

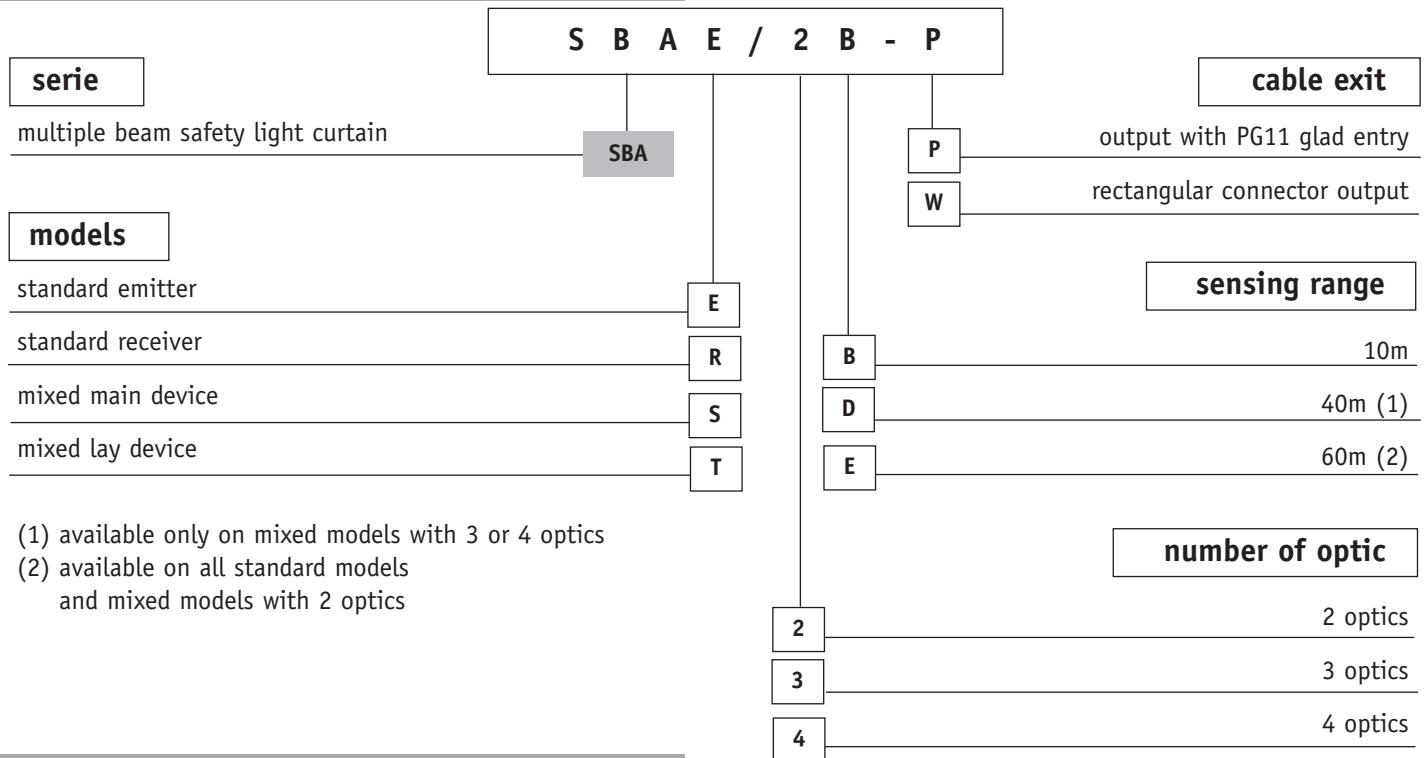
Safety light curtain (category 2)

to be used with the SBCR02 or SBCR03 control unit

- 3 models for 2, 3 or 4 optic protection
- Sensing range up to 60m
- Models available with PG11 gland entry or rectangular 7 pole connector
- EN61496 standard certification as a category 2 device
- LED indicators available on all models

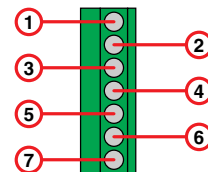
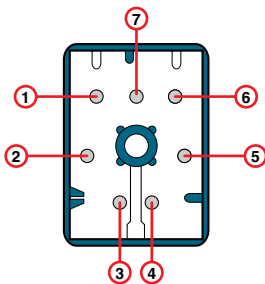


Ordering system



(1) available only on mixed models with 3 or 4 optics
 (2) available on all standard models and mixed models with 2 optics

Wiring diagrams



Rectangular connectors with 7 Hirschmann poles, W output

Internal connector for models with PG11 core hitch, P output

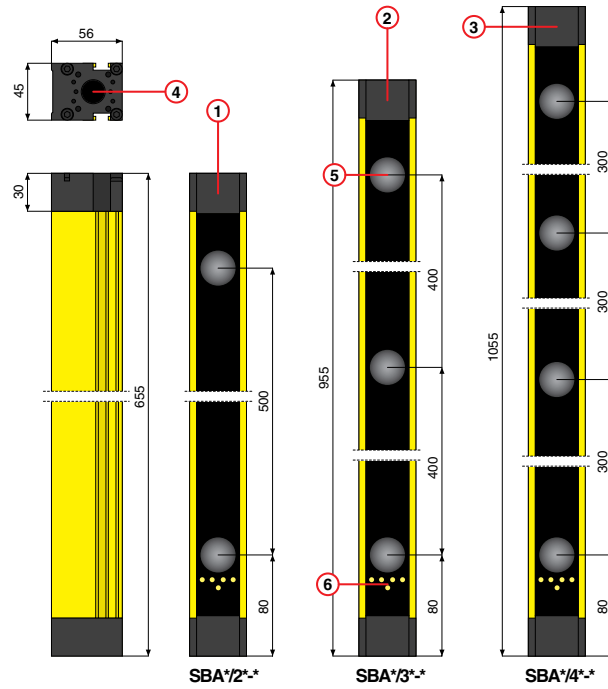
Pin	SBAE/**	SBAR/**	SBAS/2*	SBAT/2*	SBAS/3*	SBAT/3*	SBAS/4*	SBAT/4*
1	+24Vdc	+24Vdc	+24Vdc	+24Vdc	+24Vdc	+24Vdc	+24Vdc	+24Vdc
2	Test 1	Out 1	Test 1	n.c.	Test 1	n.c.	Test 1	n.c.
3	Test 2	Out 2	n.c.	n.c.	n.c.	n.c.	Test 3	n.c.
4	Test 3	Out 3	n.c.	n.c.	n.c.	n.c.	Out 2	n.c.
5	Test 4	Out 4	Out 2	n.c.	n.c.	Out 3	Out 4	n.c.
6	0V	0V	0V	0V	0V	0V	0V	0V
7	PE	PE	PE	PE	PE	PE	PE	PE

Specifications

Model	SBAE/2*-* + SBAR/2*-*	SBAE/3*-* + SBAR/3*-*	SBAE/4*-* + SBAR/4*-*
Type	standard column through-beam		
Nominal distance	0...10m / 0...60m (depending on the model)		
Connectable to SBCR02	YES (uses 2 channels)	YES (uses 3 channels)	YES (uses 4 channels)
Connectable to SBCR03	NO	NO	NO
No. of optics (step)	2 (500mm)	3 (400mm)	4 (300mm)
Emission	red (visible)		
Angular width of the beam	±4°		
Operating voltage	10...30Vdc		
No - load supply current	150mA (2 optic pairs); 225mA (3 optic pairs); 300mA (4 optic pairs)		
Response time	1ms		
Protection degree	IP65		
Temperature range	0...+55°C		
Storage temperature	-25...+75°C		
Ambient humidity	15...95% (without condensation)		
Housing material	aluminium / polycarbonate		
Weight (approx.)	2x1800g	2x2800g	2x3200g

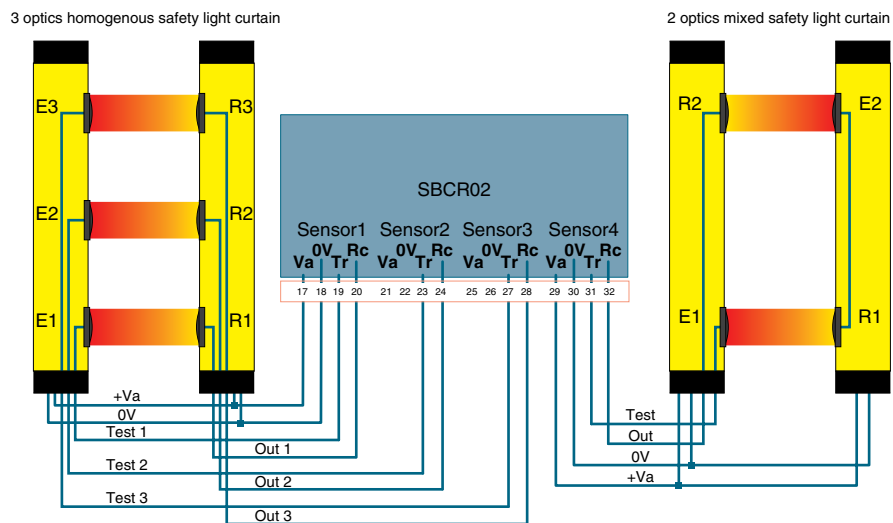
Model	SBAS/2*-*	SBAT/2*-*	SBAS/3*-*	SBAT/3*-*	SBAS/4*-*	SBAT/4*-*
Type	column through-beam with mixed emitter/receiver elements					
Composition	1 Em. + 1 Ric.	1 Ric. + 1 Em.	2 Em. + 1 Ric.	2 Ric. + 1 Em.	2 Em. + 2 Ric.	2 Ric. + 2 Em.
Nominal distance	0...10m / 0...40m / 0...60m (depending on the model)					
Connectable to SBCR02	YES (uses 1 channel)		NO		YES (uses 2 channel)	
Connectable to SBCR03	YES (uses 1 channel)		YES (uses 1 channel)		YES (uses 2 channel)	
No. of optics (step)	2 (500mm)		3 (400mm)		4 (300mm)	
Emission	red (visible)					
Angular width of the beam	±4°					
Operating voltage	10...30Vdc					
No - load supply current	150mA (2 optic pairs); 225mA (3 optic pairs) ; 300mA (4 optic pairs)					
Response time	1ms					
Protection degree	IP65					
Temperature range	0...+55°C					
Storage temperature	-25...+75°C					
Ambient humidity	15...95% (without condensation)					
Housing material	aluminium / polycarbonate					
Weight (approx.)	2x1800g		2x2800g		2x3200g	

Dimensions



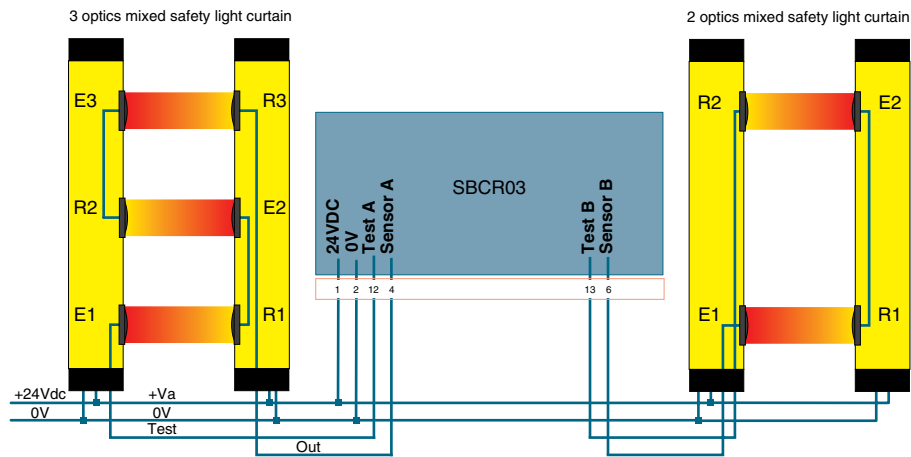
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|----------------------|-------------------------------|
| 1. Two optic model | 4. Core hitch/connector cover |
| 2. Three optic model | 5. Optic Ø15mm or Ø26mm |
| 3. Four optic model | 6. LED indicators |

Wiring diagrams



Example of two SBA safety light curtains using a SBCR02 control unit

Connections



Example of two SBA safety light curtains using a SBCR03 control unit

Description

The SBA columns are optic sensors designed to provide, together with the SBCR02 control unit or the SBCR03 control unit, a wide range of safety systems for body protection, in accordance with the EN611496 standard, category 2, regulation. Each SBA column has an extruded aluminium housing of high mechanical strength.

There are two types of columns:

columns composed of homogenous elements:

- one column houses all the emitters while the other houses the receiver elements. There are 3 models:
 - 2 optics model: up to two pairs of columns can be connected to each SBCR02 safety unit.
 - 3 optics model: only one pair of columns can be connected to each SBCR02 safety unit.
 - 4 optics model: only one pair of columns can be connected to each SBCR02 safety unit.

columns composed of non-homogenous elements:

- each column houses mixed elements (emitters and receivers). There are 3 models:
 - 2 mixed optics model: up to four pairs of columns can be connected to each SBCR02 safety unit and a maximum of two pairs for each SBCR03 safety unit.
 - 3 mixed optics model: up to two pairs of columns can be connected to each SBCR03 safety unit.
 - 4 mixed optics model: up to 2 pairs of columns can be connected to each SBCR02 safety unit and a maximum of one pair for each SBCR03 safety unit.

Note: on the same SBCR02 safety unit it is possible to apply both standard or mixed column models at the same time, until all the available control unit's channels are employed.

Applications

The SBA multiple beam safety columns protect people from entering dangerous areas.

some examples of their use are:

- robotized systems;
- bottling systems;
- palletizers and unloaders;
- wood working machines;
- stacking machines;
- automatic stocking machines;
- packaging machines in general;
- assembly lines;
- handling areas;
- machines for the ceramic industry.