

## SG 10 - USER MANUAL

### Space Guard Series

Photoelectric light curtains

EN

#### Product Data

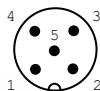
Electrical Data		
	SGT (Transmitter)	SGR (Receiver)
Supply voltage	12 – 36 Vdc	
Max. Voltage ripple	15 % (within supply range)	
Current consumption	100 mA	50 mA
Max. output load	-	200 mA
Reverse polarity protected	Yes	
Short circuit protected	-	Yes
Inductive load protection	-	Yes

Environmental Data	
Light immunity @ 5° incidence	> 100.000 lux
Temperature, operation	-20 to + 65 °C
Sealing class	Slim Line C-type profile: IP 67 Slim Line A-type & Leading edge B-type profile: IP 54
Marking	UK CA CE

Available Models					
	Model	Output	Output Mode	Time-out Function	Sensing Range
Transmitter	SGT 10-xxx-0xx-x1-x-0x-xx	-	-	-	A & C profile: 1 – 10m
Receiver	SGR 10-xxx-0xx-B1-x-06-xx	Solid State Relay	Light/Dark	Yes	B profile: 1 – 7.5 m
	SGR 10-xxx-0xx-x1-x-07-xx			No	

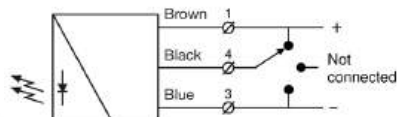
#### Connection

##### Wiring Diagrams

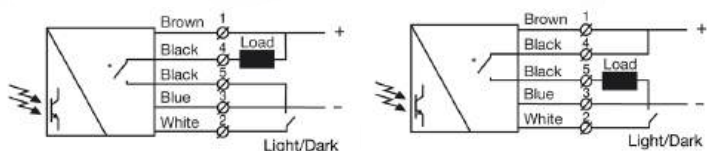


5 pole M12 male connector

Transmitter Model	Black wire connected to ( - )	Black wire not connected	Black wire connected to ( + )
SGT 10-xxx-0xx-x1-x-00-xx	TX is not transmitting	TX is transmitting	TX is transmitting
SGT 10-xxx-0xx-x1-x-01-xx	TX is not transmitting	TX is transmitting	TX is not transmitting
SGT 10-xxx-0xx-x1-x-02-xx	TX is transmitting	TX is not transmitting	TX is transmitting

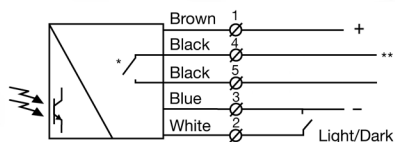


Transmitter SGT 10



Receiver SGR 10 output as NPN

Receiver SGR 10 output as PNP



\* Relay type: Open when SGR not powered  
\*\* Max. 24 V ac / 36 V dc

Receiver SGR 10 with solid state relay output.

#### Installation & Adjustments

Adjustment	
No initial set up or adjustments are required, due the automatic signal-tracking (AST) feature, that automatically adjusts the gain of each individual beam on the system.	
Notice that the SG 10 system must not be placed on moving doors.	
1	Mount the transmitter (SGT) and receiver (SGR) facing each other and correctly aligned.
2	Wire the sensor according to the wiring diagram. Make sure the load does not exceed 200 mA.
3	Check for correct wiring before turning power on. Select Light/Dark output mode if required.
4	When the power on indicator (green LED) is on, the system is operating. If the Status indicator (red LED) is constant on the SGR cannot see the SGT.



##### Warning

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

##### Time-out Function

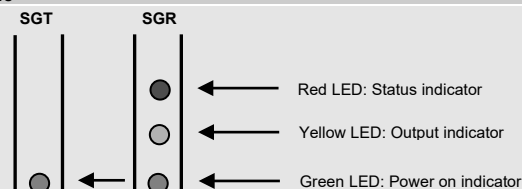
On models with timeout function up to 3 non-adjacent channels can be ignored when obstructed for more than 10 seconds:

Receiver Model	Non-adjacent channels which can be ignored
SGR 10-xxx-028-B1-x-06-xx	3
SGR 10-xxx-024-B1-x-06-xx	2
SGR 10-xxx-020-B1-x-06-xx	2
SGR 10-xxx-016-B1-x-06-xx	2
SGR 10-xxx-012-B1-x-06-xx	1
SGR 10-xxx-008-B1-x-06-xx	1

##### Test Input

The SGT10 transmitter can be externally disabled and enabled via the black control wire for test purposes. When the transmitter is disabled the receiver will switch the output.

##### Indicators



##### Troubleshooting

Probable Reason	Corrective Action
<b>1. Symptom: Status indicator (Red LED) on SGR is constant on.</b>	
TX is not emitting.	Check supply and cable to the SGT.
SGT is disabled.	Enable the SGT.
The upper channel is blocked.	Remove obstruction.
The rails are out of sensing range	Reduce the distance between the rails.
On models with timeout function: Too many channels have been blocked or damaged (time-out function is activated).	Remove obstruction or replace the faulty unit.
<b>2. Symptom: Status indicator (Red LED) is flashing but correct function of light curtain.</b>	
On models with timeout function: time-out function is activated.	Remove obstruction or replace the faulty unit.
<b>3. Symptom: Status indicator (Red LED) is flashing and output is activated in Dark Operated mode. Output is not activated in Light Operated mode.</b>	
On models with timeout function: Two adjacent channels are blocked or damaged.	Remove obstruction or replace the faulty unit.
<b>4. Symptom: Output indicator (Yellow LED) is flashing</b>	
Severe electrical interference.	Separate SGR and SGT supply cable from high voltage cables.
Severe ambient light.	Swap position of SGT and SGR.
Cross talk from another light curtain.	Swap position of SGT and SGR.
Cross talk from a nearby HF strip light	Swap position of SGT and SGR or remove the strip light.

<b>5. Symptom: Status indicator (Red LED) is not lit and output is activated in Dark Operated mode. Output is not activated in Light Operated mode.</b>	
One or more beams are blocked or the rails are out of sensing range.	Remove obstruction or reduce the distance between the rails.

V 1.5 Part Number: 0666220648

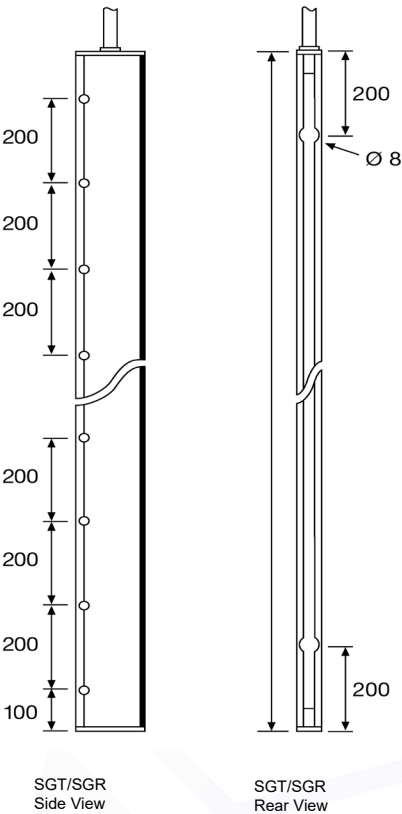
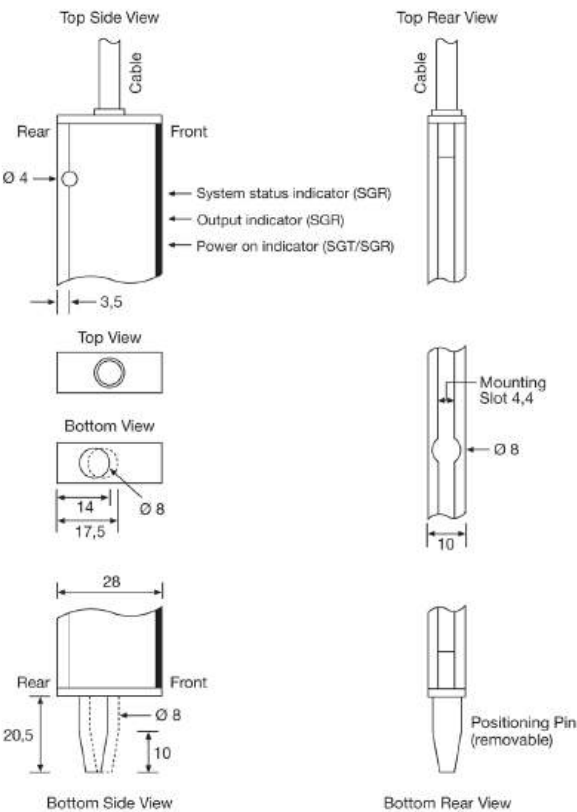
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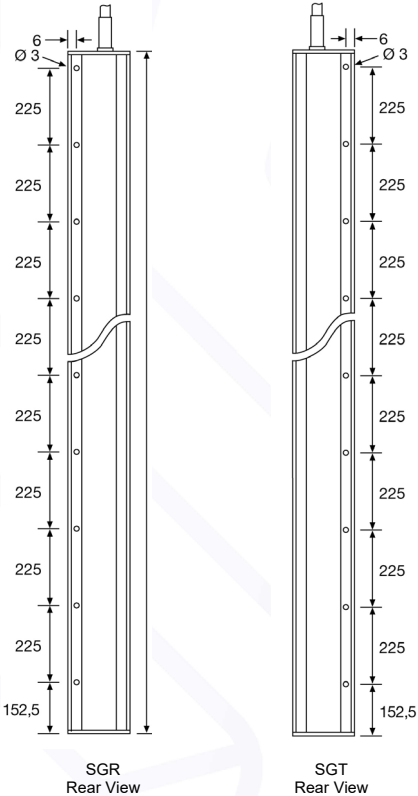
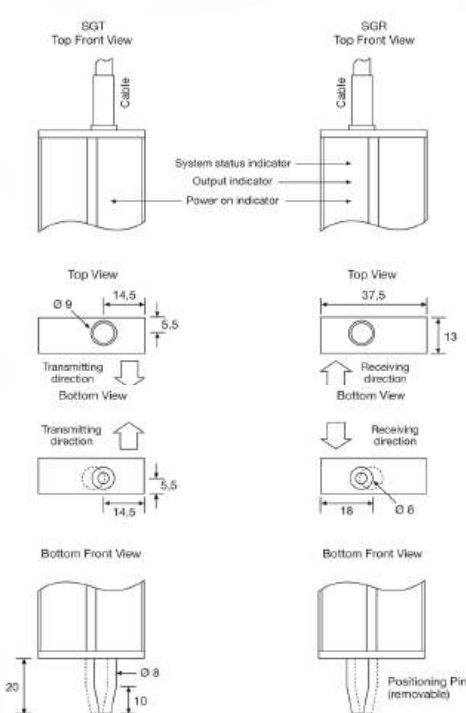
Dimensions and Descriptions

Slim Line "A" Housing – IP 54

Details



Leading Edge "B" Housing – IP 54

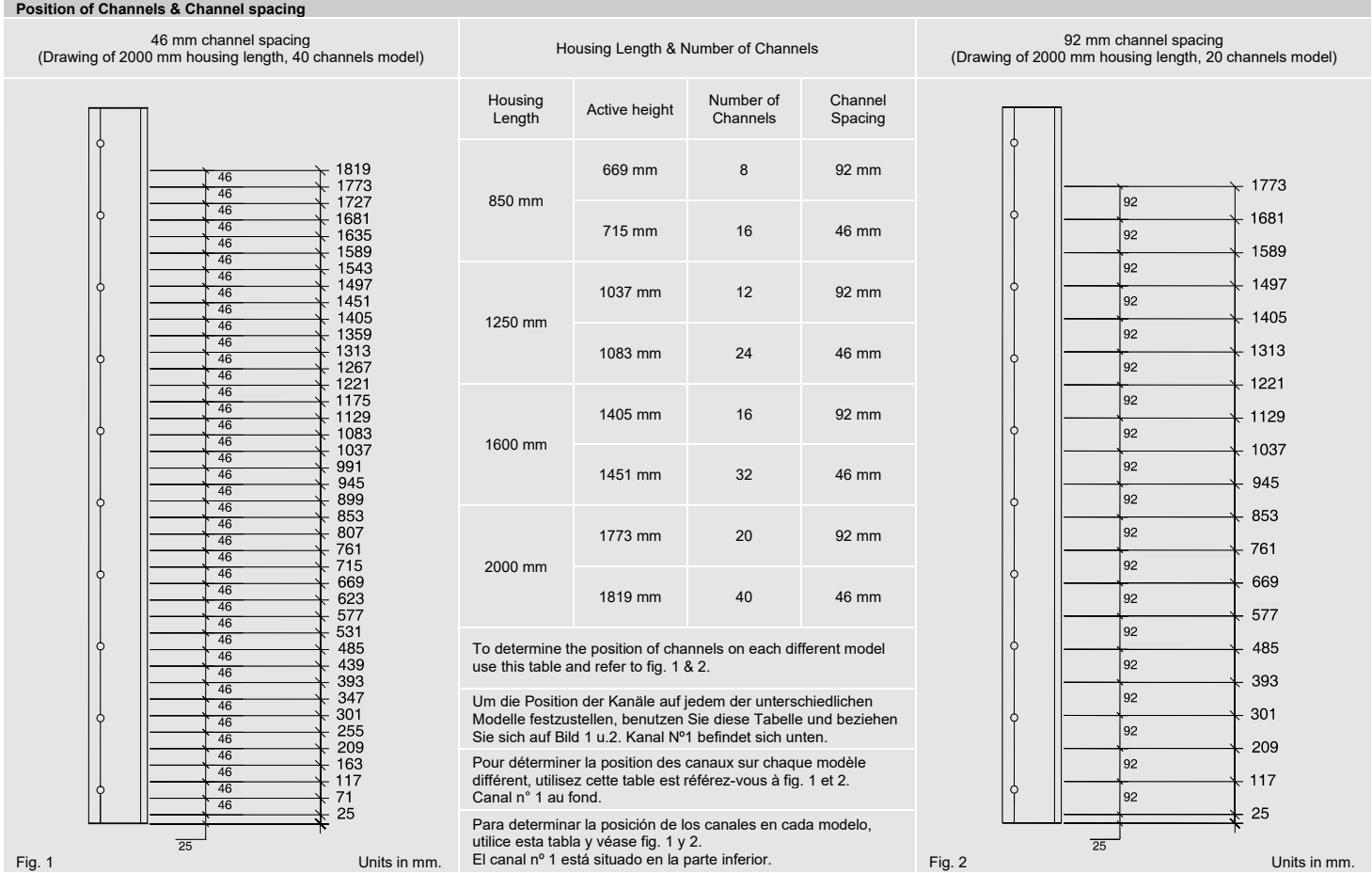
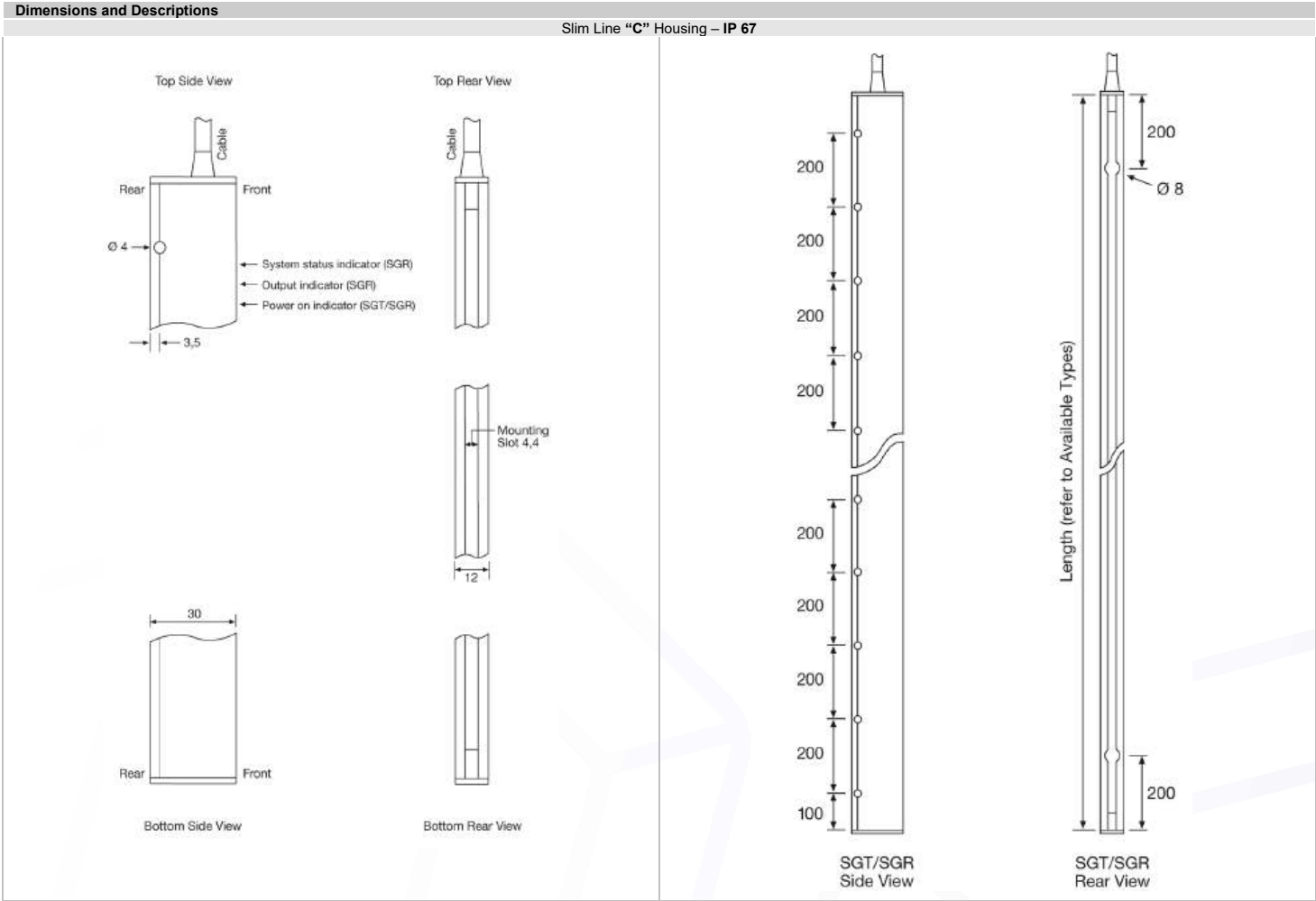


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