

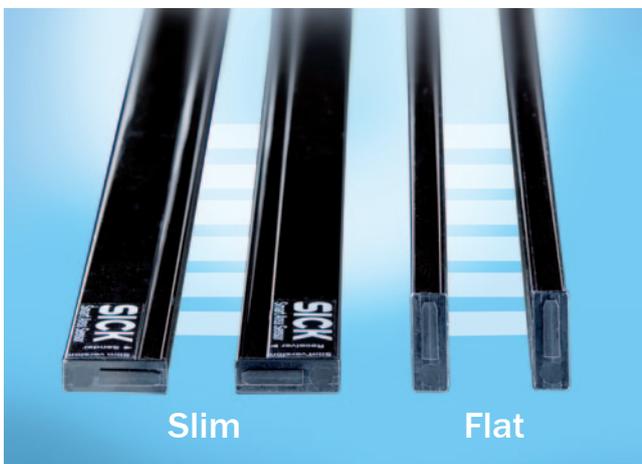
Smart Light Grids

Smart, slender, stealth

Whether slim, flat, short or long, nothing can get past smart light grids unnoticed



Smart light grids from SICK ensure nothing goes unnoticed and are available in range of variants for many types of applications. With a depth of just 8 mm and a width of 25 mm, various lengths and a choice of optical light exit, they are suitable for virtually all situations and can be integrated into walls, doors, conveyor belts, machines or shelves – from industrial gates to stocking small parts.



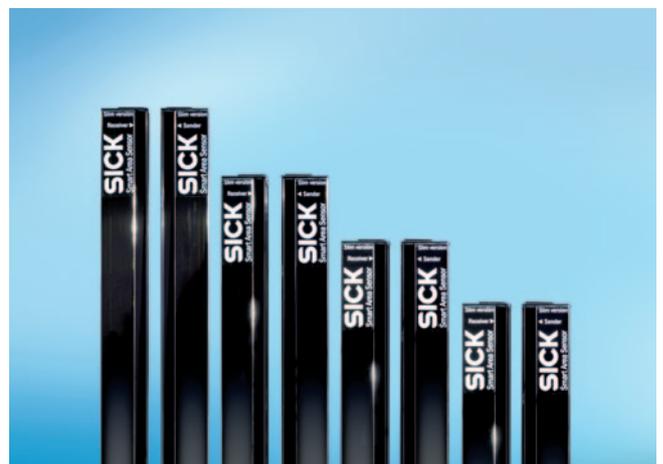
Slim

Flat

Slim & Flat – one housing profile, two options of optical light exit

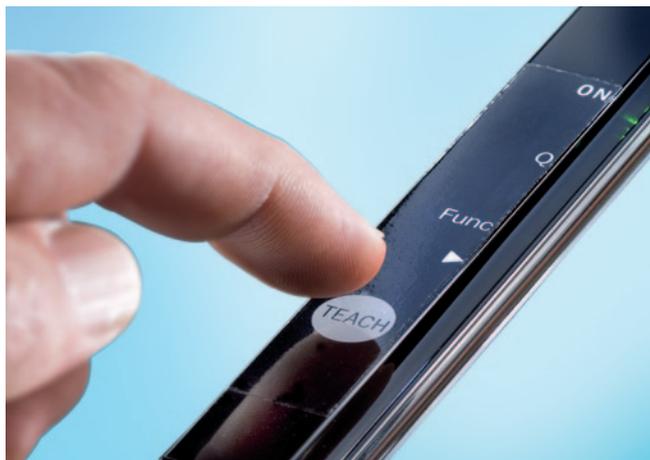
Slim model = optical light exit on narrow side.

Flat model = optical light exit on wide side.



Short & long – it's your choice

Smart light grids from SICK are available in several lengths with various detection heights.



Plug & Play – and teachable versions available

Two options are available for maximum flexibility: set the range in the field with the clever teach button or choose a factory pre-configured option.



Click & Go – simple assembly concept

The “multi-connector” can be used to fasten smart light grids or for mechanical connection to another light grid. A specially developed aluminum housing makes mounting even easier.



LED indicator – visible indication of right or wrong

The integrated inspection unit with LEDs makes for easier commissioning, diagnostics and fault analysis – providing clear feedback for greater reliability.



Job LEDs – indicate not just where but precisely where

With the SPL smart pick-to-light light grid, individually switchable and 180°-visible green job LEDs are distributed across the entire detection height. For example when several components are located in one compartment stacked on top of one another, the light grids not only tell operators which compartment to reach into, but also indicate the height at which to do so.



The smart light grids (SLG) product family consists of the smart area sensor (SAS), smart gate sensor (SGS) and smart pick-to-light light grid (SPL) automation light grids.

Typical applications can be found on the following pages.

SPL – pick-to-light operator guidance

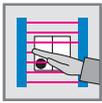


SAS – checking for overhang



SAS light grids are the perfect solution for numerous industrial automation tasks for and in machines. Their small size enables them to be used in virtually all situations, e.g. for checking overhang in the electronics industry.

Recommended product	SAS (see page 8)
Limiting range	4 m
Resolution (beam separation)	40 mm
Detection height	120 mm ... 600 mm
Response time	< 20 ms



The SPL light grid provides effective support for picking in small parts racks since indicator and job LEDs are visible across its entire detection height. A window appears enabling you to immediately detect at a glance all the current removal compartments. A further benefit of the SPL is its integrated monitoring system for incorrect removals – as soon as a part is removed from a compartment which has not been indicated, the job LED will light up red. The SPL therefore makes a valuable contribution to quality assurance.

➔ For more information and other “pick-to-light” light grids by SICK, see product information “Standard Automation Light Grids” (8014654).

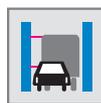
Recommended product	SPL (see page 20)
Limiting range	3 m
Resolution (beam separation)	40 mm
Detection height	120 mm ... 440 mm
Response time	< 20 ms

Selection guide

Light grid type	Page			Limiting range in m	Beam separation in mm	Detection height in mm	Job LED
PLG3	1)			2	30	120, 210, 270, 360, 420	Green, visible from 360°
PLG6	1)			0.5	60	60	Red, visible from 360°
SPL	20			3	40	120 ... 440	Green, across entire light grid length at sender and receiver, visible from 180°

¹⁾ For more information, see www.mysick.com/en/PLG3 resp. www.mysick.com/en/PLG6 or product information “Standard Automation Light Grids” (8014654).

SGS – door/gate monitoring



Their large 10 m range and detection heights of up to 1.40 m mean SGS light grids by SICK are tried and tested in the widest applications such as monitoring of entrances and exits for vehicles at industrial sites. Their particularly narrow design enables them to be installed virtually invisibly for use as an innovative monitoring system at turnstiles in airports and train stations. Here, SGS light grids will ensure turnstiles do not close after the person has exited if objects are still located within the turnstile.



Recommended product	SGS (see page 30)
Limiting range	10 m
Min. resolution (beam separation)	40 mm
Detection height	600 mm ... 1,400 mm
Response time	< 20 ms

Product family overview

	 SAS	
Better machine control in a small housing		
Technical data overview		
Beam separation	40 mm	
Working range	3 m	
Detection height	120 mm ... 600 mm	
Switching output	NPN PNP	
Optical light exit	Flat Slim	
Dimensions (W x H x D)	25 mm x 192.4 mm x 8 mm ... 25 mm x 672.4 mm x 8 mm	
At a glance		
	<ul style="list-style-type: none"> • Variable detection lengths from 120 mm up to 600 mm (in 160 mm increments) • Set parameters via teach-in with no PC • Simple teach-in setup • Maximum range 4 m • Response time 18 ms • 25 mm resolution with 40 mm beam separation possible • Highly immune to sunlight up to 150,000 lx • Small blind zone < 11 mm 	
Further information		
Applications		
Detailed information → 8		

 <p>SPL</p>	 <p>SGS</p>
Error-proof picking	Opens the door to smart sensing
40 mm	40 mm
1.5 m	80 mm 3 m 7 m
120 mm ... 440 mm	600 mm ... 1,400 mm (SGS4) 560 mm ... 1,360 mm (SGS8)
NPN PNP	NPN / 2 x NPN PNP / 2 x PNP
Flat Slim	Flat Slim
25 mm x 192.4 mm x 8 mm ... 25 mm x 512.4 mm x 8 mm	25 mm x 672.4 mm x 8 mm ... 25 mm x 1,472.4 mm x 8 mm (SGS4) 25 mm x 932.4 mm x 8 mm ... 25 mm x 1,432.4 mm x 8 mm (SGS8)
<ul style="list-style-type: none"> • Variable detection lengths from 120 mm up to 440 mm • No commissioning necessary – Plug & Play operation • Maximum range 3 m • Response time 18 ms • 25 mm resolution with 40 mm beam separation possible • Highly visible job LEDs along the entire length of the sensor • Green job LEDs for correct pick and red job LEDs for incorrect pick • Can be connected to bus systems 	<ul style="list-style-type: none"> • Variable detection lengths from 560 mm up to 1,400 mm (in 160 mm increments) • Simple teach-in setup via cable • Optional parameter setting with teach-in button, no PC required • Maximum range 10 m • Response time 18 ms • 25 mm or 45 mm MDO possible • Highly immune to sunlight at 150,000 lx • Small blind zone < 11 mm
	
→ 20	→ 30

Better machine control in a small housing



Additional information

Detailed technical data 9

Ordering information 10

Dimensional drawings 13

Adjustments 15

Connection type and diagram 15

Recommended accessories 16

Special functions 16

Setting the switching threshold via teaching process 17

Configuration mode using the example of “cross beam/parallel beam” 18

Accessories 44

Dimensional drawings accessories . 46

Product description

The SAS light grid is an easy-to-install solution used on production, manufacturing, and fabricating machines. Thanks to its range of sizes, slim and sleek design, as well as special options the SAS light grids are ideal for a range of applications. The SAS is available in a flat and slim housing and is suitable

for detection heights from 120 mm to 600 mm. The software is accessed via an integrated teach-in button, offering the choice between parallel technology or even higher-resolution cross-beam technology. In addition, auto-muting, switching logic and an alignment aid provide more uptime.

At a glance

- Variable detection lengths from 120 mm up to 600 mm (in 160 mm increments)
- Set parameters via teach-in with no PC
- Simple teach-in setup
- Maximum range 4 m
- Response time 18 ms
- 25 mm resolution with 40 mm beam separation possible
- Highly immune to sunlight up to 150,000 lx
- Small blind zone < 11 mm

Your benefits

- Small, slim and sleek design enables easy integration into applications
- Capacitive teach-in button and LEDs make commissioning easier for complex solutions
- Slim and flat models offer flexible mounting options and optimize space while reducing damage
- Customized preset configurations or set parameters via one-touch teach-in with no PC
- Optical synchronization eliminates the need to lay cables, saving time
- Auto-teach and auto-muting enable Plug & Play. And, an alignment aid and “Click & Go” provide faster installation.

→ www.mysick.com/en/SAS

Detailed technical data

Features

Technology	Sender/receiver
Task	Switching light grid
Minimum detectable object (MDO)	Parallel beam: ≥ 45 mm Cross beam: ≥ 25 mm
Number of beams	4 ... 16
Configuration	Teach button with configuration software ¹⁾
Software features	Parallel beam Cross beam Output 1 high active/low active (normally open/closed), if light beam interrupted Automatic teach active/inactive With/without alignment aid

¹⁾ For all T-types (cf. type code).

Performance

Maximum range ¹⁾	4 m
Minimum range ²⁾	Parallel beam: ≥ 0 m Cross beam: ≥ 0.3 m
Response time	Parallel beam: ≤ 19 ms Cross beam: ≤ 57 ms

¹⁾ No reserve for environmental issue and deterioration of the diode.

²⁾ $\pm 10^\circ$.

Interfaces

Inputs	Teach input
Connection type	Short cable with connector M8, 4-pin

Mechanics/electronics

Wave length	IR, 950 nm
Supply voltage V_s	DC 24 V ± 20 %
Power consumption sender ¹⁾	64 mA ... 136 mA
Power consumption receiver ¹⁾	70 mA
Ripple	$< 5 V_{pp}$
Output current I_{max}	100 mA
Output load capacitive	100 nF
Output load inductive	1 H
Initialization time	1 s
Dimensions (W x H x D)	25 mm x 192.4 mm x 8 mm ... 25 mm x 672.4 mm x 8 mm
Housing material	PMMA
Indication	LED
Synchronization	Optical
Enclosure rating	IP 65
Circuit protection	V_s connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Weight	20 g ... 80 g
Switching frequency	500 kHz

¹⁾ Without load.

Ambient data

Protection class	III
EMC	EN 60947-5-2
Ambient temperature	Operation: -25 °C ... +55 °C Storage: -25 °C ... +70 °C
Ambient light safety ¹⁾	Direct: 100,000 lx Indirect: 150,000 lx
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
Shock load	10 g / DIN EN 60068-2-29 / 16 ms

¹⁾ Sunlight.

Specific data

Beam separation	Optical light exit	Aluminum stabilizer	Model name	Ordering information
40 mm	Flat	-	SAS4-Fxxxxxxx1xxx	10
		With stabilizer	SAS4-Fxxxxxxx2xxx	10
	Slim	-	SAS4-Sxxxxxxx1xxx	11
		With stabilizer	SAS4-Sxxxxxxx2xxx	11

Ordering information

The part numbers below show a selection of common configurations and represent only a portion of the product portfolio. The type code on page 12 indicates all possible configurations that can be ordered.

Please note: Sender and receiver are only offered as a pair.

SAS4-Fxxxxxxx1xxx

- Beam separation: 40 mm
- Optical light exit: Flat
- Aluminum stabilizer: -

Working range	Detection height	Switching output	Model name	Part no.
3 m	120 mm	1 x NPN	SAS4-F012N3PS1T00	1208785
		1 x PNP	SAS4-F012P3PS1T00	1207475
			SAS4-F012P3PS1T01	1209637
			SAS4-F012P3PS1W00	1208450
	280 mm	1 x NPN	SAS4-F028N3PS1T00	1208786
		1 x PNP	SAS4-F028P3PS1T00	1208171
	440 mm	1 x NPN	SAS4-F044N3PS1T00	1207761
		1 x PNP	SAS4-F044P3PS1T00	1045020
	600 mm	1 x NPN	SAS4-F060N3PS1T00	1208787
		1 x PNP	SAS4-F060P3PS1T00	1048058

SAS4-Fxxxxxxx2xxx

- Beam separation: 40 mm
- Optical light exit: Flat
- Aluminum stabilizer: With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
3 m	280 mm	1 x PNP	SAS4-F028P3PS2T00	1207711
	600 mm	1 x PNP	SAS4-F060P3PS2T00	1209213

SAS4-Sxxxxxxx1xxx

- **Beam separation:** 40 mm
- **Optical light exit:** Slim
- **Aluminum stabilizer:** -

Working range	Detection height	Switching output	Model name	Part no.
3 m	120 mm	1 x NPN	SAS4-S012N3PS1T00	1047009
			SAS4-S012N3PS1W00	1047014
	280 mm	1 x PNP	SAS4-S012P3PS1T00	1047364
			SAS4-S028N3PS1T00	1207707
	440 mm	1 x NPN	SAS4-S028N3PS1W00	1207704
			SAS4-S028P3PS1T00	1047063
		1 x PNP	SAS4-S044N3PS1T0D	1209170
			SAS4-S044N3PS1T00	1207708
	600 mm	1 x NPN	SAS4-S044N3PS1W00	1207705
			SAS4-S044P3PS1T00	1045019
			SAS4-S044P3PS1W00	1209581
		1 x PNP	SAS4-S060N3PS1T0D	1209171
			SAS4-S060N3PS1T00	1207709
			SAS4-S060N3PS1W00	1207706
	1 x PNP	SAS4-S060N3PS1W02	1207752	
		SAS4-S060P3PS1T00	1047587	
SAS4-S060P3PS1W00	1047525			

SAS4-Sxxxxxxx2xxx

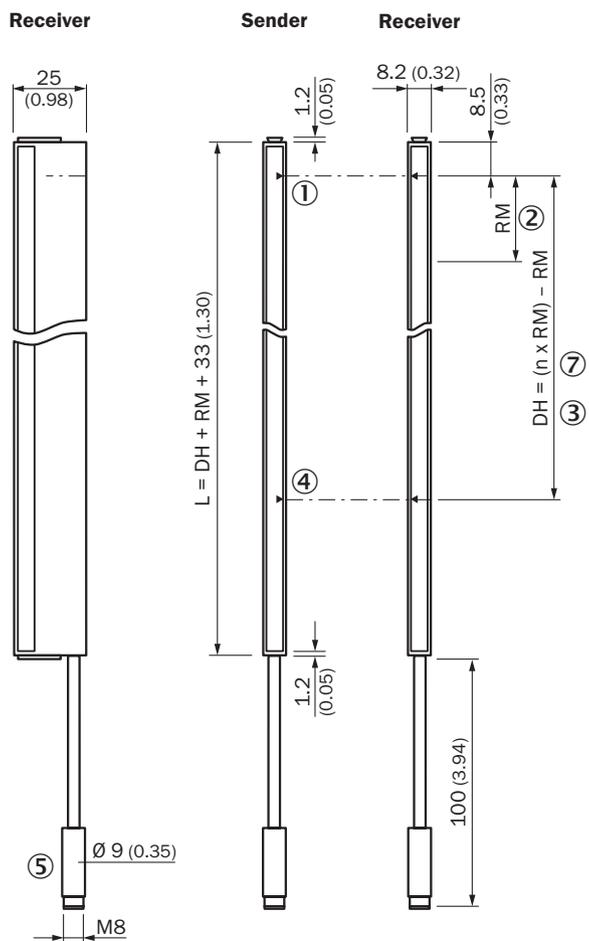
- **Beam separation:** 40 mm
- **Optical light exit:** Slim
- **Aluminum stabilizer:** With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
3 m	120 mm	1 x PNP	SAS4-S012P3PS2W04	1208464
	600 mm	1 x PNP	SAS4-S060P3PS2W0A	1209013

Dimensional drawings

SAS4-Fxxxxxx1xxx

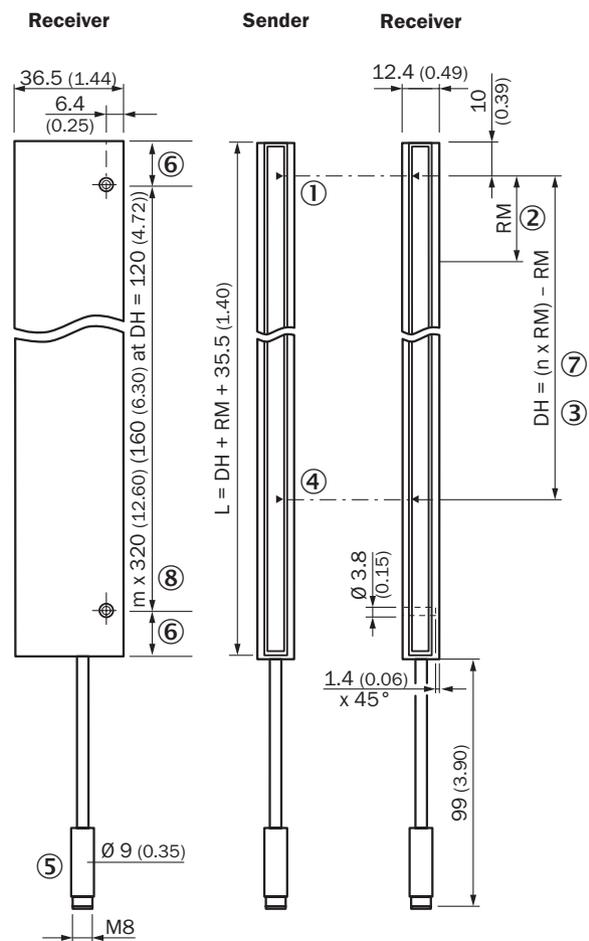
Flat, without stabilizer



All dimensions in mm (inch)

SAS4-Fxxxxxx2xxx

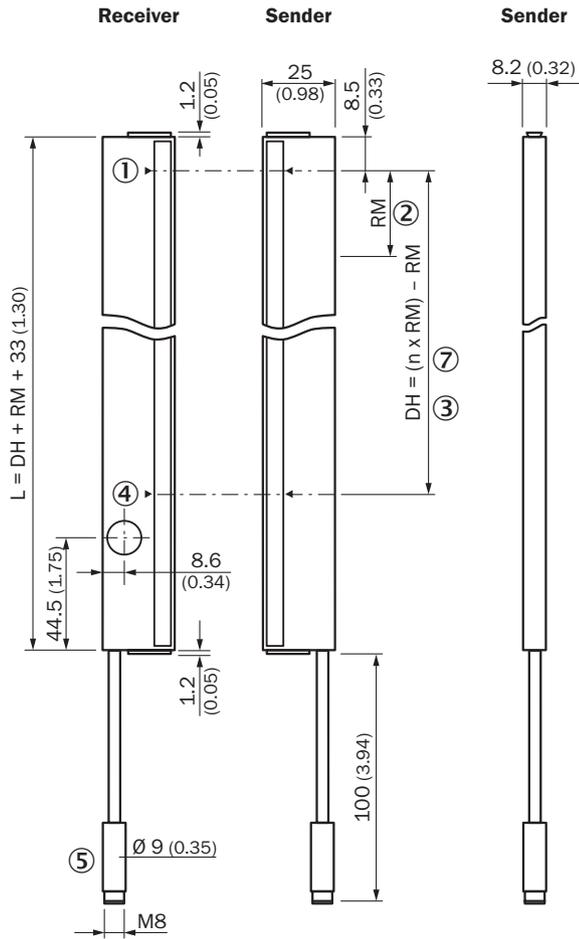
Flat, with stabilizer



All dimensions in mm (inch)

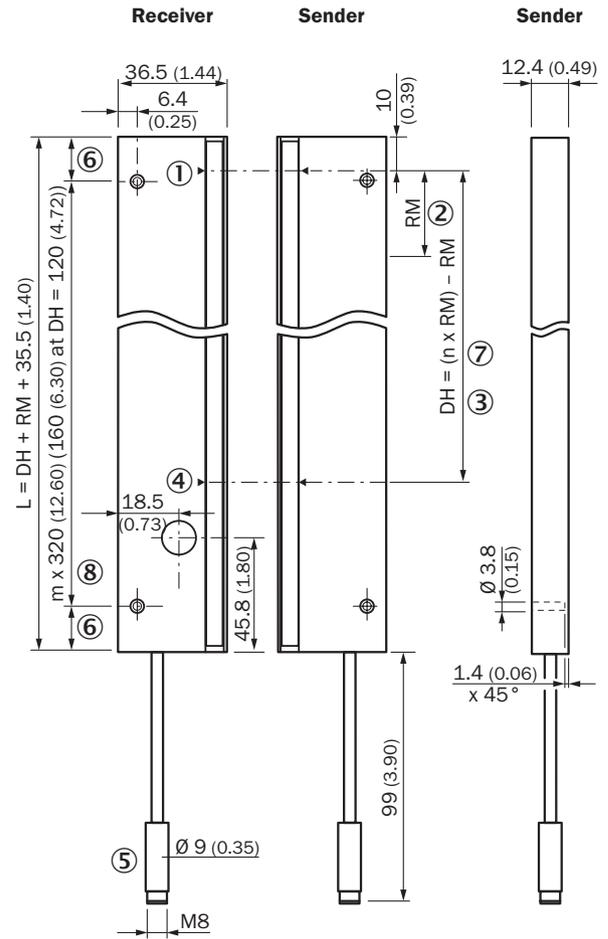
- ① Last beam
- ② Beam separation RM
- ③ DH - Detection height (n x 40 mm) - RM
- ④ First beam
- ⑤ Connection
- ⑥ Same distance
- ⑦ n = beam
- ⑧ m = mounting hole

SAS4-Sxxxxxxx1xxx
Slim, without stabilizer



All dimensions in mm (inch)

SAS4-Sxxxxxxx2xxx
Slim, with stabilizer

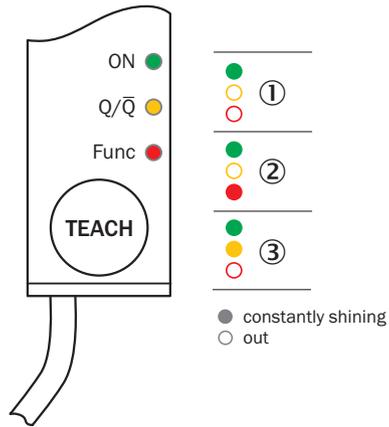


All dimensions in mm (inch)

- ① Last beam
- ② Beam separation RM
- ③ DH - Detection height (n x 40 mm) - RM
- ④ First beam
- ⑤ Connection
- ⑥ Same distance
- ⑦ n = beam
- ⑧ m = mounting hole

Adjustments

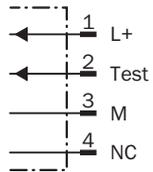
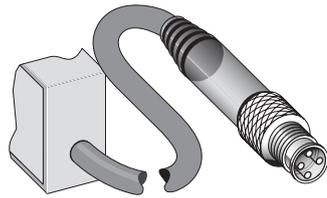
Receiver, LED indication



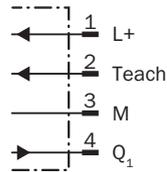
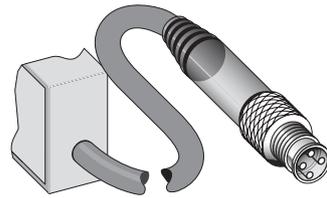
- ① Supply voltage
- ② Active, if teach-in button is pressed
- ③ No object in the light path

Connection type and diagram

**Sender
Connector
M8, 4-pin**



**Receiver
Connector
M8, 4-pin**



Recommended accessories

Complete accessories for SAS include: 2 female connector cables and 1 bracket.

Please take note of the number of pins on the connector when choosing connection cables.

Terminal and alignment brackets

	Brief description	Model name	Part no.
	Mounting bracket for mounting on the top sides. The mounting kit consists of 4 x BEF-SLG1.	BEF-SLG-SET2	2056518

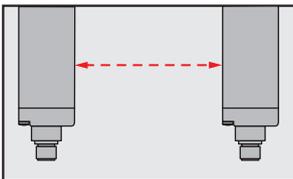
Plug connectors and cables

	Brief description	Model name	Part no.
 Illustration may differ	Female connector, M8, 4-pin, straight, 2 m, PVC	DOL-0804-G02M	6009870
	Female connector, M8, 4-pin, straight, 5 m, PVC	DOL-0804-G05M	6009872
	Female connector, M8, 4-pin, straight, 10 m, PVC	DOL-0804-G10M	6010754
 Illustration may differ	Female connector, M12, 4-pin, straight, 2 m, PVC	DOL-1204-G02M	6009382
	Female connector, M12, 4-pin, straight, 5 m, PVC	DOL-1204-G05M	6009866
	Female connector, M12, 4-pin, straight, 10 m, PVC	DOL-1204-G10M	6010543

For additional accessories including dimensional drawings, please see page 44.

Special functions

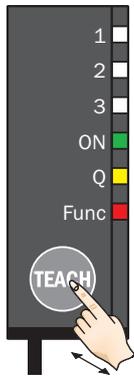
Optical synchronisation



The light grid communicates via the light beams. A cable is not necessary for the optical synchronisation.

Setting the switching threshold via teaching process

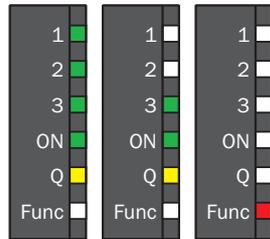
1. Light grid in RUN mode, green LED "ON" illuminates, yellow LED "Q" illuminates.



1 s ... 5 s

Press the teach button for 1 s to 5 s. During the teach process the green LEDs illuminates sequentially. The red LED "Func" illuminates.

2. Alignment aid is automatically activated for 10 s.



① ② ③

- ① = Optimum light reception.
- ② = Light reception not optimized,
→ align sensors.
- ③ = No light received,
→ check light path.

The light grid switches after 10 s automatically back into the RUN mode.

3. Light grid in RUN mode, green LED "ON" illuminates, yellow LED "Q" illuminates.

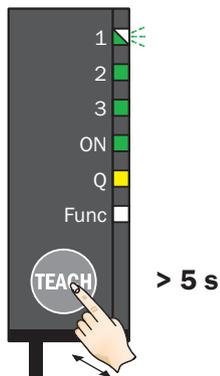


The switching threshold is set.

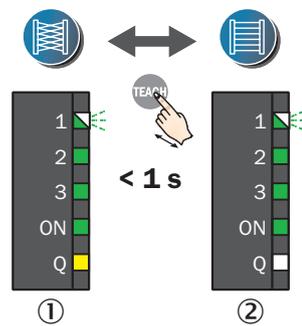
Configuration mode using the example of “cross beam/parallel beam”

If the teach button is pressed longer than 5 s, you switch into the configuration mode. In the configuration mode the menu items are indicated by the green LEDs. If the teach button is then pressed for < 1 s, the respective function is activated or reset (yellow LED on or off). If the teach button is pressed for 1 s to 5 s long, you switch to the next menu item. To exit the configuration mode, press the teach button for > 5 s or wait for 30 s.

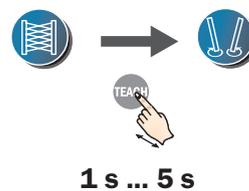
1. Light grid in RUN mode, green LED “ON” illuminates, yellow LED “Q” illuminates.



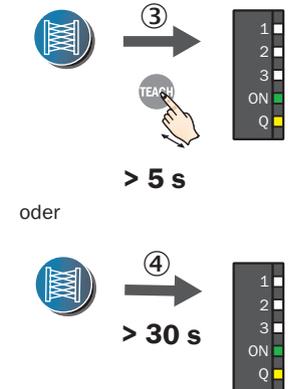
2. Cross or parallel beam set up.¹⁾



3. Go to the next menu item.



4. Exit the configuration mode.



Press teach button > 5 s. The light grid switches into the configuration mode – menu item “cross beam/parallel beam”. The first green LED from top flashes.

- ① = Yellow LED on, → “Crossed beam” active.
- ② = Yellow LED off, → “Parallel beam” active.

Press teach button for 1 s to 5 s to switch to the next menu item (in this case “alignment aid”).

- ③ = Press teach button > 5 s, → save parameters.
- ④ = Wait > 30 s, → parameters not saved.

Press teach button < 1 s to switch between the settings.

¹⁾ Configure the light grid in a 3-way cross-beam or a parallel-oriented operating principle. The cross beam can be used to improve the resolution in the middle detection area. Objects up to a size of 25 mm can be detected. The response time increases.

The other menu items in sequence of the menu setting of the light grid

Alignment aid ²⁾	Invert switching output	Auto-teach ³⁾	Pushbutton lock	Standard values ⁴⁾
active	Q ₁	active	active	active
inactive	Q̄ ₁	inactive	inactive	inactive

²⁾ The alignment aid is recommended for applications with high ranges. The signal strength of the receiver is permanently displayed by four green alignment LEDs. Depending on the strength, the number of illuminated LEDs differ. When reception is strong, all four LEDs illuminate. The alignment aid must be deactivated again after alignment.

³⁾ After commissioning (power on), the switching threshold is taught in automatically. No object should be between the sender and receiver during this process.

⁴⁾ With standard values “active” all parameters are reset to the delivery state.

Error-proof picking



Product description

The SPL pick-to-light light grid from SICK ensures optimum picking accuracy, reducing errors and improving quality. The SPL is an operator-friendly light grid – the ergonomic and economical solution for access control and picking control. The green job LEDs indicate the correct picking bin to the operator and optically confirms that the correct

item has been picked. The red LED lights when there is a picking error. This means no wrong components are used, no missing parts and no rework. In addition, features such as auto-muting, auto-teach, and an alignment aid provide more uptime. The SPL ensures process reliability and quality.

At a glance

- Variable detection lengths from 120 mm up to 440 mm
- No commissioning necessary – Plug & Play operation
- Maximum range 3 m
- Response time 18 ms
- 25 mm resolution with 40 mm beam separation possible
- Highly visible job LEDs along the entire length of the sensor
- Green job LEDs for correct pick and red job LEDs for incorrect pick
- Can be connected to bus systems

Your benefits

- Highly visible job LEDs can be seen from any position
- Picking error display for order picking improves quality
- Plug & Play operation saves time
- Automatic teach-in when turned on
- Slim and flat models offer flexible mounting options and optimize shelf/bin space while reducing damage
- Quick, cost-effective installation thanks to optical synchronization – no need to wire the sender and receiver together
- Auto-muting, auto-teach and an alignment aid provide more uptime



Additional information

Detailed technical data 21

Ordering information 22

Dimensional drawings 25

Adjustments 27

Connection type and diagram 27

Recommended accessories 28

Special functions 29

Accessories 44

Dimensional drawings accessories . 46

→ www.mysick.com/en/SPL

Detailed technical data

Features

Technology	Sender/receiver
Task	Switching light grid
Minimum detectable object (MDO)	Parallel beam: ≥ 45 mm Cross beam: ≥ 25 mm
Number of beams	4 ... 12
Configuration	Without teach button with configuration software
Software features	Parallel beam Cross beam Output 1 high active/low active (normally open/closed), if light beam interrupted Automatic teach active/inactive With/without alignment aid

Performance

Maximum range ¹⁾	3 m
Minimum range ²⁾	Parallel beam: ≥ 0 m Cross beam: $\geq 0,3$ m
Response time	Parallel beam: ≤ 19 ms Cross beam: ≤ 57 ms

¹⁾ No reserve for environmental issue and deterioration of the diode.

²⁾ $\pm 10^\circ$.

Interfaces

Inputs	Job LED
Connection type	Short cable with connector M8, 4-pin

Mechanics/electronics

Wave length	IR, 950 nm
Supply voltage V_s	DC 24 V ± 20 %
Power consumption sender ¹⁾	50 mA
Power consumption receiver ¹⁾	50 mA
Ripple	$< 5 V_{PP}$
Output current I_{max}	100 mA
Output load capacitive	100 nF
Output load inductive	1 H
Initialization time	1 s
Dimensions (W x H x D)	25 mm x 192.4 mm x 8 mm ... 25 mm x 512.4 mm x 8 mm
Housing material	PMMA
Indication	LED
Synchronization	Optical
Enclosure rating	IP 65
Circuit protection	V_s connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Weight	20 g ... 60 g
Switching frequency ²⁾	500 kHz 250 kHz

¹⁾ Without load.

²⁾ Depending on type.

Ambient data

Protection class	III
EMC	EN 60947-5-2
Ambient temperature	Operation: -25 °C ... +55 °C Storage: -25 °C ... +70 °C
Ambient light safety ¹⁾	Direct: 100,000 lx Indirect: 150,000 lx
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
Shock load	10 g / DIN EN 60068-2-29 / 16 ms

¹⁾ Sunlight.

Specific data

Beam separation	Optical light exit	Aluminum stabilizer	Model name	Ordering information
40 mm	Flat	-	SPL-Fxxxxxx1xxx	22
		With stabilizer	SPL-Fxxxxxx2xxx	22
	Slim	-	SPL-Sxxxxxx1xxx	23
		With stabilizer	SPL-Sxxxxxx2xxx	23

Ordering information

The part numbers below show a selection of common configurations and represent only a portion of the product portfolio. The type code on page 24 indicates all possible configurations that can be ordered.

Please note: Sender and receiver are only offered as a pair.

SPL-Fxxxxxx1xxx

- Beam separation: 40 mm
- Optical light exit: Flat
- Aluminum stabilizer: -

Working range	Detection height	Switching output	Model name	Part no.
1.5 m	120 mm	1 x NPN	SPL-F120NPS1W04	1208550
		1 x PNP	SPL-F120PPC1W04	1208391
			SPL-F120PPS1W04	1046128
	280 mm	1 x PNP	SPL-F280PPS1W04	1046764
	440 mm	1 x PNP	SPL-F440PPS1W04	1046314

SPL-Fxxxxxx2xxx

- Beam separation: 40 mm
- Optical light exit: Flat
- Aluminum stabilizer: With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
1.5 m	120 mm	1 x PNP	SPL-F120PPS2W04	1047344
	280 mm	1 x PNP	SPL-F280PPS2W04	1046996

SPL-Sxxxxx1xxx

- **Beam separation:** 40 mm
- **Optical light exit:** Slim
- **Aluminum stabilizer:** -

Working range	Detection height	Switching output	Model name	Part no.
1.5 m	120 mm	1 x PNP	SPL-S120PPS1W04	1046127
	280 mm	1 x PNP	SPL-S280PPS1W04	1046763
	440 mm	1 x NPN	SPL-S440NPS1W04	1047365
		1 x PNP	SPL-S440PPS1W04	1046312

SPL-Sxxxxx2xxx

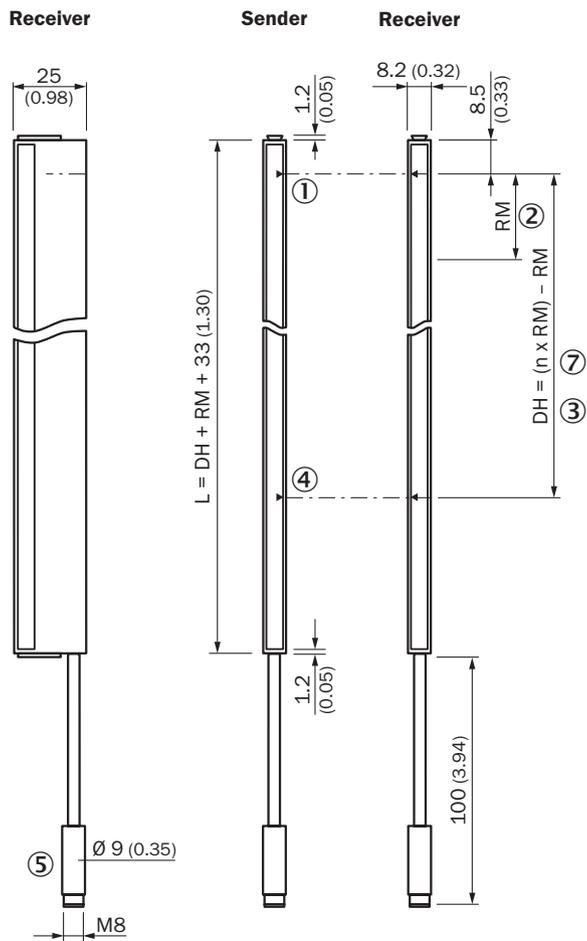
- **Beam separation:** 40 mm
- **Optical light exit:** Slim
- **Aluminum stabilizer:** With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
1.5 m	280 mm	1 x PNP	SPL-S280PPS2W04	1209197
	440 mm	1 x PNP	SPL-S440PPS2W04	1045018

Dimensional drawings

SPL-Fxxxxx1xxx

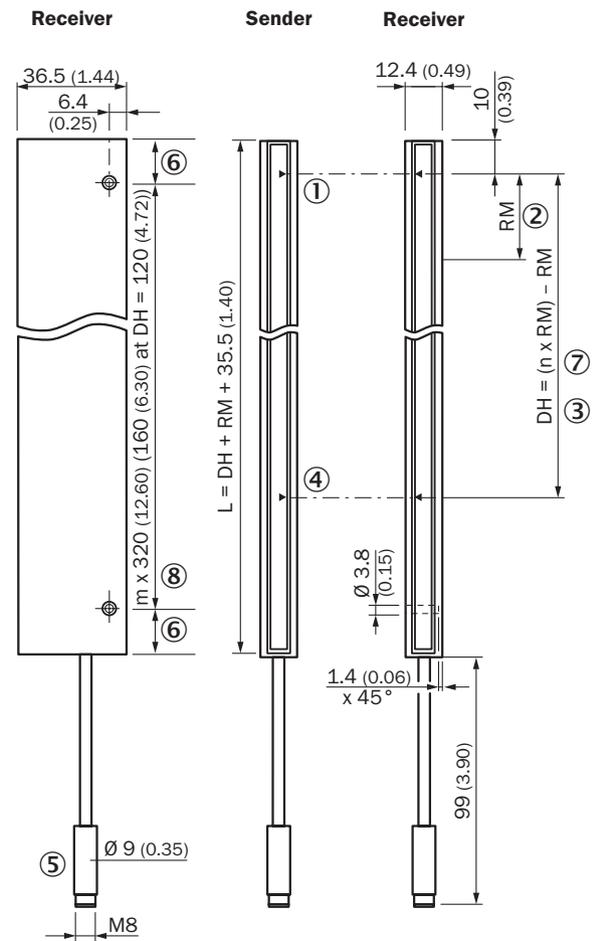
Flat, without stabilizer



All dimensions in mm (inch)

SPL-Fxxxxx2xxx

Flat, with stabilizer

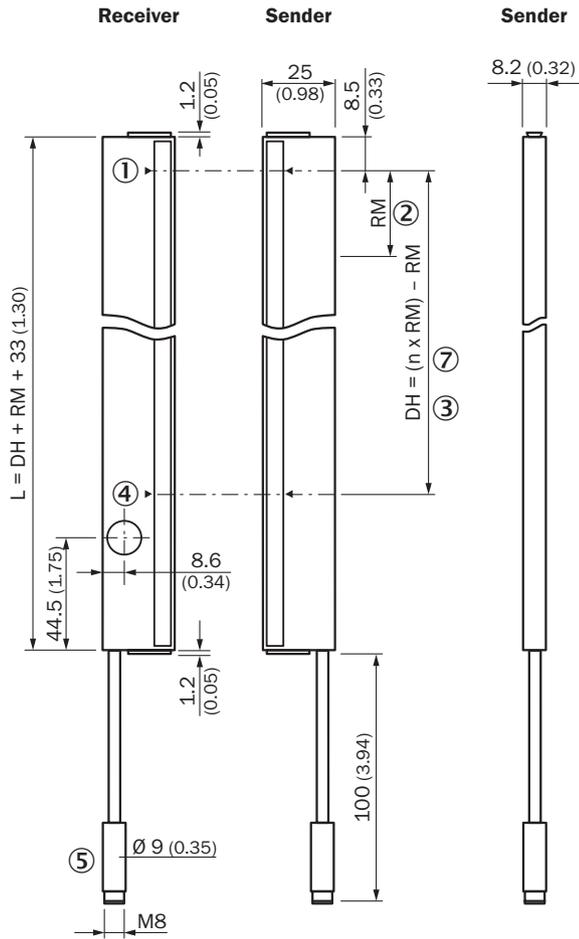


All dimensions in mm (inch)

- ① Last beam
- ② Beam separation RM
- ③ DH - Detection height (n x 40 mm) - RM
- ④ First beam
- ⑤ Connection
- ⑥ Same distance
- ⑦ n = beam
- ⑧ m = mounting hole

SPL-Sxxxxxx1xxx

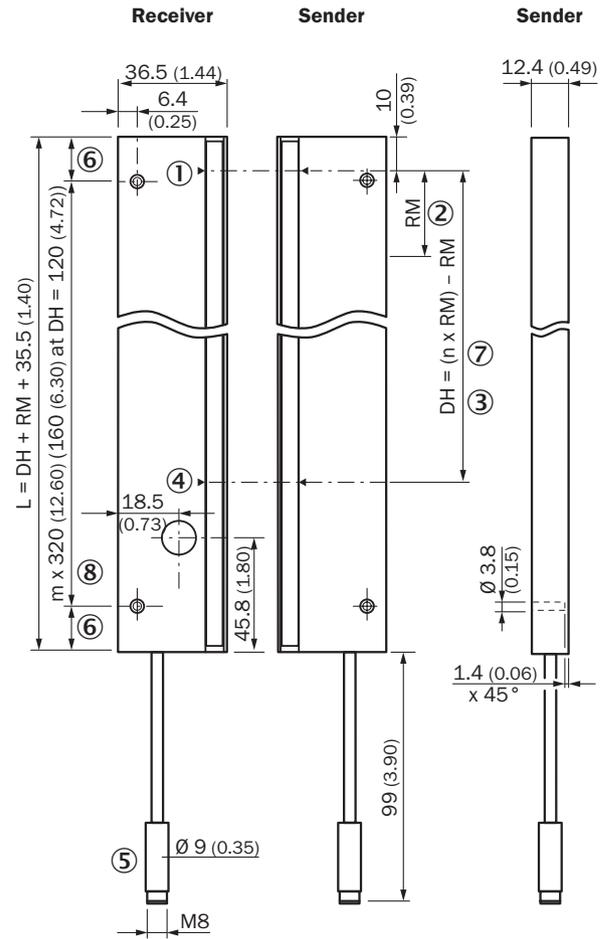
Slim, without stabilizer



All dimensions in mm (inch)

SPL-Sxxxxxx2xxx

Slim, with stabilizer

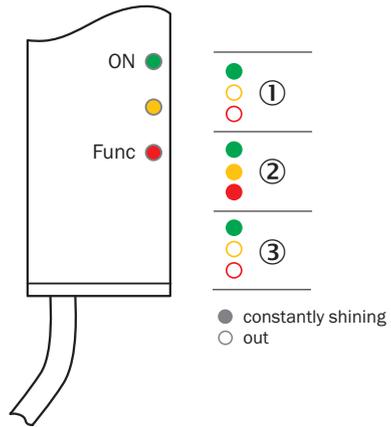


All dimensions in mm (inch)

- ① Last beam
- ② Beam separation RM
- ③ DH - Detection height (n x 40 mm) - RM
- ④ First beam
- ⑤ Connection
- ⑥ Same distance
- ⑦ n = beam
- ⑧ m = mounting hole

Adjustments

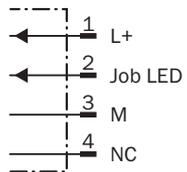
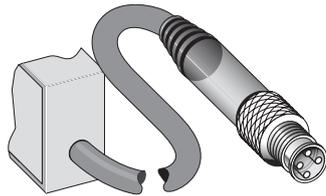
Receiver, LED indication



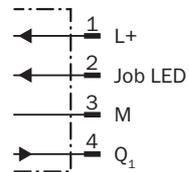
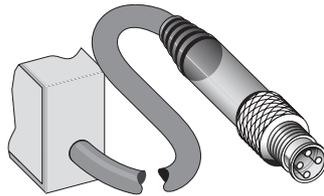
- ① Supply voltage
- ② Active, if teach procedure active
- ③ No object in the light path

Connection type and diagram

**Sender
Connector
M8, 4-pin**



**Receiver
Connector
M8, 4-pin**



Recommended accessories

Complete accessories for SPL include: 2 female connector cables and 1 bracket.

Please take note of the number of pins on the connector when choosing connection cables.

Adapters/distributors (without cable)

	Brief description	Model name	Part no.
	Sensor/actuator box, 4 x M12, 5-pin, cable, 5 m, PUR halogen free	SBL-04D12-KC05	6028394
	Sensor/actuator box, 8 x M12, 5-pin, cable, 5 m, PUR halogen free	SBL-08D12-KC05	6028396

Terminal and alignment brackets

	Brief description	Model name	Part no.
	Mounting bracket for mounting on the top sides. The mounting kit consists of 4 x BEF-SLG1.	BEF-SLG-SET2	2056518

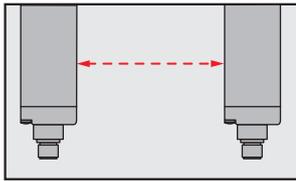
Plug connectors and cables

	Brief description	Model name	Part no.
 Illustration may differ	Female connector, M8, 4-pin, straight, 2 m, PVC	DOL-0804-G02M	6009870
	Female connector, M8, 4-pin, straight, 5 m, PVC	DOL-0804-G05M	6009872
	Female connector, M8, 4-pin, straight, 10 m, PVC	DOL-0804-G10M	6010754
 Illustration may differ	Female connector, M12, 4-pin, straight, 2 m, PVC	DOL-1204-G02M	6009382
	Female connector, M12, 4-pin, straight, 5 m, PVC	DOL-1204-G05M	6009866
	Female connector, M12, 4-pin, straight, 10 m, PVC	DOL-1204-G10M	6010543

For additional accessories including dimensional drawings, please see page 44.

Special functions

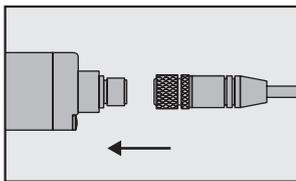
Optical synchronisation



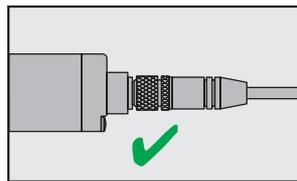
The light grid communicates via the light beams. A cable is not necessary for the optical synchronisation.

Plug & Play

1. Plug in and tighten the ring of the connector

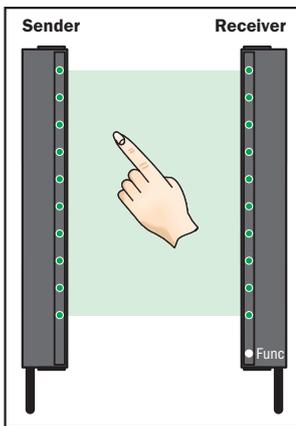


2. Device is ready for use

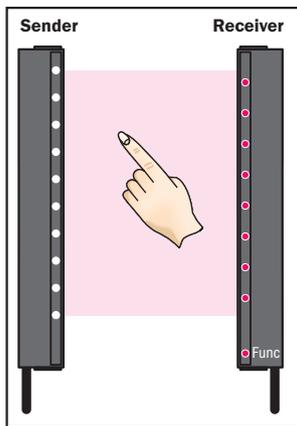


Job-LED

1. Object picking from the indicated bin



2. Incorrect picking



The “green” Job LEDs indicate the correct picking bin to the operator and confirm optically that the correct picking has taken place.

The “red” Job LEDs light in case of picking errors. The function LED “Func” will also turn “red” to indicate a picking error.

Opens the door to smart sensing



Additional information

Detailed technical data 31

Ordering information 33

Dimensional drawings 38

Adjustments 40

Connection type and diagram 40

Recommended accessories 41

Special functions 41

Setting the switching threshold via teaching process 42

Configuration mode using the example of “cross beam/parallel beam” 43

Accessories 44

Dimensional drawings accessories . 46

Product description

SGS can be mounted inside doors, gates, and entry/exit points. As a result, they are the largest light grids of the SLG product family group, are taught by remote wire, and have the longest sender to receiver span. SGS light grids can be commissioned quickly thanks to their simple “Click & Go” assembly feature and setup. In addition, features

such as auto-muting, auto-teach, and an alignment aid provide more uptime. A specially developed multi-connector also makes it easy to connect a series of multiple SGS light grids to a larger unit. Available with optional aluminum stabilizer for stand-alone mounting – it’s that simple!

At a glance

- Variable detection lengths from 600 mm up to 1,400 mm (in 160 mm increments)
- Simple teach-in setup via cable
- Optional parameter setting with teach-in button, no PC required
- Maximum range 10 m
- Response time 18 ms
- 25 mm or 45 mm MDO possible
- Highly immune to sunlight at 150,000 lx
- Small blind zone < 11 mm

Your benefits

- Small, slim and sleek design enables easy integration into applications
- Slim and flat models offer flexible mounting options and optimize shelf/bin space while reducing damage
- Customized preset configurations or set parameters via one-touch teach-in with no PC
- Optical synchronization eliminates the need to lay cables, saving time
- Optional: Capacitive teach-in button and LEDs make commissioning easier for complex solutions
- Auto-teach and auto-muting enable Plug & Play. And, an alignment aid and “Click & Go” provide faster installation.

→ www.mysick.com/en/SGS

Detailed technical data

Features

Technology	Sender/receiver
Task	Switching light grid
Minimum detectable object (MDO)	Parallel beam: ≥ 45 mm ... 85 mm Cross beam: ≥ 25 mm
Number of beams	8 ... 36
Configuration	Teach button with configuration software ¹⁾
Software features	Parallel beam Cross beam Output 1 high active/low active (normally open/closed), if light beam interrupted Automatic teach active/inactive With/without alignment aid Output 2 active/inactive (normally open/closed), if light beam interrupted With/without muting function at output 2 With/without muting function

¹⁾ For all T-types (cf. type code).

Performance

Maximum range ¹⁾	4 m 10 m
Minimum range ²⁾	Parallel beam: ≥ 0 m Cross beam: ≥ 0.3 m
Response time	Parallel beam: ≤ 19 ms Cross beam: ≤ 57 ms

¹⁾ No reserve for environmental issue and deterioration of the diode.

²⁾ $\pm 10^\circ$.

Interfaces

Inputs	Teach input
Connection type	Short cable with connector M8, 4-pin Short cable with connector, M12, 4-pin Cable open end

Mechanics/electronics

Wave length	IR, 950 nm
Supply voltage V_s	DC 24 V \pm 20 %
Power consumption sender ¹⁾	88 mA ... 148 mA
Power consumption receiver ¹⁾	70 mA
Ripple	< 5 V_{pp}
Output current I_{max}	100 mA
Output load capacitive	100 nF
Output load inductive	1 H
Initialization time	1 s
Dimensions (W x H x D)	25 mm x 672.4 mm x 8 mm ... 25 mm x 1,472.4 mm x 8 mm (SGS4) 25 mm x 932.4 mm x 8 mm ... 25 mm x 1,432.4 mm x 8 mm (SGS8)
Housing material	PMMA
Indication	LED
Synchronization	Optical
Enclosure rating	IP 65
Circuit protection	V_s connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Weight	80 g ... 360 g
Switching frequency ²⁾	500 kHz 250 kHz

¹⁾ Without load.

²⁾ Depending on type.

Ambient data

Protection class	III
EMC	EN 60947-5-2
Ambient temperature	Operation: -25 °C ... +55 °C Storage: -25 °C ... +70 °C
Ambient light safety ¹⁾	Direct: 100,000 lx Indirect: 150,000 lx
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
Shock load	10 g / DIN EN 60068-2-29 / 16 ms

¹⁾ Sunlight.

Specific data

Beam separation	Optical light exit	Aluminum stabilizer	Model name	Ordering information
40 mm	Flat	-	SGS4-Fxxxxxx1xxx	33
		With stabilizer	SGS4-Fxxxxxx2xxx	33
	Slim	-	SGS4-Sxxxxxx1xxx	34
		With stabilizer	SGS4-Sxxxxxx2xxx	34
80 mm	Flat	With stabilizer	SGS8-Fxxxxxx2xxx	35
	Slim	-	SGS8-Sxxxxxx1xxx	35
		With stabilizer	SGS8-Sxxxxxx2xxx	35

Ordering information

The part numbers below show a selection of common configurations and represent only a portion of the product portfolio. The type code on page 36 indicates all possible configurations that can be ordered.

Please note: Sender and receiver are only offered as a pair.

SGS4-Fxxxxxx1xxx

- **Beam separation:** 40 mm
- **Optical light exit:** Flat
- **Aluminum stabilizer:** -

Working range	Detection height	Switching output	Model name	Part no.
3 m	760 mm	1 x NPN	SGS4-F076N3PS1T00	1208788
			SGS4-F076N3CS1T00	1208793
		2 x PNP	SGS4-F076F3PS1W14	1209181
	920 mm	1 x NPN	SGS4-F092N3CS1T00	1208794
	1,080 mm	1 x PNP	SGS4-F108P3PS1W00	1045008
	1,400 mm	1 x PNP	SGS4-F140P3PS1W00	1045012
7 m	600 mm	1 x PNP	SGS4-F060P7PS1W00	1209723
	760 mm	1 x PNP	SGS4-F076P7PS1W00	1209287
	920 mm	1 x NPN	SGS4-F092N7PS1W00	1209012
		1 x PNP	SGS4-F092P7PS1T00	1208151
			SGS4-F092P7PS1W00	1047211
	1,080 mm	1 x PNP	SGS4-F108P7PS1W00	1045010
			SGS4-F108P7PS1W02	1047500
	1,400 mm	1 x PNP	SGS4-F140P7PS1W00	1045014

SGS4-Fxxxxxx2xxx

- **Beam separation:** 40 mm
- **Optical light exit:** Flat
- **Aluminum stabilizer:** With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
3 m	1,080 mm	1 x PNP	SGS4-F108P3PS2T01	1207780
	1,240 mm	1 x PNP	SGS4-F124P3PS2T00	1048038
	1,400 mm	1 x PNP	SGS4-F140P3PS2T00	1208809

SGS4-Sxxxxxx1xxx

- Beam separation: 40 mm
- Optical light exit: Slim
- Aluminum stabilizer: –

Working range	Detection height	Switching output	Model name	Part no.	
3 m	760 mm	1 x PNP	SGS4-S076P3PS1W00	1046966	
			SGS4-S076P3PS1T00	1047092	
	920 mm	1 x PNP	SGS4-S092P3PS1T00	1208201	
			1,080 mm	1 x PNP	SGS4-S108P3PS1W82
	SGS4-S108P3PS1W02	1209567			
	SGS4-S108P3PS1W00	1045007			
	SGS4-S108P3PS1T00	1209472			
	1 x NPN	SGS4-S108N3PS1T00			1208155
	1,240 mm	1 x NPN			SGS4-S124N3PS1T0D
	1,400 mm	1 x PNP	SGS4-S140P3PS1T00	1047015	
SGS4-S140P3PS1W00			1045011		
7 m	600 mm	1 x PNP	SGS4-S060P7PS1W00	1209722	
	760 mm	1 x PNP	SGS4-S076P7PS1W00	1209288	
	920 mm	1 x PNP	SGS4-S092P7PS1T00	1208200	
			SGS4-S092P7PS1W00	1208596	
	1,080 mm	1 x PNP	SGS4-S108P7PS1T00	1209457	
			SGS4-S108P7PS1W00	1045009	
	1,400 mm	2 x PNP	SGS4-S140F7PS1T00	1047077	
		1 x PNP	SGS4-S140P7PS1W00	1045013	

SGS4-Sxxxxxx2xxx

- Beam separation: 40 mm
- Optical light exit: Slim
- Aluminum stabilizer: With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
3 m	920 mm	1 x PNP	SGS4-S092P3PS2T00	1208108
	1,080 mm	1 x PNP	SGS4-S108P3PS2T07	1207519
	1,240 mm	1 x PNP	SGS4-S124P3PS2W00	1047815
			SGS4-S124P3PS2W04	1047903
	1,400 mm	1 x PNP	SGS4-S140P3PS2T00	1208109
7 m	1,080 mm	2 x PNP	SGS4-S108F7TS2W17	1209503
	1,400 mm	1 x PNP	SGS4-S140P7PS2T00	1208241

SGS8-Fxxxxxx2xxx

- **Beam separation:** 80 mm
- **Optical light exit:** Flat
- **Aluminum stabilizer:** With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
3 m	880 mm	1 x PNP	SGS8-F088P3PS2W0E	1208797
	1,040 mm	1 x PNP	SGS8-F104P3PS2W0C	1208451
			SGS8-F104P3PS2W0E	1208610
	1,200 mm	1 x PNP	SGS8-F120P3PS2W0C	1208517
			SGS8-F120P3PS2W0E	1208611
1,360 mm	1 x PNP	SGS8-F136P3PS2W0C	1208516	

SGS8-Sxxxxxx1xxx

- **Beam separation:** 80 mm
- **Optical light exit:** Slim
- **Aluminum stabilizer:** -

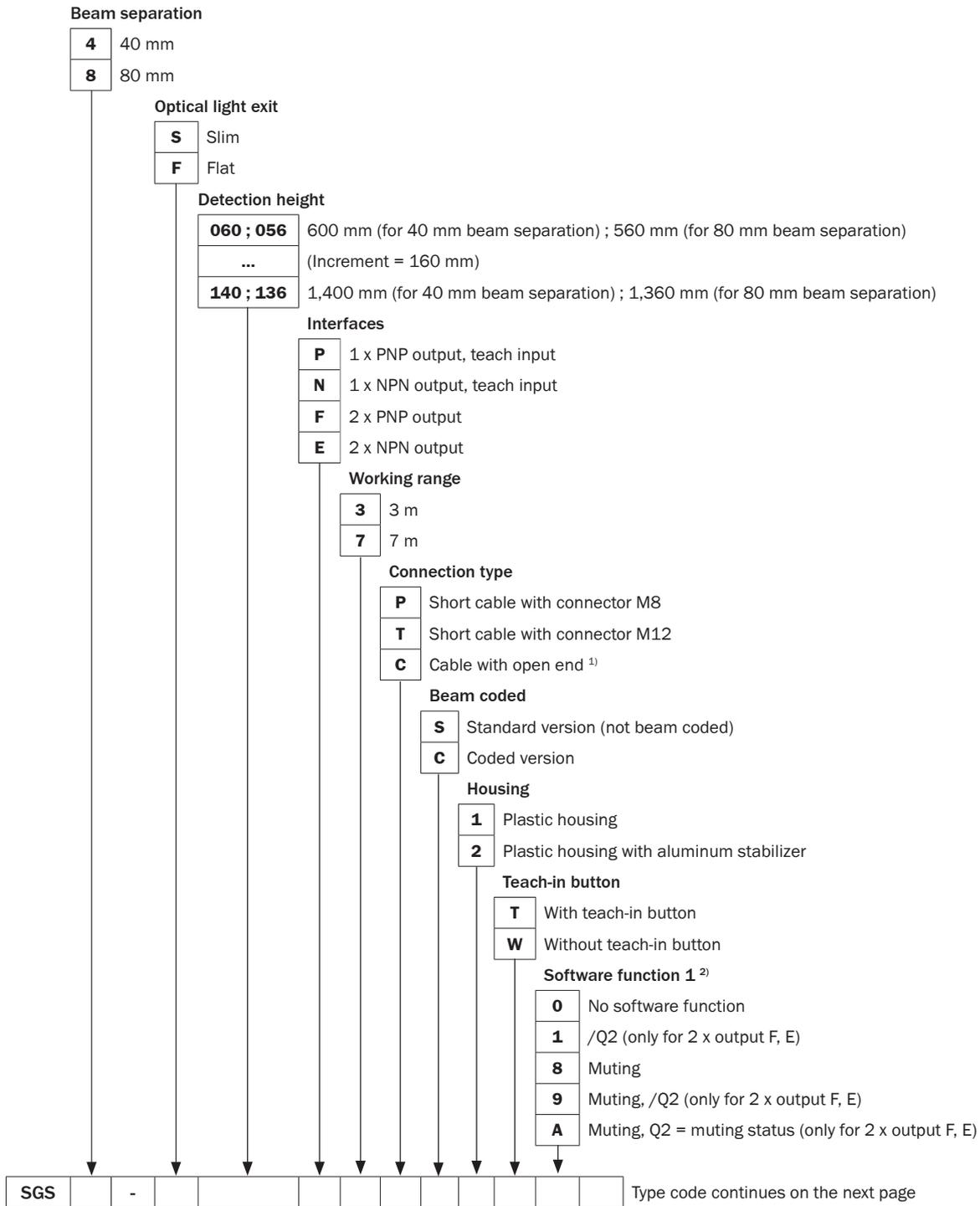
Working range	Detection height	Switching output	Model name	Part no.
3 m	560 mm	2 x PNP	SGS8-S056F3PS1T00	1209297
		1 x PNP	SGS8-S056P3PS1W00	1208141
	720 mm	1 x PNP	SGS8-S072P3PS1W00	1209568
	880 mm	1 x PNP	SGS8-S088P3PS1W00	1209597
	1,200 mm	1 x PNP	SGS8-S120P3PS1T00	1209294
7 m	1,040 mm	2 x PNP	SGS8-S104F7PC1WA4	1045016
			SGS8-S104F7PS1T00	1047499
			SGS8-S104F7PS1WA4	1045015

SGS8-Sxxxxxx2xxx

- **Beam separation:** 80 mm
- **Optical light exit:** Slim
- **Aluminum stabilizer:** With stabilizer

Working range	Detection height	Switching output	Model name	Part no.
3 m	720 mm	1 x PNP	SGS8-S072P3PS2W0C	1208519
	880 mm	1 x PNP	SGS8-S088P3PS2T00	1207983
			SGS8-S088P3PS2W00	1047998
	1,200 mm	1 x PNP	SGS8-S120P3PS2W0C	1208452
	1,360 mm	1 x PNP	SGS8-S136P3PS2T00	1209554
SGS8-S136P3PS2W00			1047161	

Type code



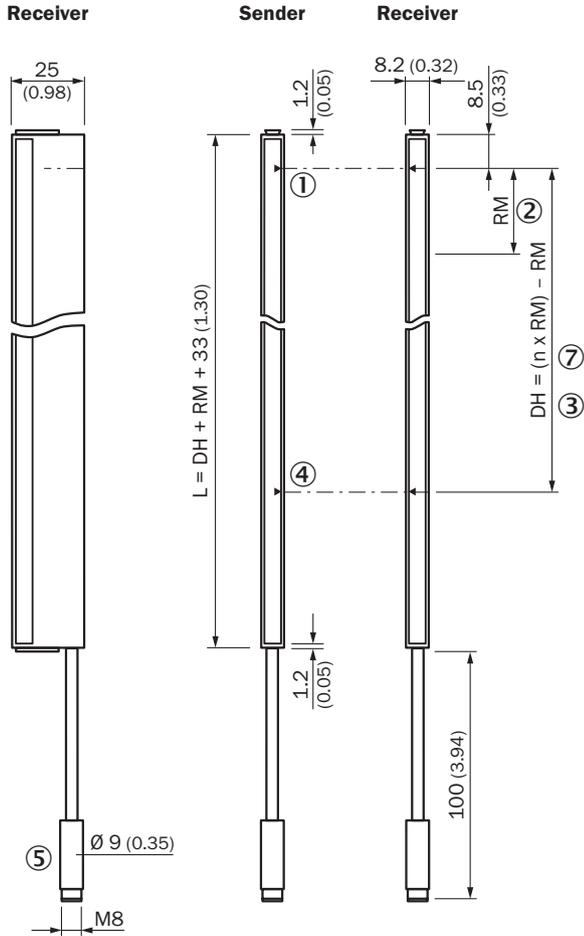
¹⁾ On request.

²⁾ Alignment aid = LEDs signalize the correct alignment
 Automatic teach = Automatic teach at plug-in
 Q1 = switching status ON if light path interrupted
 /Q1; /Q2 = switching status OFF if light path interrupted.

Dimensional drawings

SGS4-Fxxxxxxx1xxx
 SGS8-Fxxxxxxx1xxx

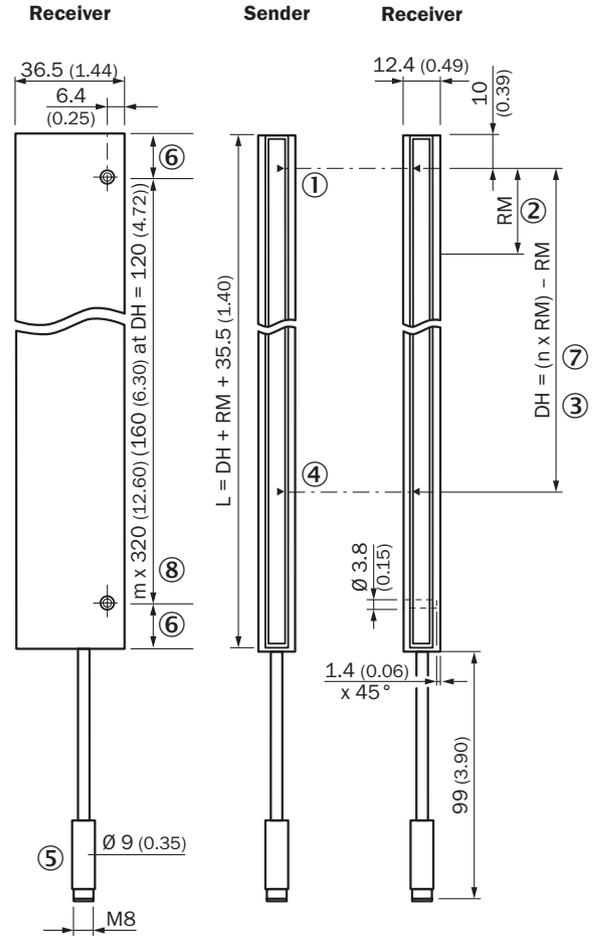
Flat, without stabilizer



All dimensions in mm (inch)

SGS4-Fxxxxxxx2xxx
 SGS8-Fxxxxxxx2xxx

Flat, with stabilizer

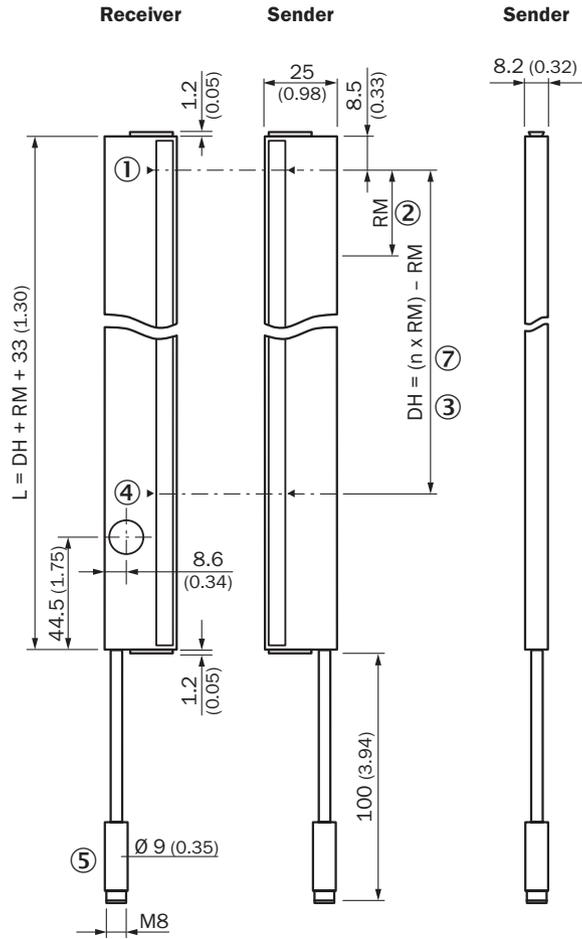


All dimensions in mm (inch)

- ① Last beam
- ② Beam separation RM
- ③ DH - Detection height (n x RM) - RM
- ④ First beam
- ⑤ Connection
- ⑥ Same distance
- ⑦ n = beam
- ⑧ m = mounting hole

SGS4-Sxxxxxx1xxx
SGS8-Sxxxxxx1xxx

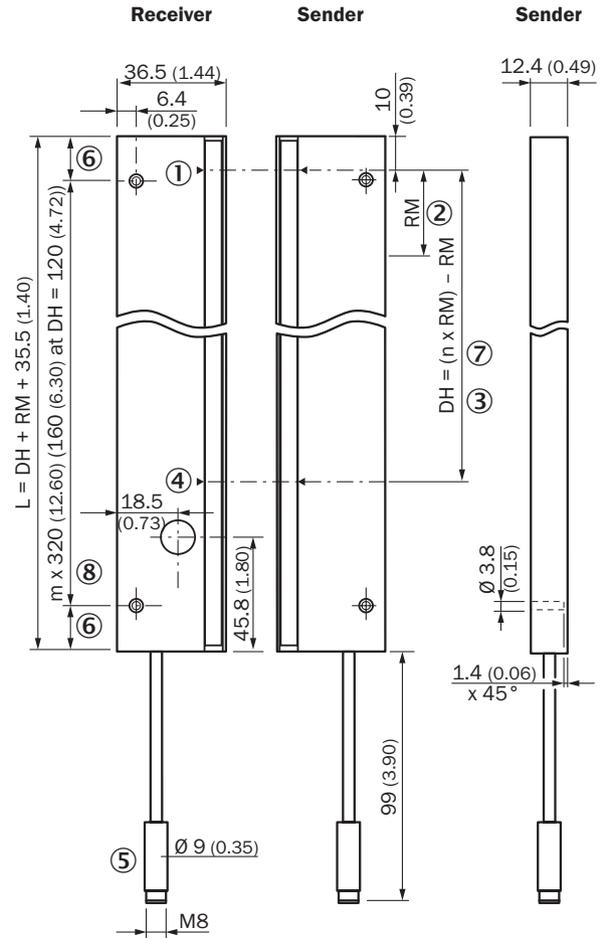
Slim, without stabilizer



All dimensions in mm (inch)

SGS4-Sxxxxxx2xxx
SGS8-Sxxxxxx2xxx

Slim, with stabilizer

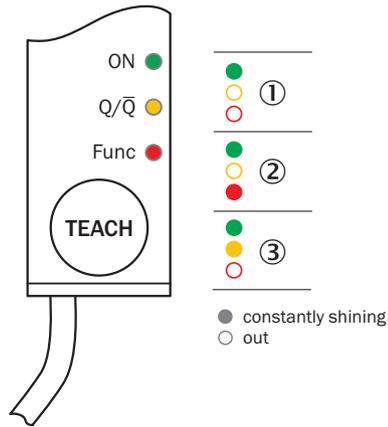


All dimensions in mm (inch)

- ① Last beam
- ② Beam separation RM
- ③ DH - Detection height (n x RM) - RM
- ④ First beam
- ⑤ Connection
- ⑥ Same distance
- ⑦ n = beam
- ⑧ m = mounting hole

Adjustments

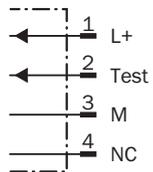
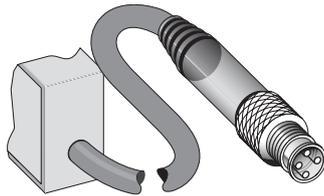
Receiver, LED indication



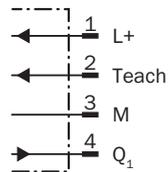
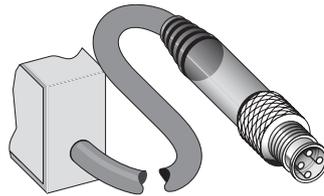
- ① Supply voltage
- ② Active, if teach-in button is pressed
- ③ No object in the light path

Connection type and diagram

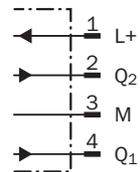
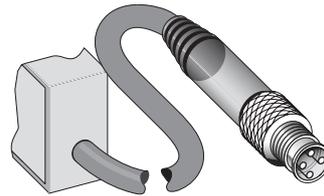
**Sender
Connector
M8, 4-pin**



**Receiver teach PNP/NPN
Connector
M8, 4-pin**



**Receiver 2 x PNP/2 x NPN
Connector
M8, 4-pin**



Recommended accessories

Complete accessories for SGS include: 2 female connector cables and 1 bracket.

Please take note of the number of pins on the connector when choosing connection cables.

Terminal and alignment brackets

	Brief description	Model name	Part no.
	Mounting bracket for mounting on the top sides. The mounting kit consists of 2 x BEF-SLG1 and 2 x BEF-SLG2.	BEF-SLG-SET1	2055427
	Bracket for SLG, stainless steel, 4 pcs	VZA-SLG	2048519

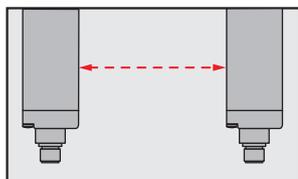
Plug connectors and cables

	Brief description	Model name	Part no.
 Illustration may differ	Female connector, M8, 4-pin, straight, 2 m, PVC	DOL-0804-G02M	6009870
	Female connector, M8, 4-pin, straight, 5 m, PVC	DOL-0804-G05M	6009872
	Female connector, M8, 4-pin, straight, 10 m, PVC	DOL-0804-G10M	6010754
 Illustration may differ	Female connector, M12, 4-pin, straight, 2 m, PVC	DOL-1204-G02M	6009382
	Female connector, M12, 4-pin, straight, 5 m, PVC	DOL-1204-G05M	6009866
	Female connector, M12, 4-pin, straight, 10 m, PVC	DOL-1204-G10M	6010543

For additional accessories including dimensional drawings, please see page 44.

Special functions

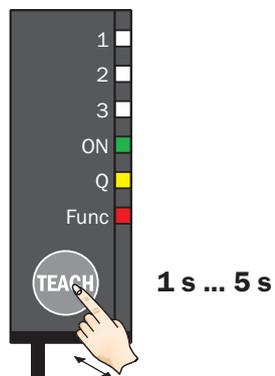
Optical synchronisation



The light grid communicates via the light beams. A cable is not necessary for the optical synchronisation.

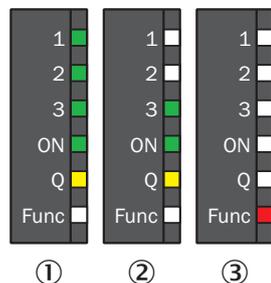
Setting the switching threshold via teaching process

1. Light grid in RUN mode, green LED "ON" illuminates, yellow LED "Q" illuminates.



Press the teach button for 1 s to 5 s. During the teach process the green LEDs illuminates sequentially. The red LED "Func" illuminates.

2. Alignment aid is automatically activated for 10 s.



① = Optimum light reception.
 ② = Light reception not optimized,
 → align sensors.
 ③ = No light received,
 → check light path.

The light grid switches after 10 s automatically back into the RUN mode.

3. Light grid in RUN mode, green LED "ON" illuminates, yellow LED "Q" illuminates.

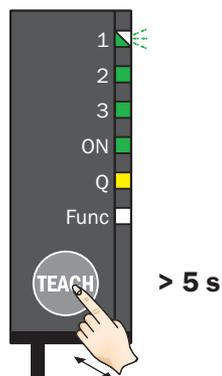


The switching threshold is set.

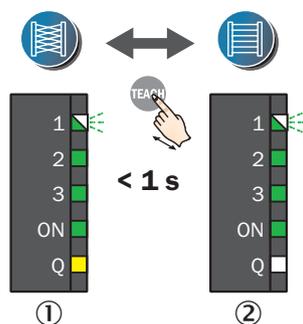
Configuration mode using the example of “cross beam/parallel beam”

If the teach button is pressed longer than 5 s, you switch into the configuration mode. In the configuration mode the menu items are indicated by the green LEDs. If the teach button is then pressed for < 1 s, the respective function is activated or reset (yellow LED on or off). If the teach button is pressed for 1 s to 5 s long, you switch to the next menu item. To exit the configuration mode, press the teach button for > 5 s or wait for 30 s.

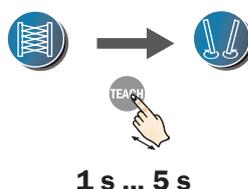
1. Light grid in RUN mode, green LED “ON” illuminates, yellow LED “Q” illuminates.



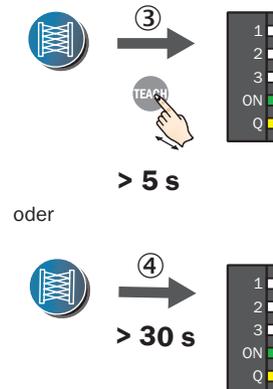
2. Cross or parallel beam set up.¹⁾



3. Go to the next menu item.



4. Exit the configuration mode.



Press teach button > 5 s. The light grid switches into the configuration mode – menu item “cross beam/parallel beam”. The first green LED from top flashes.

- ① = Yellow LED on, → “Crossed beam” active.
- ② = Yellow LED off, → “Parallel beam” active.

Press teach button for 1 s to 5 s to switch to the next menu item (in this case “alignment aid”).

- ③ = Press teach button > 5 s, → save parameters.
- ④ = Wait > 30 s, → parameters not saved.

Press teach button < 1 s to switch between the settings.

¹⁾ Configure the light grid in a 3-way cross-beam or a parallel-oriented operating principle. The cross beam can be used to improve the resolution in the middle detection area. Objects up to a size of 25 mm can be detected. The response time increases.

The other menu items in sequence of the menu setting of the light grid

Alignment aid ²⁾	Invert switching output	Auto-teach ³⁾	Pushbutton lock	Standard values ⁴⁾	Invert second switching output	Muting ⁵⁾
active	Q ₁	active	active	active	Q ₂	active
inactive	Q̄ ₁	inactive	inactive	inactive	Q̄ ₂	inactive

²⁾ The alignment aid is recommended for applications with high ranges. The signal strength of the receiver is permanently displayed by four green alignment LEDs. Depending on the strength, the number of illuminated LEDs differ. When reception is strong, all four LEDs illuminate. The alignment aid must be deactivated again after alignment.

³⁾ After commissioning (power on), the switching threshold is taught in automatically. No object should be between the sender and receiver during this process.

⁴⁾ With standard values “active” all parameters are reset to the delivery state.

⁵⁾ If a beam is interrupted permanently, it disappears after > 60 s, and the switching output Q₁ is enabled again. If a second switching output is present, it remains inactive.

Accessories

Adapters/distributors (without cable)

	Brief description	Model name	Part no.	SAS	SPL	SGS
	Sensor/actuator box, 4x M12, 5-pin, cable, 5 m, PUR halogen free	SBL-04D12-KC05	6028394	-	●	-
	Sensor/actuator box, 8x M12, 5-pin, cable, 5 m, PUR halogen free	SBL-08D12-KC05	6028396	-	●	-

Cleaning agent

	Brief description	Model name	Part no.	SAS	SPL	SGS
	Plastic cleaner and care product, anti-static	Plastic cleaner	5600006	●	●	●

Lens cloths

	Brief description	Model name	Part no.	SAS	SPL	SGS
	-	Optical cleaning cloth	4003353	●	●	●

Plug connectors and cables

	Brief description	Model name	Part no.	SAS	SPL	SGS
 Illustration may differ	Female connector, M8, 4-pin, straight, 2 m, PVC	DOL-0804-G02M	6009870	●	●	●
	Female connector, M8, 4-pin, straight, 5 m, PVC	DOL-0804-G05M	6009872	●	●	●
	Female connector, M8, 4-pin, straight, 10 m, PVC	DOL-0804-G10M	6010754	●	●	●
	Female connector, M8, 4-pin, straight, 2 m, PUR halogen free	DOL-0804-G02MC	6025894	●	●	●
	Female connector, M8, 4-pin, straight, 5 m, PUR halogen free	DOL-0804-G05MC	6025895	●	●	●
	Female connector, M8, 4-pin, straight, 10 m, PUR halogen free	DOL-0804-G10MC	6025896	●	●	●
 Illustration may differ	Female connector, M8, 4-pin, angled, 2 m, PVC	DOL-0804-W02M	6009871	●	●	●
	Female connector, M8, 4-pin, angled, 5 m, PVC	DOL-0804-W05M	6009873	●	●	●
	Female connector, M8, 4-pin, angled, 10 m, PVC	DOL-0804-W10M	6010755	●	●	●
	Female connector, M8, 4-pin, angled, 2 m, PUR halogen free	DOL-0804-W02MC	6025897	●	●	●
	Female connector, M8, 4-pin, angled, 5 m, PUR halogen free	DOL-0804-W05MC	6025898	●	●	●
	Female connector, M8, 4-pin, angled, 10 m, PUR halogen free	DOL-0804-W10MC	6025899	●	●	●
 Illustration may differ	Female connector, M12, 4-pin, straight, 2 m, PVC	DOL-1204-G02M	6009382	●	●	●
	Female connector, M12, 4-pin, straight, 5 m, PVC	DOL-1204-G05M	6009866	●	●	●
	Female connector, M12, 4-pin, straight, 10 m, PVC	DOL-1204-G10M	6010543	●	●	●
	Female connector, M12, 4-pin, straight, 15 m, PVC	DOL-1204-G15M	6010753	●	●	●
	Female connector, M12, 4-pin, straight, 2 m, PUR halogen free	DOL-1204-G02MC	6025900	●	●	●
	Female connector, M12, 4-pin, straight, 5 m, PUR halogen free	DOL-1204-G05MC	6025901	●	●	●
	Female connector, M12, 4-pin, straight, 10 m, PUR halogen free	DOL-1204-G10MC	6025902	●	●	●
	Female connector, M12, 4-pin, straight, 15 m, PUR halogen free	DOL-1204-G15MC	6034749	●	●	●

	Brief description	Model name	Part no.	SAS	SPL	SGS
 Illustration may differ	Female connector, M12, 4-pin, angled, 2 m, PVC	DOL-1204-W02M	6009383	●	●	●
	Female connector, M12, 4-pin, angled, 5 m, PVC	DOL-1204-W05M	6009867	●	●	●
	Female connector, M12, 4-pin, angled, 10 m, PVC	DOL-1204-W10M	6010541	●	●	●
	Female connector, M12, 4-pin, angled, 2 m, PUR halogen free	DOL-1204-W02MC	6025903	●	●	●
	Female connector, M12, 4-pin, angled, 5 m, PUR halogen free	DOL-1204-W05MC	6025904	●	●	●
	Female connector, M12, 4-pin, angled, 10 m, PUR halogen free	DOL-1204-W10MC	6025905	●	●	●
	Female connector, M12, 4-pin, angled, 15 m, PUR halogen free	DOL-1204-W15MC	6034752	●	●	●
	Female connector, M8, 4-pin, straight	DOS-0804-G	6009974	●	●	●
	Female connector, M8, 4-pin, angled	DOS-0804-W	6009975	●	●	●
	Female connector, M12, 4-pin, straight	DOS-1204-G	6007302	●	●	●
	Female connector, M12, 4-pin, angled	DOS-1204-W	6007303	●	●	●
 Illustration may differ	Connection cable, M12, 4-pin, plug straight/socket straight, 1.5 m, PVC	DSL-1204-G1M5	6034822			
	Connection cable, M12, 4-pin, plug straight/socket straight, 2 m, PVC	DSL-1204-G02M	6022567	●	●	●
	Connection cable, M12, 4-pin, plug straight/socket straight, 5 m, PVC	DSL-1204-G05M	6022569	●	●	●
	Connection cable, M12, 4-pin, plug straight/socket straight, 10 m, PVC	DSL-1204-G10M	6034406	●	●	●
	Connection cable, M12, 4-pin, plug straight/socket straight, 20 m, PVC	DSL-1204-G20M	6034407	-	-	●
	Connection cable, M12, 4-pin, plug straight/socket straight, 1 m, PUR halogen free	DSL-1204-G01MC	6033244	●	●	●
	Connection cable, M12, 4-pin, plug straight/socket straight, 2 m, PUR halogen free	DSL-1204-G02MC	6025927	●	●	●
	Connection cable, M12, 4-pin, plug straight/socket straight, 5 m, PUR halogen free	DSL-1204-G05MC	6033245	●	●	●
	Connection cable, M12, 4-pin, plug straight/socket straight, 10 m, PUR halogen free	DSL-1204-G10MC	6033698	●	●	●
 Illustration may differ	Connection cable, M8/M12, 4-pin, plug straight/socket straight, 2 m, PVC	DSL-8204-G02M	6022573	●	●	●
	Connection cable, M8/M12, 4-pin, plug straight/socket straight, 5 m, PVC	DSL-8204-G05M	6034403	●	●	●
	Connection cable, M8/M12, 4-pin, plug straight/socket straight, 10 m, PVC	DSL-8204-G10M	6034404	●	●	●

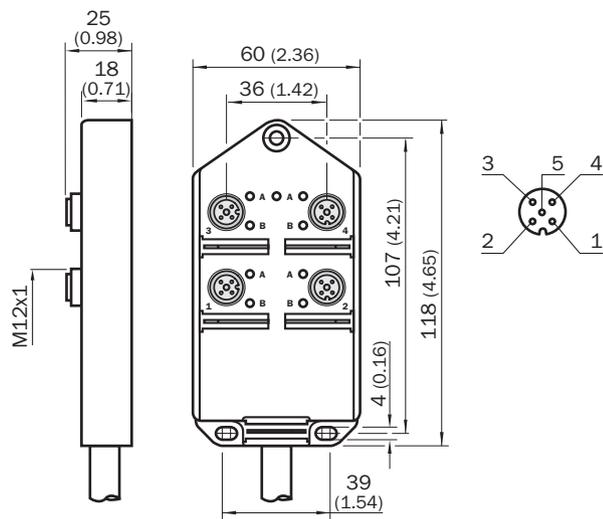
Terminal and alignment brackets

	Brief description	Model name	Part no.	SAS	SPL	SGS
	Mounting bracket for mounting on the face sides. The mounting kit consists of 2x BEF-SLG1 and 2x BEF-SLG2.	BEF-SLG-SET1	2055427	●	●	●
	Mounting bracket for mounting on the face sides. The mounting kit consists of 4x BEF-SLG1.	BEF-SLG-SET2	2056518	●	●	●
	Bracket for SLG, stainless steel, 4 pcs	VZA-SLG	2048519	●	●	●

Dimensional drawings accessories

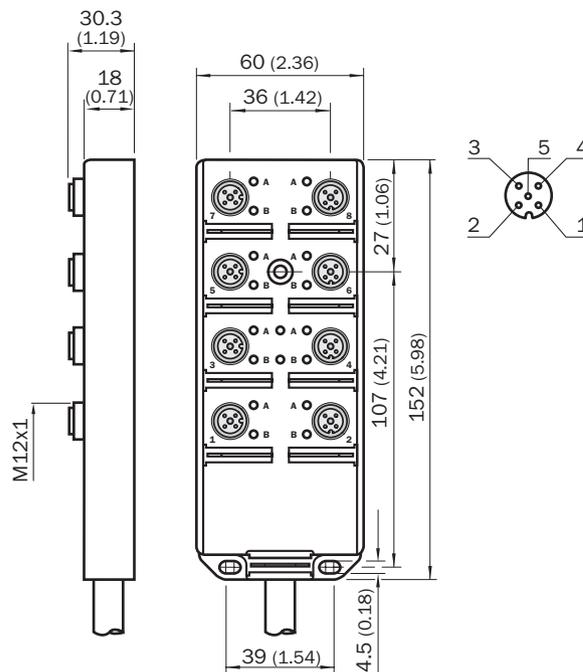
Adapters/distributors (without cable)

SBL-04D12-KC05



Dimensions in mm (inch)

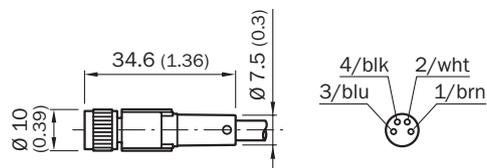
SBL-08D12-KC05



Dimensions in mm (inch)

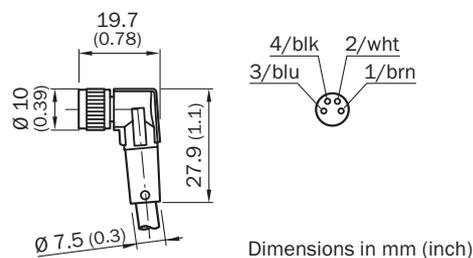
Plug connectors and cables

DOL-0804-G02MC
DOL-0804-G05MC
DOL-0804-G10MC



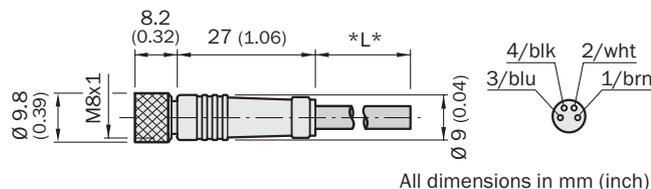
Dimensions in mm (inch)

DOL-0804-W02MC
DOL-0804-W05MC
DOL-0804-W10MC



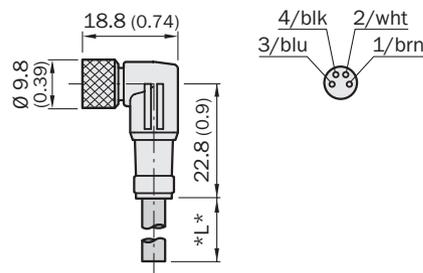
Dimensions in mm (inch)

DOL-0804-G02M
DOL-0804-G05M
DOL-0804-G10M



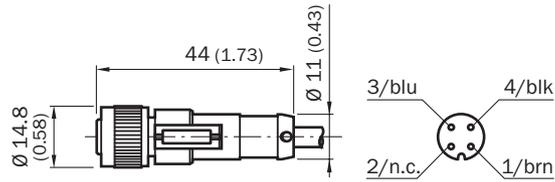
All dimensions in mm (inch)

DOL-0804-W02M
DOL-0804-W05M
DOL-0804-W10M



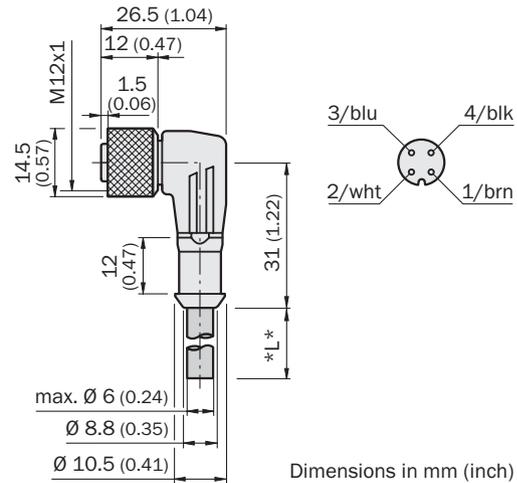
All dimensions in mm (inch)

DOL-1204-G02M/DOL-1204-G02MC
DOL-1204-G05M/DOL-1204-G05MC
DOL-1204-G10M/DOL-1204-G10MC
DOL-1204-G15M/DOL-1204-G15MC



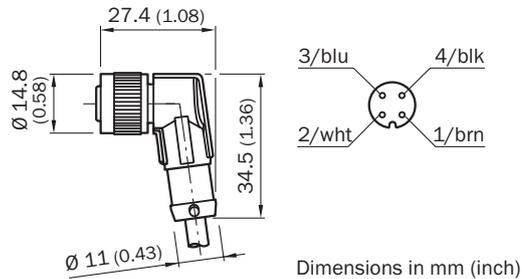
Dimensions in mm (inch)

DOL-1204-W02M
DOL-1204-W05M
DOL-1204-W10M



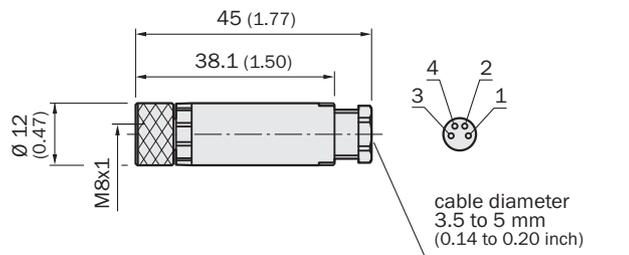
Dimensions in mm (inch)

DOL-1204-W02MC/DOL-1204-W05MC
DOL-1204-W10MC/DOL-1204-W15MC



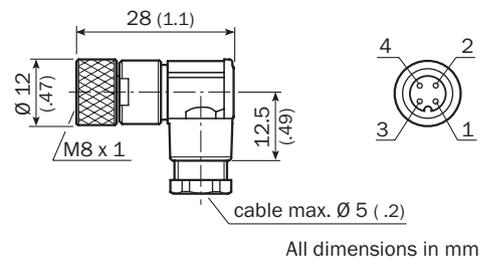
Dimensions in mm (inch)

DOS-0804-G



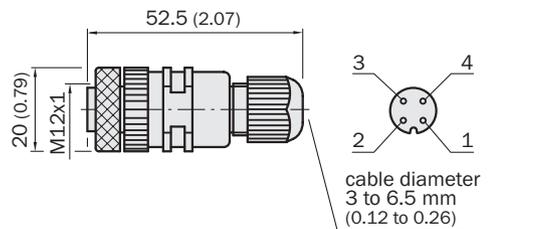
All dimensions in mm (inch)

DOS-0804-W



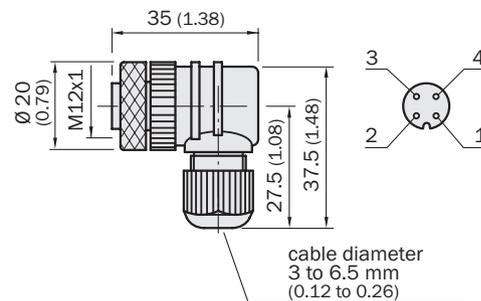
All dimensions in mm

DOS-1204-G



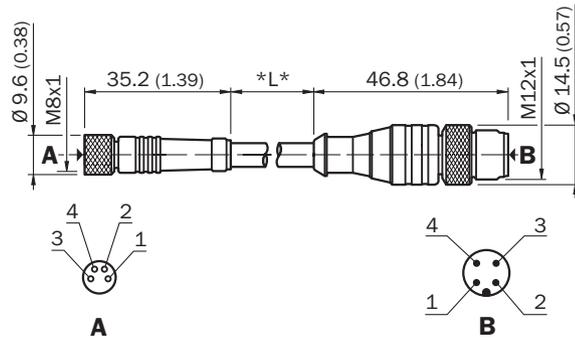
Dimensions in mm (inch)

DOS-1204-W



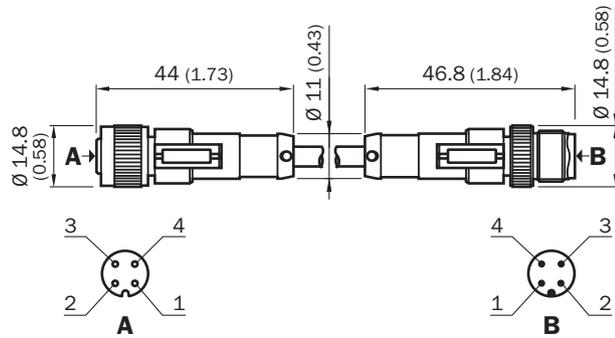
Dimensions in mm (inch)

DSL-8204-G02M/DSL-8204-G05M
DSL-8204-G10M



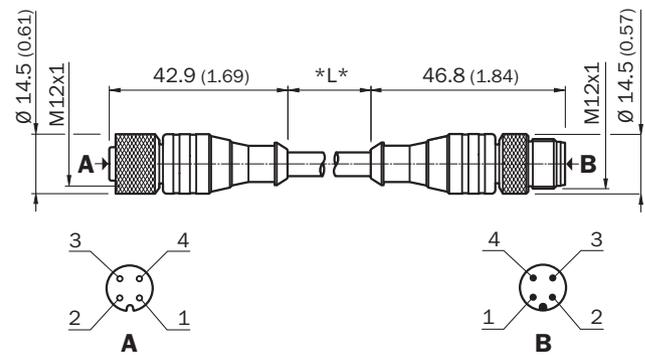
Dimensions in mm (inch)

DSL-1204-G01MC/DSL-1204-G02MC
DSL-1204-G05MC/DSL-1204-G10MC



Dimensions in mm (inch)

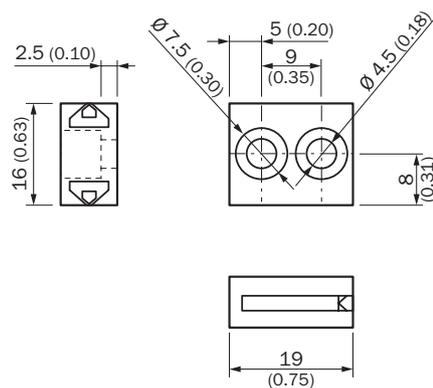
DSL-1204-G0M6/DSL-1204-G1M5
DSL-1204-G02M/DSL-1204-G05M
DSL-1204-G10M/DSL-1204-G20M



Dimensions in mm (inch)

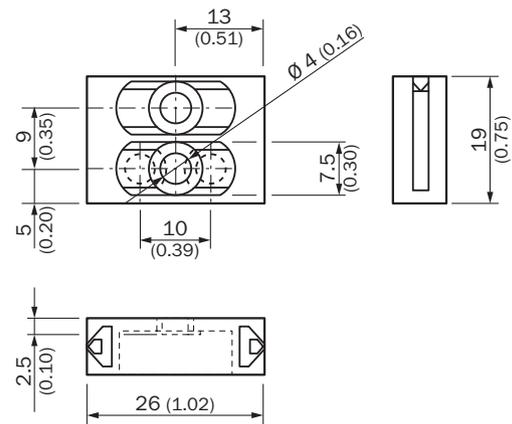
Terminal and alignment brackets

BEF-SLG-SET1



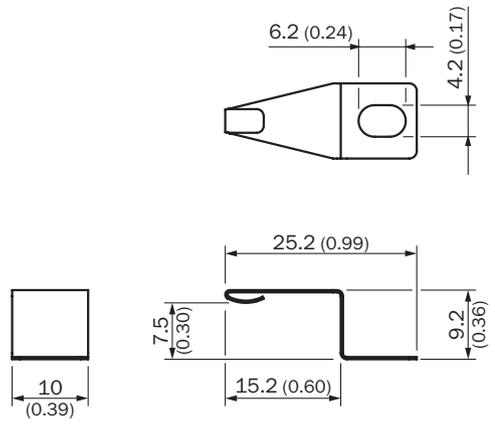
All dimensions in mm (inch)

BEF-SLG-SET2



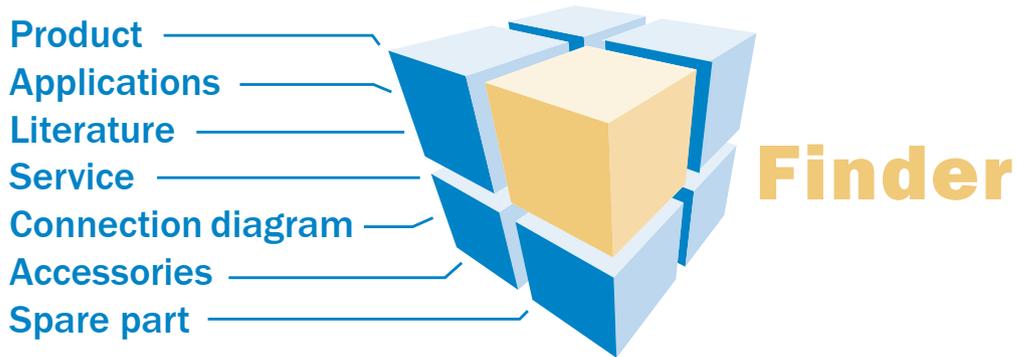
All dimensions in mm (inch)

VZA-SLG



All dimensions in mm (inch)

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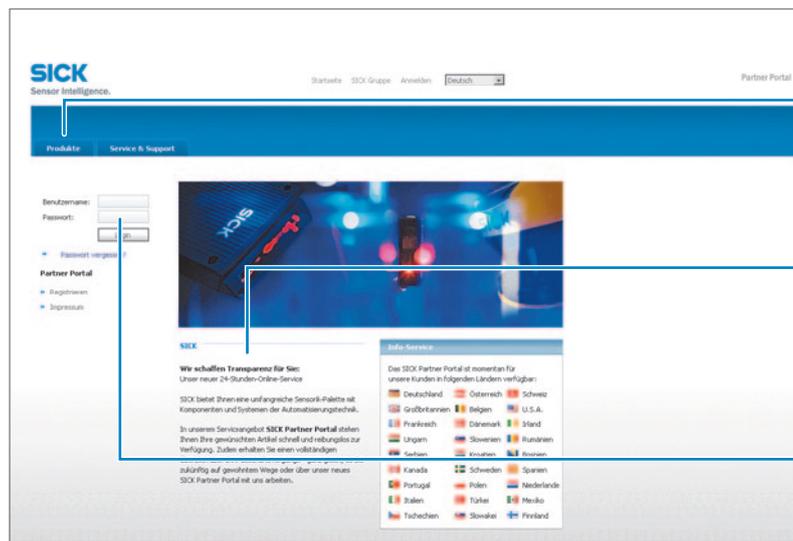
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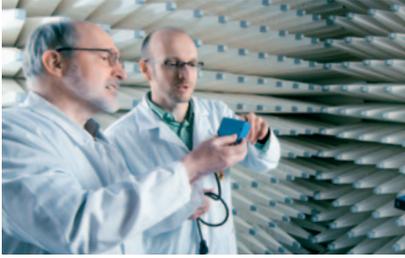
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