

## LIGHT BEAM DEVICES



- *Emitter-receiver photocells with test input*
- *Tubular plastic or metal photocells for distances reaching 8 m*
- *Parallelepiped plastic photocells for distances reaching 50 m*
- *Tubular plastic laser photocells for distances reaching 40 m*

## Sx-F/G-ST SERIES

The **Sx-F/G-ST** series emitter-receiver photocells are homologated to be connected to the safety control units of the SB-BWS-T2 and BWS-T4 series and together form a respectively Type 2 and Type 4 safety system conforming with the EN 954-1 Standard.



The special characteristics of these photocells, immediately identified by the yellow-coloured data label, mainly consist of the reduced beam's effective aperture angle and in the presence of a test input, complying with the EN 61496-2 Standard.

Different photocells are available: a tubular M18 format either in the plastic S5 series version or metal S10 version with operating distances reaching 8 m, a glass-fibre reinforced plastic parallelepiped format of the S30 series with distances up to 50 m and a tubular M18 plastic format with laser emission of the SL5 series for distance reaching 40 m.

M12 connector versions are available as well as 5 m shielded cable versions for S5, S10 models and terminal block for S30 models. LEDs signalling the operating status and the correct alignment of the safety devices are present on the photocells.

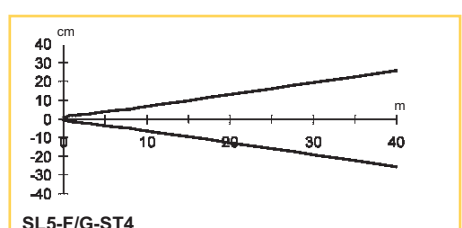
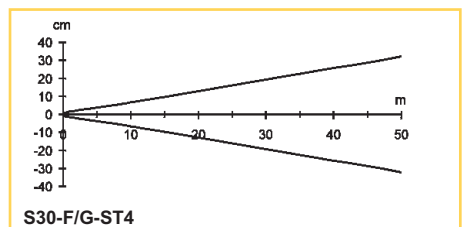
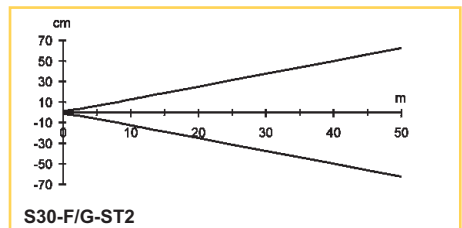
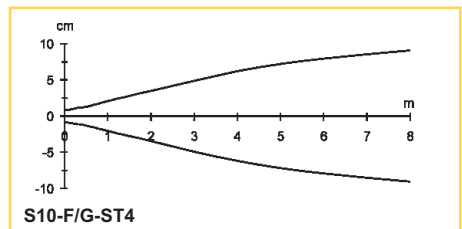
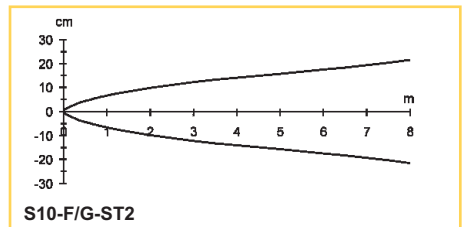
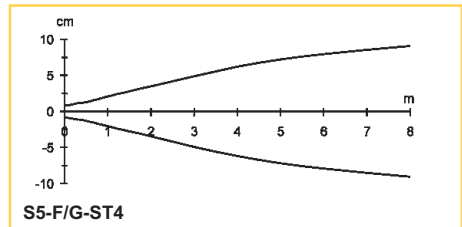
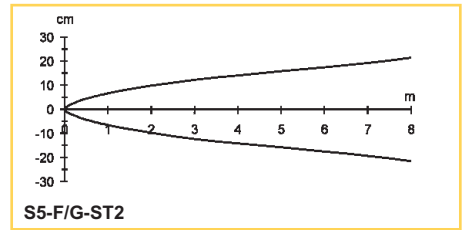


## TECHNICAL DATA

<b>Power supply:</b> .....	10 ... 30 Vdc, reverse polarity protection
<b>Consumption:</b> .....	30 mA max. (S5/S10) 40 mA max. (S30) 35 mA max. (SL5)
<b>Light emission:</b> .....	infrared LED 880 nm (S5/S10/S30) red laser 650 nm (SL5), safety class 1 and 2 according to EN 60825-1
<b>Through beam operating distance:</b> .....	0 ... 8 m (S5 / S10) 0 ... 50 m (S30) 0 ... 40 m (SL5)
<b>Indicators:</b> .....	red POWER LED (S5/S10/S30-G) green POWER LED (SL5-G) red free/aligned beam LED (S5/S10/S30-F) yellow OUTPUT LED (SL5-F) green STABILITY LED (SL5-F)
<b>Output type:</b> .....	PNP
<b>Saturation voltage:</b> .....	1 V max. (S5/S10/S30) 2 V max. (SL5)
<b>Output current:</b> .....	200 mA max. (S5/S10/S30) 100 mA max. (SL5) short-circuit protection
<b>Response time:</b> .....	2 ms max. (S5/S10/S30) 333 $\mu$ s max. (SL5)
<b>Switching frequency:</b> .....	250 Hz max. (S5/S10/S30) 1.5 kHz max. (SL5)
<b>Operating mode:</b> .....	light
<b>Auxiliary functions:</b> .....	'test -' input for Sx-G-ST2 'test +' input for Sx-G-ST4
<b>Connection:</b> .....	5 m $\varnothing$ 5 mm shielded cable (S5/S10) M12 connector (S5/S10/S30/SL5) terminal block (S30) for $\varnothing$ 8 ... 12 mm cable
<b>Safety category:</b> .....	type 2 (ST2 vers.) type 4 (ST4 vers.)
<b>Electrical protection:</b> .....	class 2 (S5/S30/SL5) class 1 (S10)
<b>Mechanical protection:</b> .....	IP67
<b>Housing material:</b> .....	ABS (S5/SL5) nickel-plated brass (S10) glass-fibre reinforced polycarbonate (S30)
<b>Lens material:</b> .....	PMMA plastic
<b>Weight:</b> .....	150 g max. (S5/S10/SL5) 165 g max. (S30)
<b>Operating temperature:</b> .....	-25 ... +55 $^{\circ}$ C (S5/S10/S30) -10 ... +50 $^{\circ}$ C (SL5)
<b>Storage temperature:</b> .....	-25 ... +70 $^{\circ}$ C
<b>Reference standards:</b> .....	EN 954-1, IEC 61496-1, IEC 61496-2
<b>Certifications:</b> .....	 

The operating distances indicate the detection with excess gain 2.

## DETECTION DIAGRAMS



Effective aperture angle (EAA)

## CONNECTIONS

<p>S30-F50-1-ST2/ST4</p>	<p>S30-G50-1-ST2</p>	<p>S30-G50-1-ST4</p>	<h3>M12 CONNECTOR</h3> <p>S30-F50-2-ST2/ST4      S30-G50-2-ST2</p>
<p>S5/S10/SL5-F-ST2/ST4</p>	<p>S5/S10-G8-ST2</p>	<p>S5/S10/SL5-G8-ST4</p>	<p>S30-G50-2-ST4      S5/S10/SL5-ST2/ST4</p>

## DIMENSIONS

<h3>S10 SERIES</h3> <p><b>CABLE VERSION</b></p> <p><b>M12 CONNECTOR VERSION</b></p>	<h3>S30 SERIES</h3>
<h3>S5 SERIES</h3> <p><b>CABLE VERSION</b></p> <p><b>M12 CONNECTOR VERSION</b></p>	<h3>SL5 SERIES</h3>

	MODELS			
	F8-ST2	F8-ST4	G8-ST2	G8-ST4
L	65	72	55	62
X1	42	42	32	32
X2	3	10	3	10

mm

## MODELS

### SAFETY PHOTOCELLS FOR SB-BWS-ST2 CONTROL UNITS (type 2)

MODEL	FUNCTION	CONNECTION	ORDER N°
S5-5-G8-60-ST2	emitter	5 m cable	952051300
S5-5-G8-62-ST2	emitter	M12 connector	952051310
S5-5-F8-90-ST2	receiver	5 m cable	952051340
S5-5-F8-92-ST2	receiver	M12 connector	952051350
S10-5-G8-60-ST2	emitter	5 m cable	962151040
S10-5-G8-62-ST2	emitter	M12 connector	962151050
S10-5-F8-90-ST2	receiver	5 m cable	962151060
S10-5-F8-92-ST2	receiver	M12 connector	962151070
S30-5-G50-1-ST2	emitter	terminal block	960211350
S30-5-G50-2-ST2	emitter	M12 connector	960211360
S30-5-F50-1-ST2	receiver	terminal block	960211370
S30-5-F50-2P-ST2	receiver	M12 connector	960211380

### SAFETY PHOTOCELLS FOR SB-BWS-ST4 CONTROL UNITS (type 4)

MODEL	FUNCTION	CONNECTION	ORDER N°
S5-5-G8-60-ST4	emitter	5 m cable	952051380
S5-5-G8-62-ST4	emitter	M12 connector	952051390
S5-5-F8-90-ST4	receiver	5 m cable	952051420
S5-5-F8-92-ST4	receiver	M12 connector	952051430
S10-5-G8-60-ST4	emitter	5 m cable	962151080
S10-5-G8-62-ST4	emitter	M12 connector	962151090
S10-5-F8-90-ST4	receiver	5 m cable	962151100
S10-5-F8-92-ST4	receiver	M12 connector	962151110
S30-5-G50-1-ST4	emitter	terminal block	960211390
S30-5-G50-2-ST4	emitter	M12 connector	960211400
S30-5-F50-1-ST4	receiver	terminal block	960211410
S30-5-F50-2P-ST4	receiver	M12 connector	960211420
SL5-5-G-82-ST4	class 1 laser emitter	M12 connector	952501140
SL5-5-G-83-ST4	class 2 laser emitter	M12 connector	952501150
SL5-5-F-92-ST4	receiver	M12 connector	952501130

## ACCESSORIES

MODEL	DESCRIPTION	ORDER N°
CV-A1-21-G-10	axial M12 3-pole shielded 10 m connector	95ACC2060
SP-40	fixed support for tubular M18 sensors	95ACC1370
SWING-18	adjustable support for tubular M18 sensors	895000006
MICRO-18	support with micrometric regulation for tubular M18 sensors	95ACC1380

Please refer also to **Sensor Accessories**

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