

Description

- 0-4 metre sensing range
- 94 or 194 cross scanning beams
- Active height of 1755 mm or 1800 mm
- Detector length 2000 mm or 2100 mm
- Flexible cable connection
- Automatic sensitivity adjustment
- Slim line (10 x 28 mm) or leading edge (37,5 x 13 mm) detector housing
- Power, output and signal status indicators
- 12 – 36 V dc supply voltage
- 4 wire, NPN or PNP transistor output or 5 wire, solid state relay output
- Test input
- Time-out function via wire connection



The SG 1 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 an aluminium profile available in a slim line design (10 x 28 mm) and a leading edge design (37,5 x 13 mm).

The SGR is supplied with a 12 – 36 V dc power supply with a 4 wire, NPN or PNP transistor output, or a 5 wire, solid state relay output, with a choice of 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 detectors also include time-out function, which when enabled,

allows a pre-set number of channels to be automatically ignored if permanently obstructed for 10 seconds or more. This function can be enabled or disabled via the connection.

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 compensating for misalignment and contamination during operation. The system can be used both in static and dynamic installations.

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	–	200 mA	–	200 mA
Short circuit protected	–	Yes	–	Yes
Reverse polarity protected	Yes			
Light source	Infrared (940 nm)	–	Infrared (940 nm)	–
Number of channels (diodes per detector)	40		20	
Number of cross scanning beams	194 (constant)		94 (constant)	
Active height	1800 mm		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	–	< 80 ms	–	< 40 ms
Power on indicator	Green LED			
Output indicator	–	Yellow LED	–	Yellow LED
System status indicator	–	Red LED	–	Red LED
Time-out function	Up to 4 non-adjacent channels, selectable		Up to 2 non-adjacent channels, selectable	
Connection	3 m fixed flexible cable			
Housing dimensions (w x d)	Slim Line	10 x 28 mm		
	Leading Edge	37,5 x 13 mm		
Housing material	Aluminium			
Housing colour	Black anodized			
Front cover	Infrared transparent plastic			

Environmental Data

Light immunity @ 5° incidence	> 100 000 lux
Temperature, operation	-20 to +65 °C
Temperature, storage	-40 to +80 °C
Sealing class	IP 54
Approvals	CE

Available Types

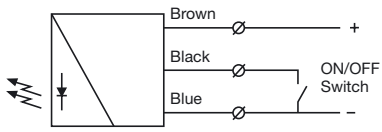
Transmitter Detector	Housing Length	Active Height	Number of Channels	Number of Beams	Beam Spacing	Housing Design	Slim Line	Leading Edge
						Output	Order reference	
2000 mm	1755 mm	20	94	92 mm	-	-	SGT 1-200-020-A-3F	SGT 1-200-020-B-3F
							SGT 1-200-040-A-3F	SGT 1-200-040-B-3F
	1800 mm	40	194	46 mm			SGT 1-210-020-A-3F	SGT 1-210-020-B-3F
							SGT 1-210-040-A-3F	SGT 1-210-040-B-3F

Receiver Detector	Housing Length	Active Height	Number of Channels	Number of Beams	Beam Spacing	Housing Design		Order reference					
						Output	Output	A	B				
2000 mm	1755 mm	20	94	92 mm	NPN	NC	SGR 1-200-020-A-00-3F	SGR 1-200-020-B-00-3F					
						NO	SGR 1-200-020-A-01-3F	SGR 1-200-020-B-01-3F					
						PNP	NC	SGR 1-200-020-A-02-3F	SGR 1-200-020-B-02-3F				
							NO	SGR 1-200-020-A-03-3F	SGR 1-200-020-B-03-3F				
					Solid State Relay	NO	SGR 1-200-020-A-04-3F	SGR 1-200-020-B-04-3F					
						NC	SGR 1-200-020-A-05-3F	SGR 1-200-020-B-05-3F					
						1800 mm	40	194	46 mm	NPN	NC	SGR 1-200-040-A-00-3F	SGR 1-200-040-B-00-3F
											NO	SGR 1-200-040-A-01-3F	SGR 1-200-040-B-01-3F
	PNP	NC	SGR 1-200-040-A-02-3F	SGR 1-200-040-B-02-3F									
		NO	SGR 1-200-040-A-03-3F	SGR 1-200-040-B-03-3F									
	Solid State Relay	NO	SGR 1-200-040-A-04-3F	SGR 1-200-040-B-04-3F									
		NC	SGR 1-200-040-A-05-3F	SGR 1-200-040-B-05-3F									
		2100 mm	20	94	92 mm					NPN	NC	SGR 1-210-020-A-00-3F	SGR 1-210-020-B-00-3F
											NO	SGR 1-210-020-A-01-3F	SGR 1-210-020-B-01-3F
	PNP					NC	SGR 1-210-020-A-02-3F	SGR 1-210-020-B-02-3F					
						NO	SGR 1-210-020-A-03-3F	SGR 1-210-020-B-03-3F					
Solid State Relay	NO					SGR 1-210-020-A-04-3F	SGR 1-210-020-B-04-3F						
	NC					SGR 1-210-020-A-05-3F	SGR 1-210-020-B-05-3F						
	1800 mm					40	194	46 mm	NPN	NC	SGR 1-210-040-A-00-3F	SGR 1-210-040-B-00-3F	
										NO	SGR 1-210-040-A-01-3F	SGR 1-210-040-B-01-3F	
PNP		NC	SGR 1-210-040-A-02-3F	SGR 1-210-040-B-02-3F									
		NO	SGR 1-210-040-A-03-3F	SGR 1-210-040-B-03-3F									
Solid State Relay		NO	SGR 1-210-040-A-04-3F	SGR 1-210-040-B-04-3F									
		NC	SGR 1-210-040-A-05-3F	SGR 1-210-040-B-05-3F									

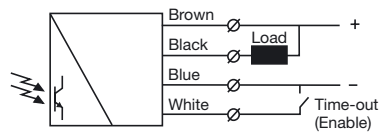
Note: 1. The transmitter SGT and receiver SGR set must have the same number of channels

2. The receiver SGR is available with an optional alarm output wire. Add AL after the type number for alarm output e.g. SGR 1-200-040-A-00-3F-AL

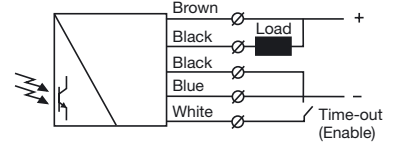
Wiring Diagrams



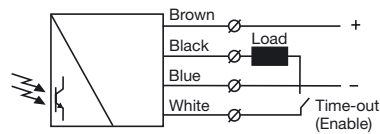
SGT 1



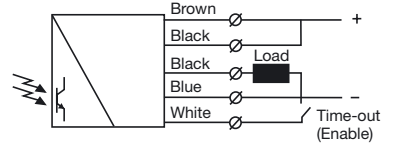
SGR 1 (NPN Output)



SGR 1 (Solid State Relay Output - load NPN)



SGR 1 (PNP Output)

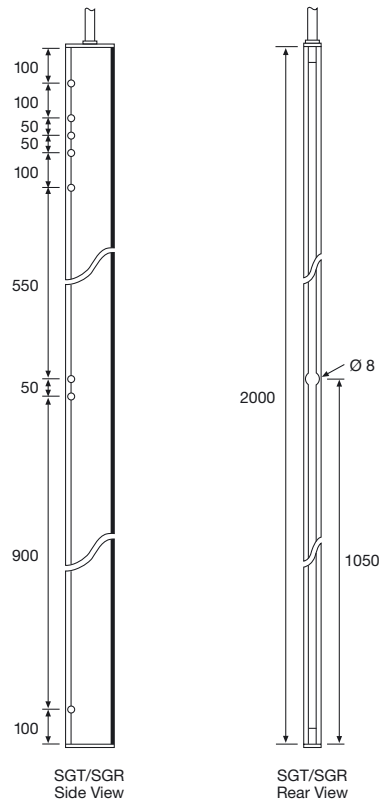
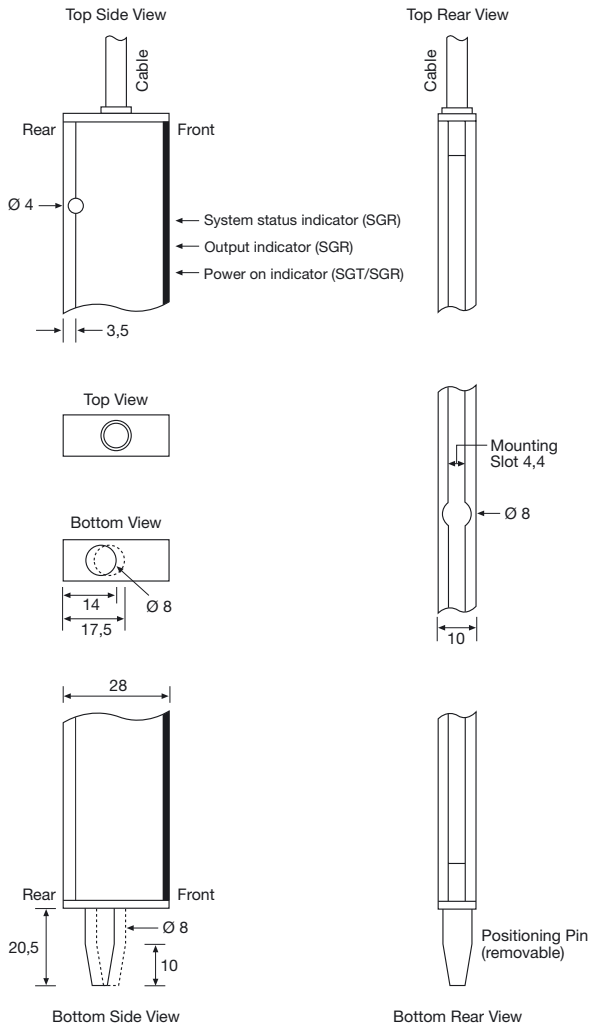


SGR 1 (Solid State Relay Output - load PNP)

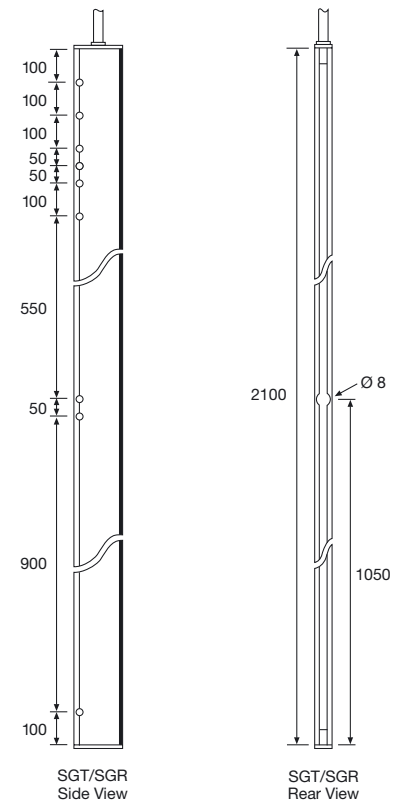
Dimensions and Descriptions

Slim Line

Details



SG 1-200



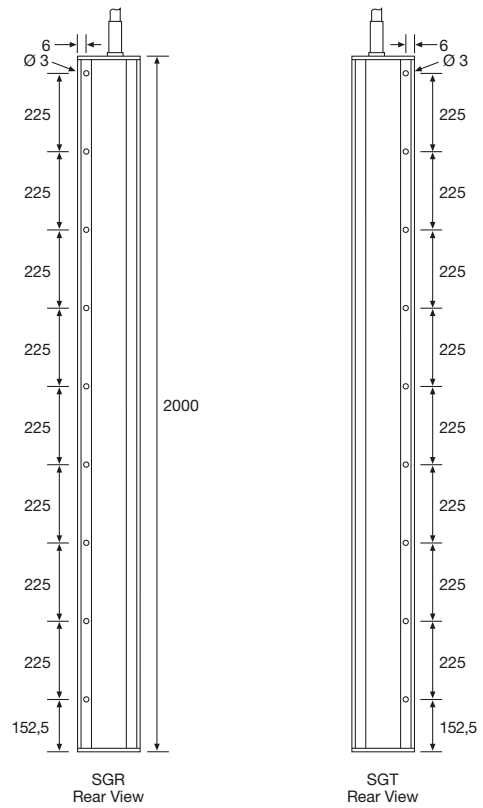
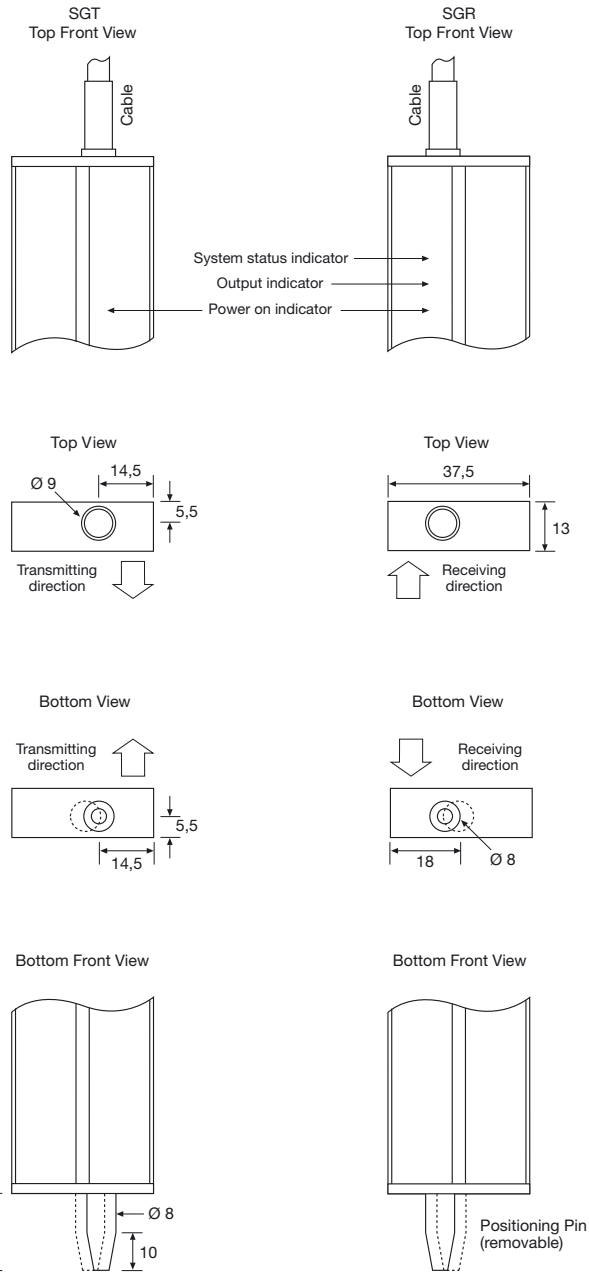
SG 1-210

(Units in mm)

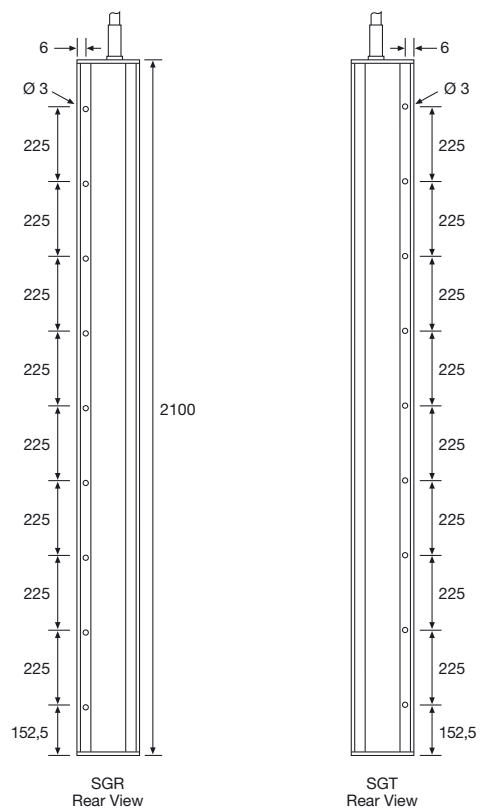
Dimensions and Descriptions

Leading Edge

Details



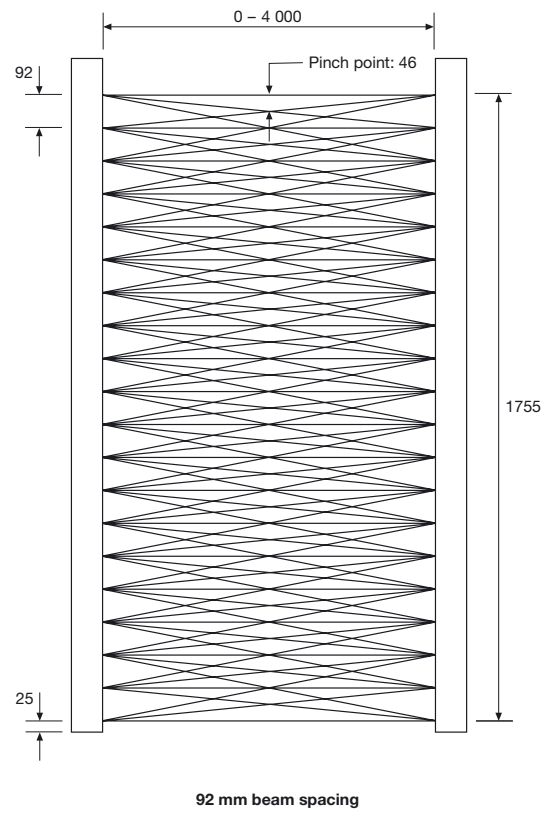
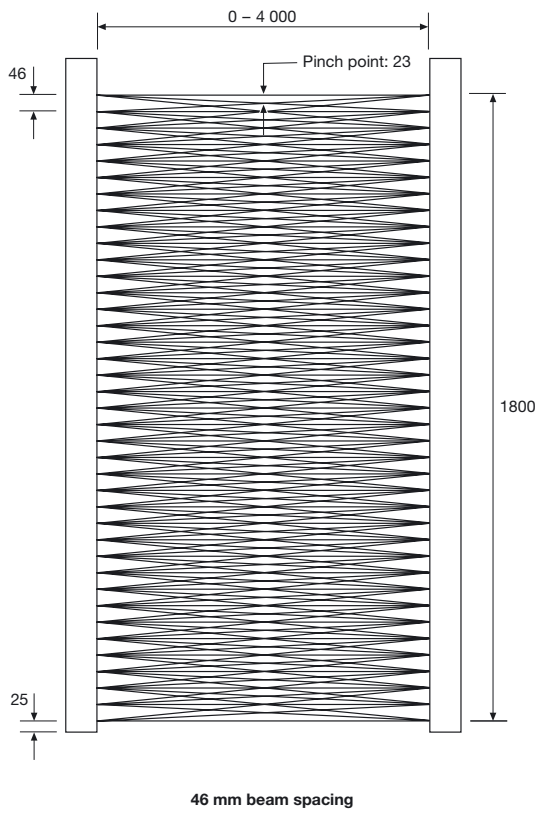
SG 1-200



SG 1-210

(Units in mm)

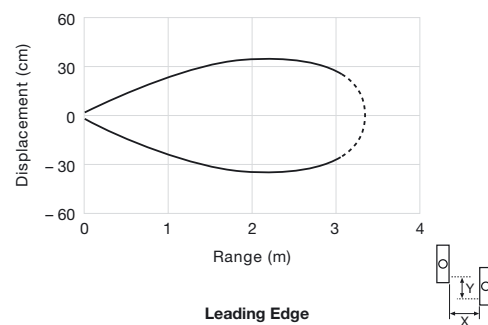
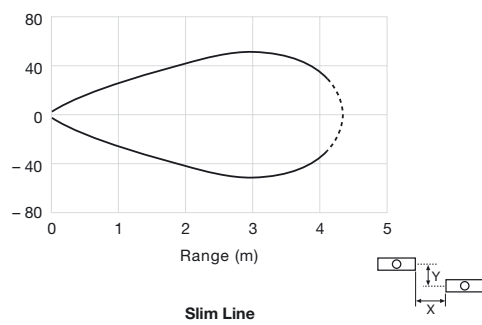
Beam Patterns



(Units in mm)

Sensing Characteristics

Parallel Displacement



Telco reserves the right to change specifications without notice.