

Product Data

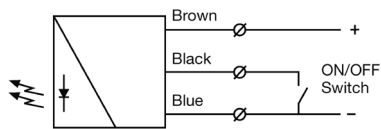
Electrical Data		SGT (Transmitter)	SGR (Receiver)
Supply voltage		12 – 36 Vdc	
Current consumption		100 mA	50 mA
Max. output load		-	200 mA
Reverse polarity protected		Yes	
Short circuit protected		-	Yes

Environmental Data	
Light immunity @ 5° incidence	> 100.000 lux
Temperature, operation	-20 to + 65 °C
Sealing class	IP 54
Approvals	

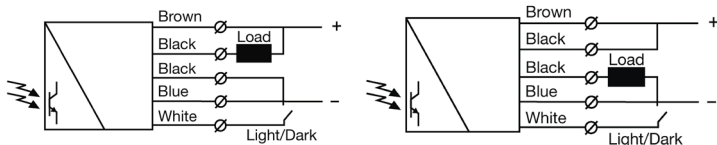
Available Models					
	Model	Output	Output Mode	Time-Out Function	Sensing Range
Transmitter	SGT 2-2x0-020-010-A-00-3F	-	-	-	0 – 4m.
Receiver	SGR 2-2x0-020-010-A-06-3F	Solid State Relay	Light/Dark	Time-Out	
	SGR 2-2x0-020-010-A-07-3F				

Connection

Wiring Diagrams

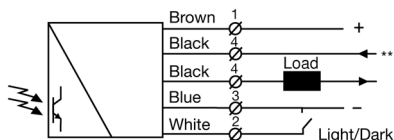


Transmitter SGT 2



Receiver SGR 2 as NPN

Receiver SGR 2 as PNP



** Max. 24 V ac / 36 V dc

Receiver SGR 2 with separate load supply.

Installation & Adjustments

Output Logic			
Detection	Output mode	Output status	Output indicator (yellow led)
Present	Dark operated (White wire connected to Blue wire)	Closed	On
	Light operated (White wire disconnected)	Open	Off
Absent	Dark operated (White wire connected to Blue wire)	Open	Off
	Light operated (White wire disconnected)	Closed	On

Adjustment

1	Mount the detectors in correct position and correctly aligned - see fig. 1 to 5.
2	Wire the sensor according to the wiring diagram. Make sure the load does not exceed 200 mA.

3	If the Blanking Function is going to be used proceed to step 4. If not, proceed to step 5.
4	Cover the number of channels that need to be ignored on the SGT (refer to Blanking function table & to fig. 7).
5	Check for correct wiring before turning power on. Select Light/Dark function if required.
6	Turn power on and wait 5 seconds for initial automatic set-up.
7	When the power on indicators (green LEDs) are on, the system is operating.
	1.- If the Status indicator (red LED) is constant on the SGR cannot see the SGT (refer to Troubleshooting table). 2.- On model 06 (time-out function available), if the Status indicator (red LED) is flashing slowly one or more beams are blocked (refer to Troubleshooting table).
Note:	In dynamic installations, for initial setup, ensure that the doors where the light curtains are installed, are in the fully open position.

Blanking Function

The Blanking function allows up to 10 top channels to be ignored when covered during set-up. This feature allows the active height to be reduced for applications which do not allow the full detection height.

Those channels that has to be ignored, need to be covered permanently with a non-infrared transparent material (tape) on the transmitter. If the cover is removed or loose, all initial setting will be disabled.

Length and active heights table: See Fig. 7

N° of Channels Blanked	Covered length from top	Active height from floor
0	0 mm	1844 mm
1	200 mm	1706 mm
2	340 mm	1614 mm
3	430 mm	1522 mm
4	525 mm	1430 mm
5	615 mm	1338 mm
6	710 mm	1246 mm
7	800 mm	1154 mm
8	890 mm	1062 mm
9	980 mm	970 mm
10	1075 mm	878 mm

Time-out function Only SGR 2-2x0-020-010-A-06-3F model

Up to two non-adjacent channels can be ignored with time-out function, when obstructed for more than 10 seconds.

Test Input SGT 2

The transmitter can be externally disabled and enabled, via the control wire, for test purposes. The test input requires the control wire to be connected to – (negative) supply wire. Make sure no object is present in the detection area when transmitter is disabled for test. When the transmitter is disabled, the receiver will change output.

Enable transmitter	Open (off) control switch.
Disable transmitter	Close (on) control switch.

Indicators

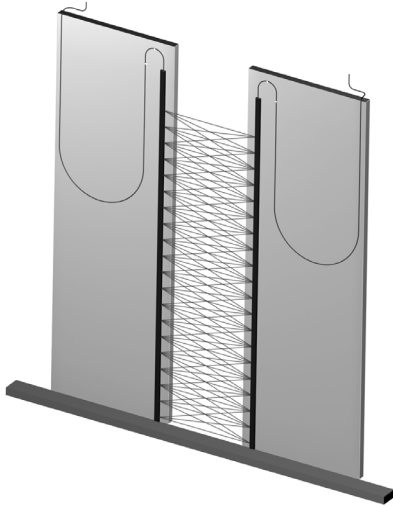
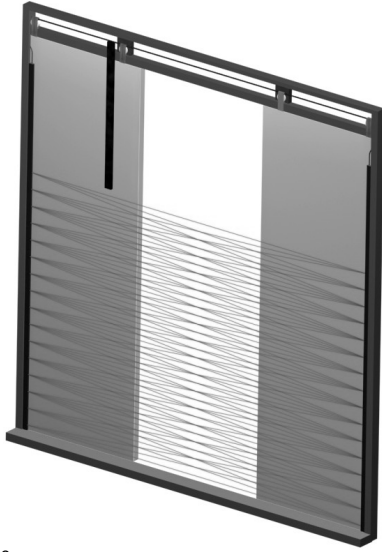
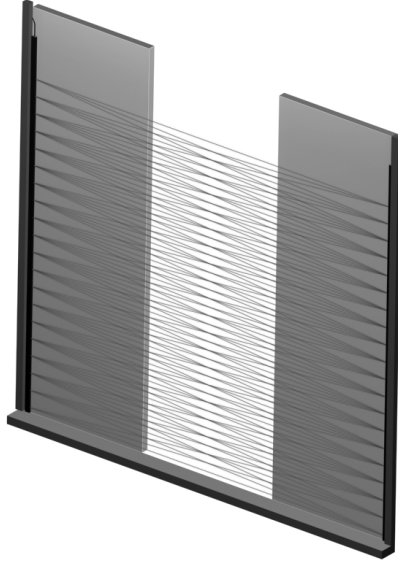
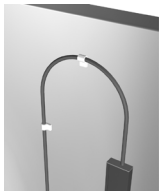
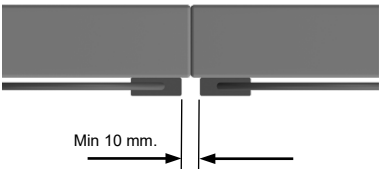
Red LED:	Status indicator
Yellow LED:	Output indicator
Green LED:	Power on indicator

Troubleshooting

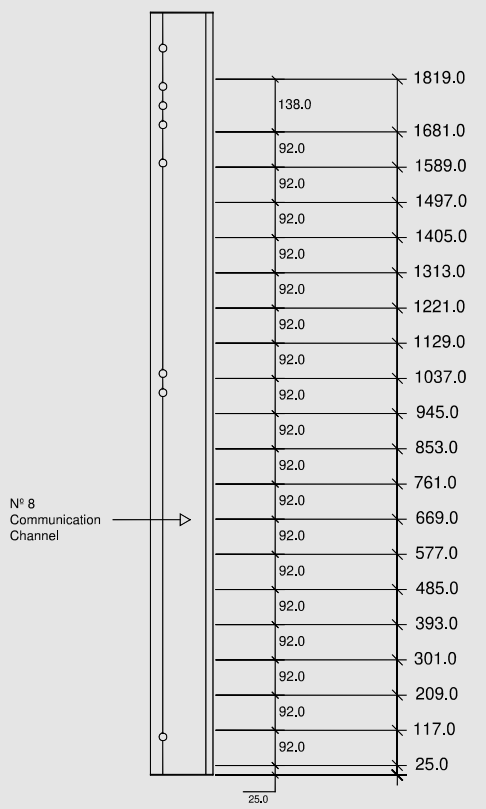
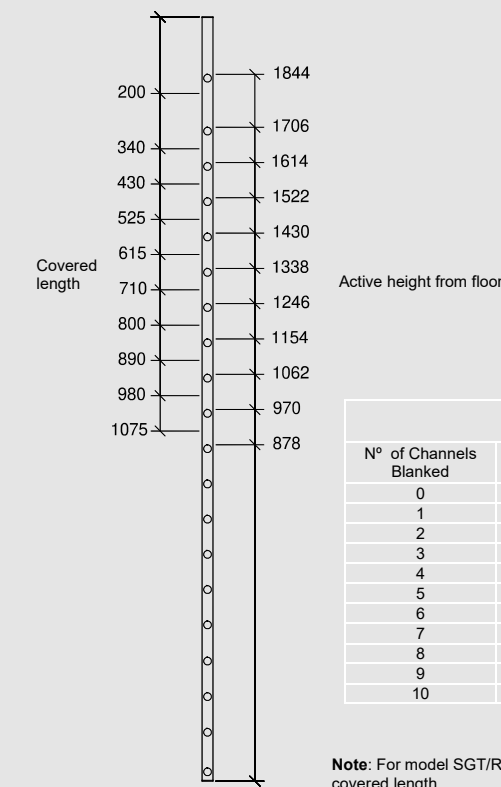
Probable Reason	Corrective Action
1. Symptom: Output changes when doors are closing	
Misaligned detectors	Align detectors
The doors are vibrating when closing	Place the detectors further apart from each other.
2. Symptom: Status indicator (Red LED) on SGR is constant on.	
TX is not emitting	Check supply and cable to the SGT
SGT is disabled	Enable the SGT
More than 2 direct beams blocked	Remove obstruction
3. Symptom: Status indicator (Red LED) is flashing and output is working correct. (Only 06 model)	
Up to two channels have been blocked or damaged (time-out function activated)	Remove obstruction or prepare to replace the faulty detector
4. Symptom: Status indicator (Red LED) is flashing and output is not working.	
Two adjacent beams are blocked.	Remove obstruction or replace detectors
5. Symptom: Output indicator (Yellow LED) is flashing	
Severe electrical interference	Remove SGR and SGT supply cable from high voltage cables
Severe ambient light	Change position of SGT and SGR
Cross talk from another light curtain	Change position of SGT and SGR
6. Symptom: Power indicator (Green LED) on – system does not work	
Lower beam blocked	Remove obstruction



Warning
 This device is not to be used for Personnel Protection in Machine Guarding Safety applications. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel machine guarding stand-alone safety applications.

System Installation	Dynamic doors	Static installations with Blanking function activated.	Static installations
			
Fig. 1	Fig. 2	Fig. 3	
		<p>In dynamic installations: Fasten the cables with cable clips. Please make sure that the cables can move freely. (Fig. 1 & 4) In order to prevent vandalism Telco recommends that the detectors are placed at least 5 mm in the door. (Fig. 5)</p> <p>The SG 2, can be used for dynamic and static doors, with or without the Blanking Function activated.</p>	
Fig. 4	Fig. 5		

Mounting accessories (per detector)				
Positioning Pin : 1 piece	M4 x 16 (screw) : 3 pieces	M4 nut : 3 pieces	10 mm screws : 3 pieces	4 mm washer : 3 pieces

Position of Channels and Blanking Function Set-up	Blanked function set-up																																				
Positions of Channels	Blanked function set-up																																				
	 <table border="1" style="margin-top: 20px; width: 100%; border-collapse: collapse;"> <caption>Blanking Function heights</caption> <thead> <tr> <th>N° of Channels Blanked</th> <th>Covered length from top</th> <th>Active height from floor</th> </tr> </thead> <tbody> <tr><td>0</td><td>0 mm</td><td>1844 mm</td></tr> <tr><td>1</td><td>200 mm</td><td>1706 mm</td></tr> <tr><td>2</td><td>340 mm</td><td>1614 mm</td></tr> <tr><td>3</td><td>430 mm</td><td>1522 mm</td></tr> <tr><td>4</td><td>525 mm</td><td>1430 mm</td></tr> <tr><td>5</td><td>615 mm</td><td>1338 mm</td></tr> <tr><td>6</td><td>710 mm</td><td>1246 mm</td></tr> <tr><td>7</td><td>800 mm</td><td>1154 mm</td></tr> <tr><td>8</td><td>890 mm</td><td>1062 mm</td></tr> <tr><td>9</td><td>980 mm</td><td>970 mm</td></tr> <tr><td>10</td><td>1075 mm</td><td>878 mm</td></tr> </tbody> </table> <p>Note: For model SGT/R 2-2x0-020-010-A-xx-3F, please add 100 mm to the covered length.</p>	N° of Channels Blanked	Covered length from top	Active height from floor	0	0 mm	1844 mm	1	200 mm	1706 mm	2	340 mm	1614 mm	3	430 mm	1522 mm	4	525 mm	1430 mm	5	615 mm	1338 mm	6	710 mm	1246 mm	7	800 mm	1154 mm	8	890 mm	1062 mm	9	980 mm	970 mm	10	1075 mm	878 mm
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Fig. 6 (Units in mm)	Fig. 7 (Units in mm)																																				



Dimensions and Descriptions		Slim line	
Details			
<p>Top Side View</p> <p>Ø 4</p> <p>3,5</p> <p>System status indicator (SGR)</p> <p>Output indicator (SGR)</p> <p>Power on indicator (SGT/SGR)</p>	<p>Top Rear View</p> <p>Cable</p>	<p>SGT/SGR Side View</p>	<p>SGT/SGR Rear View</p>
<p>Top View</p> <p>Ø 8</p>	<p>Bottom Rear View</p> <p>Mounting Slot 4,4</p> <p>Ø 8</p> <p>10</p>	SG 2-200	
<p>Bottom View</p> <p>14</p> <p>17,5</p> <p>Ø 8</p>	<p>Bottom Side View</p> <p>28</p> <p>20,5</p> <p>Ø 8</p> <p>10</p>	<p>SGT/SGR Side View</p>	<p>SGT/SGR Rear View</p>
		SG 2-210	
(Units in mm)			

