

**Description**

- 1-10 metre sensing range
- 34 to 194 cross scanning beams
- Active height of 650 mm to 1800 mm
- Detector length of 850 mm to 2000 mm
- Cable or plug connection
- Automatic sensitivity adjustment
- Water-resistant, slim line (12x30 mm) detector housing
- Power, output and signal status indicators
- 12 – 36 V dc supply voltage
- 5 wire, solid state relay output
- Test input



The SG 10 light curtain system consists of a self-contained transmitter detector, SGT and receiver detector, SGR, which are to be positioned opposite of each other. The detectors are housed in a water-resistant, aluminium profile available in a slim line design (12 x 30 mm).

The SGR is supplied with a 12 – 36 V dc power supply with a 5 wire, solid state relay output, with wire selectable light or dark function. The test input in the SGT may be used for either disabling or enabling the transmitting power temporarily for test purposes.

The advanced automatic signal-tracking (AST) feature ensures that no onsite set up or adjustments are required. The signal level of each

individual channel is adjusted automatically, which compensates for misalignment and contamination during operation. Transmitter and receiver detectors are optically synchronised.

Specialised signal processing technology, designed for outdoor environments, reduces the risk of false detections of water, rain or snow that may pass between the detectors during operation.

Both the transmitter and receiver detectors are protected against reverse polarity of power supplies, control input and output signals. The output is also protected against short circuit and inductive loads.

Technical Data					
		46 mm channel spacing		92 mm channel spacing	
		SGT	SGR	SGT	SGR
Supply voltage		12 – 36 V dc			
Current consumption		Max. 100 mA	50 mA	Max. 100 mA	50 mA
Output rating		Solid state		Solid state	
		–	200 mA	–	200 mA
Short circuit protected		–	Yes	–	Yes
Reverse polarity protected		Yes			
Light source		Infrared (880 nm)	–	Infrared (880 nm)	–
Number of channels (diodes per detector)		16, 24, 32 or 40		8, 12, 16 or 20	
Number of cross scanning beams		74, 114, 154 or 194		34, 54, 74 or 94	
Active height		695, 1065, 1430 or 1800 mm		650, 1020, 1385 or 1755 mm	
Channel spacing		Between channel 1 and bottom of housing: 25 mm Between other channels: 46 mm		Between channel 1 and bottom of housing: 25 mm Between other channels: 92 mm	
Distance between beams at pinch point		23 mm		46 mm	
Response time		–	< 165 ms	–	< 85 ms
Power on indicator		Green LED			
Output indicator		–	Yellow LED	–	Yellow LED
System status indicator		–	Red LED	–	Red LED
Time-out function		–			
Housing dimensions (w x d)		Slim Line	C	12 x 30 mm	
Housing material		Aluminium (black anodised)			
Lens cover		Polycarbonate			
Connection		5 m fixed cable or 0,5 m cable with 5 pin, M12 plug			
Cable, PVC Ø 4,9 mm		3 x 0,20 mm <sup>2</sup>	5 x 0,20 mm <sup>2</sup>	3 x 0,20 mm <sup>2</sup>	5 x 0,20 mm <sup>2</sup>

**Environmental Data**

Light immunity @ 5° incidence	> 100 000 lux
Temperature, operation	-20 to +65 °C
Temperature, storage	-40 to +80 °C
Sealing class	C housing IP 67
Approvals	CE

**Available Types**

**Water-Resistant Slim Line C**

Transmitter Detector	Housing Length	Active Height	Number of Channels	Number of Beams	Beam Spacing	Connection		5 m cable	0.5 m cable with 5 pin, M12 plug	Range
						Output		Order reference		
						-	-	SGT 10-085-008-B1-C-01-5	SGT 10-085-008-B1-C-01-0.5-J5	
850 mm	650 mm	8	34	92 mm	-	-	SGT 10-085-016-A1-C-01-5	SGT 10-085-016-A1-C-01-0.5-J5	10 m	
	695 mm	16	74	46 mm			SGT 10-125-012-B1-C-01-5	SGT 10-125-012-B1-C-01-0.5-J5		
1250 mm	1020 mm	12	54	92 mm			SGT 10-125-024-A1-C-01-5	SGT 10-125-024-A1-C-01-0.5-J5		
	1065 mm	24	114	46 mm			SGT 10-160-016-B1-C-01-5	SGT 10-160-016-B1-C-01-0.5-J5		
1600 mm	1385 mm	16	74	92 mm			SGT 10-160-032-A1-C-01-5	SGT 10-160-032-A1-C-01-0.5-J5		
	1430 mm	32	154	46 mm			SGT 10-200-020-B1-C-01-5	SGT 10-200-020-B1-C-01-0.5-J5		
2000 mm	1755 mm	20	94	92 mm			SGT 10-200-040-A1-C-01-5	SGT 10-200-040-A1-C-01-0.5-J5		
	1800 mm	40	194	46 mm						

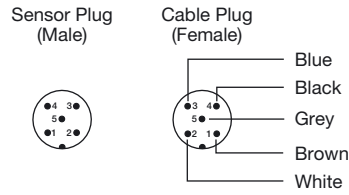
Receiver Detector	Housing Length	Active Height	Number of Channels	Number of Beams	Beam Spacing	Connection		5 m cable	0.5 m cable with 5 pin, M12 plug	Range
						Output		Order reference		
						Solid State Relay	Light/Dark	SGR 10-085-008-B1-C-07-5	SGR 10-085-008-B1-C-07-0.5-J5	
850 mm	650 mm	8	34	92 mm	Solid State Relay	Light/Dark	SGR 10-085-016-A1-C-07-5	SGR 10-085-016-A1-C-07-0.5-J5	1-10 m	
	695 mm	16	74	46 mm			SGR 10-125-012-B1-C-07-5	SGR 10-125-012-B1-C-07-0.5-J5		
1250 mm	1020 mm	12	54	92 mm			SGR 10-125-024-A1-C-07-5	SGR 10-125-024-A1-C-07-0.5-J5		
	1065 mm	24	114	46 mm			SGR 10-160-016-B1-C-07-5	SGR 10-160-016-B1-C-07-0.5-J5		
1600 mm	1385 mm	16	74	92 mm			SGR 10-160-032-A1-C-07-5	SGR 10-160-032-A1-C-07-0.5-J5		
	1430 mm	32	154	46 mm			SGR 10-200-020-B1-C-07-5	SGR 10-200-020-B1-C-07-0.5-J5		
2000 mm	1755 mm	20	94	92 mm			SGR 10-200-040-A1-C-07-5	SGR 10-200-040-A1-C-07-0.5-J5		
	1800 mm	40	194	46 mm						

**Note:** The transmitter SGT and receiver SGR set must have the same number of channels and beam spacing.

**Connections**

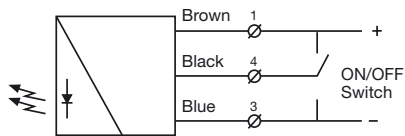
	Cable	M12 Plug/Cable
Supply +	Brown	Pin 1/Brown
Supply -	Blue	Pin 3/Blue
SGT test input	Black	Pin 4/Black
SGR output	Black	Pin 4/Black
SGR output	Black	Pin 5/Grey
SGR light/dark control	White	Pin 2/White

**5 pin, M12**

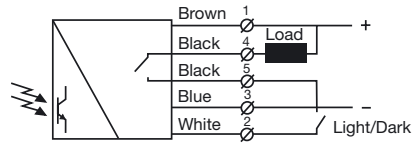


Refer to page 155 for extension cables

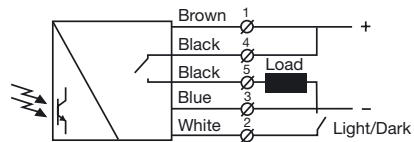
**Wiring Diagrams**



**SGT 10**  
Connect black test input wire to + or - to disable SGT



**SGR 10 (load as NPN)**

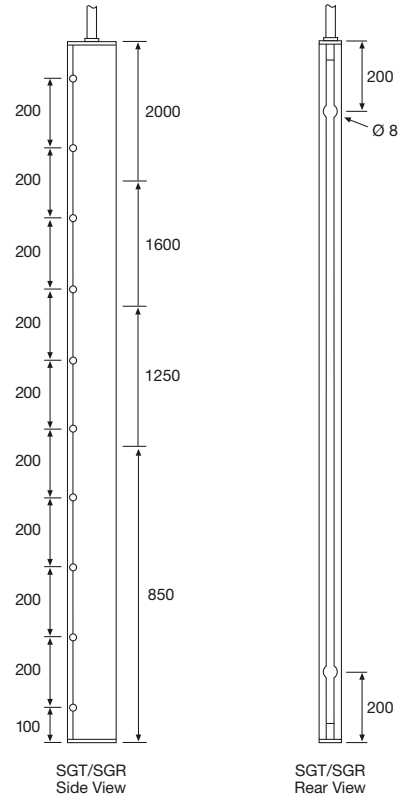
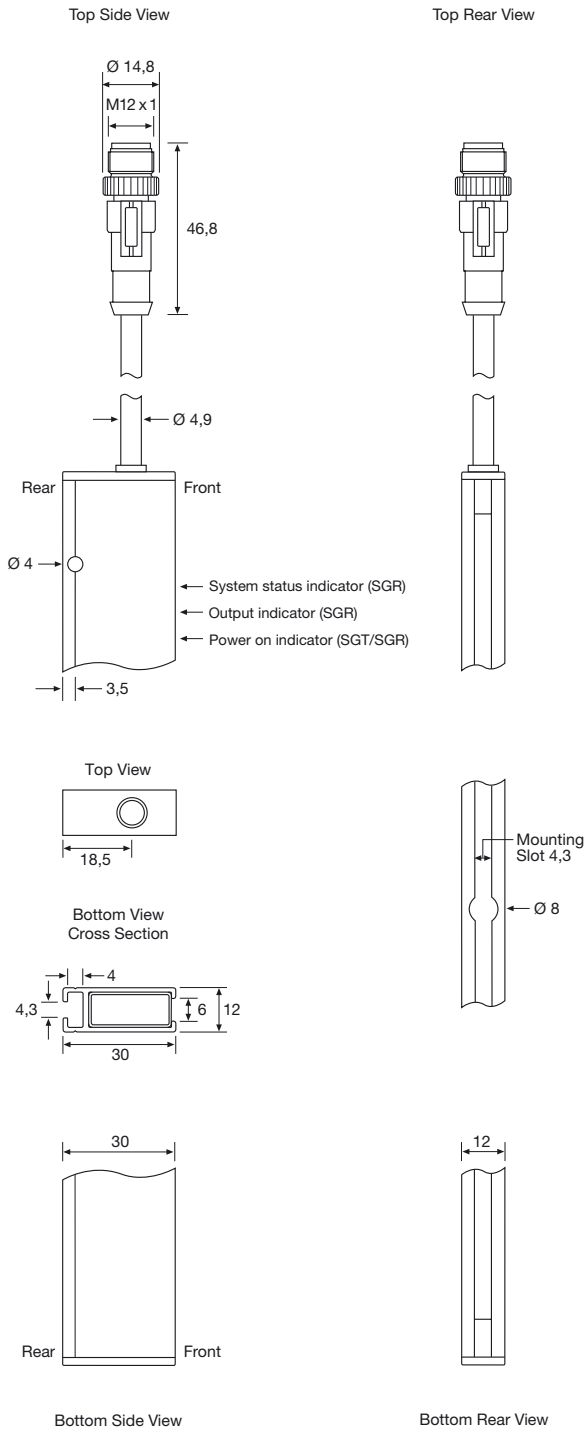


**SGR 10 (load as PNP)**

Dimensions and Descriptions

Water-Resistant Slim Line C

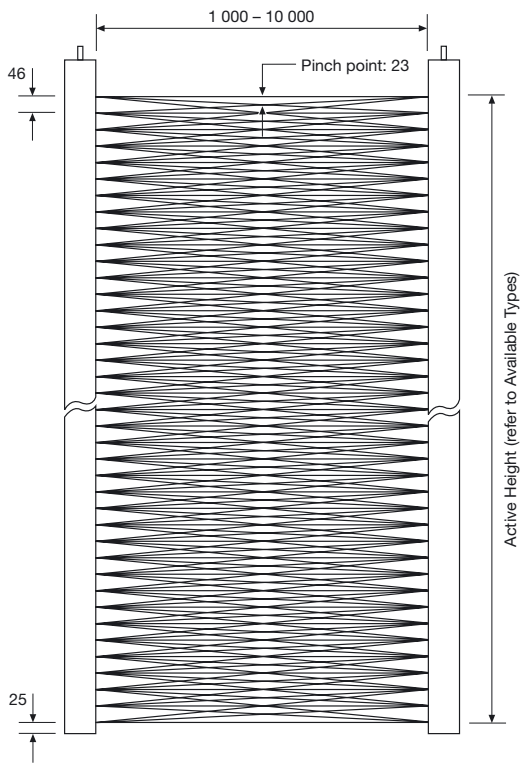
Details



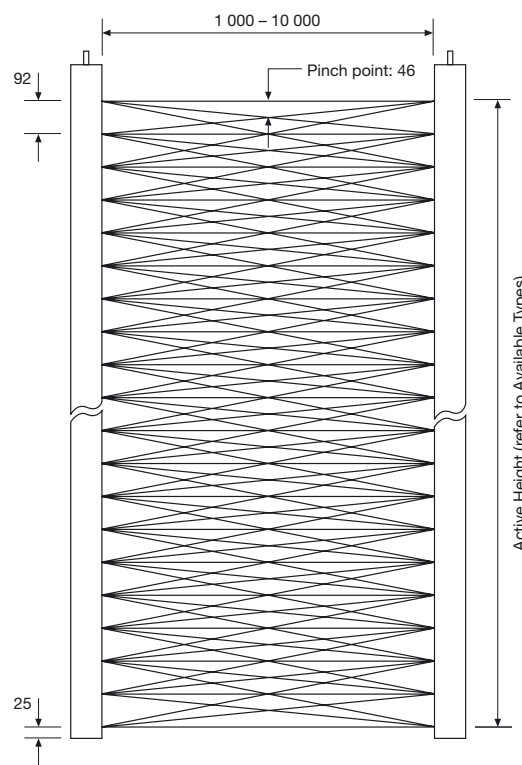
Note: Drawing shows model with M12 plug

(Units in mm)

Beam Patterns



46 mm channel spacing

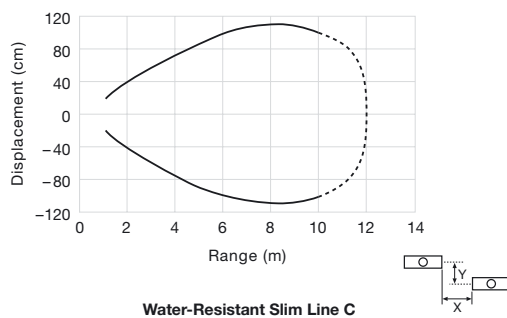


92 mm channel spacing

(Units in mm)

Sensing Characteristics

Parallel Displacement



Water-Resistant Slim Line C

Telco reserves the right to change specifications without notice.