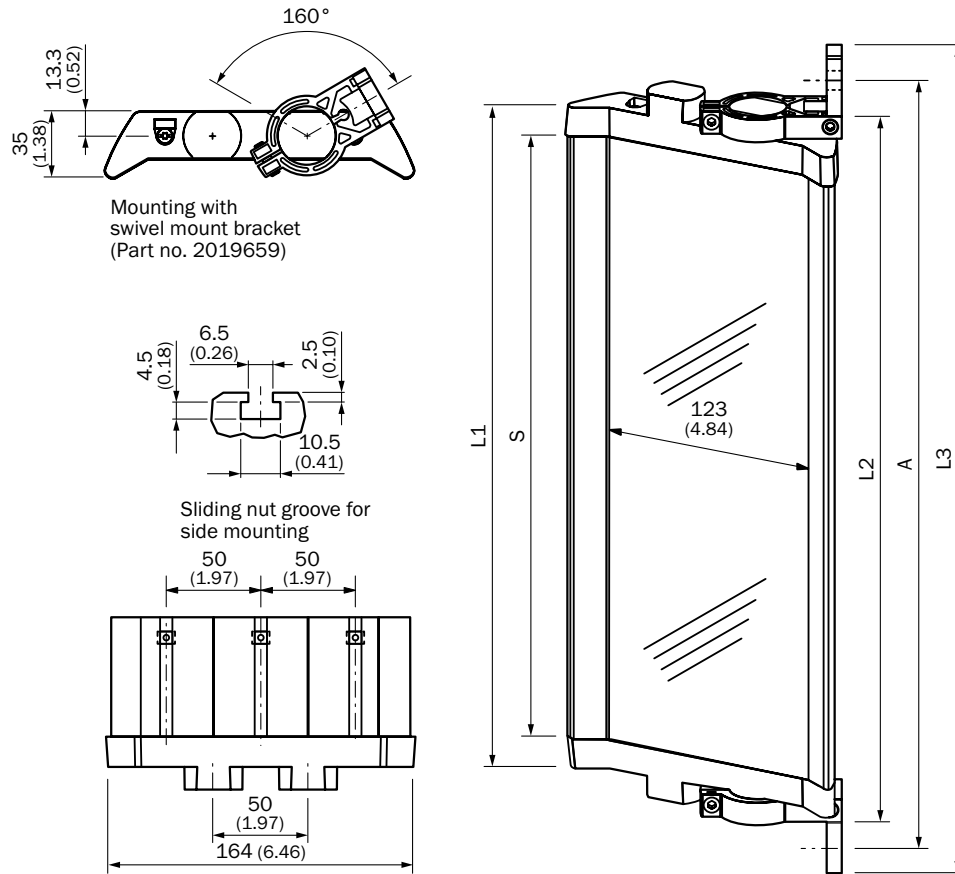


Sliding nut groove for
side mounting



Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1,060	1,040
1,090	1,122	1,146	1,210	1,190
1,240	1,272	1,296	1,360	1,340
1,390	1,422	1,446	1,510	1,490
1,540	1,572	1,596	1,660	1,640
1,690	1,722	1,746	1,810	1,790
1,840	1,872	1,896	1,960	1,940
1,990	2,022	2,046	2,110	2,090
2,140	2,172	2,196	2,260	2,240

PNS125



Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1,060	1,040
1,090	1,122	1,146	1,210	1,190
1,240	1,272	1,296	1,360	1,340
1,390	1,422	1,446	1,510	1,490
1,540	1,572	1,596	1,660	1,640
1,690	1,722	1,746	1,810	1,790
1,840	1,872	1,896	1,960	1,940
1,990	2,022	2,046	2,110	2,090
2,140	2,172	2,196	2,260	2,240

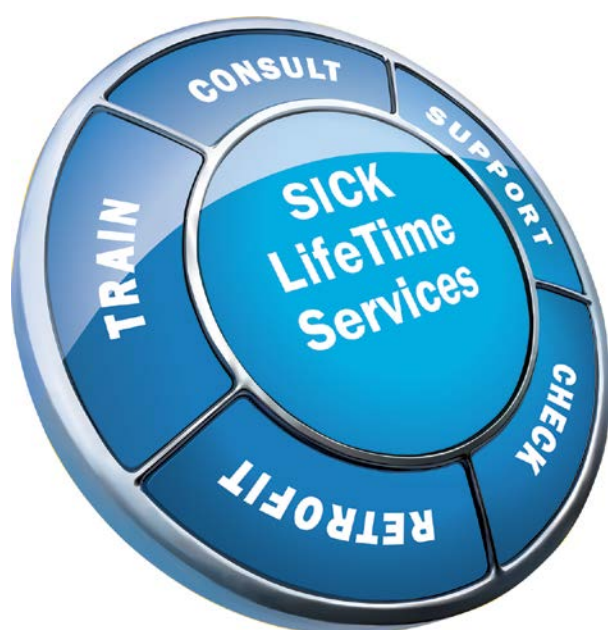
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