SG 10 M/S – 07 – USER MANUAL
Space Guard Series
Photoelectric light curtains

EN

Product Data

Electrical Data

	SGT (Transmitter)	SGR (Receiver)
Supply voltage	12 – 36 Vdc / 24 Vac ± 15%	
Max. Voltage ripple	15 % (within supply range)	
Current consumption	2 x 100 mA	2 x 50 mA
Max. output load	-	2 x 200 mA
Reverse polarity protected	Yes	
Short circuit protected	-	Yes
Inductive load protection	-	Yes

Environmental Data

Light immunity @ 5º incidence	> 100.000 lux
Temperature, operation	-20 to + 65 ºC
Sealing class	IP 67
Marking	UK CA CE

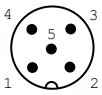
Available Models

		Model	Output	Output Mode	Sensing Range
Transmitter	Master	SGT 10-xxx-0xx-x1-x-M-0x-x-xx	-	-	C profile: 2 – 10m
	Slave	SGT 10-xxx-0xx-x1-x-S-0x-x-xx			*S14 version: 2 – 14 m
Receiver	Master	SGR 10-xxx-0xx-x1-x-M-07-x-xx	Solid State Relay	Light operated (NC)	D profile: 1,5 – 7,5 m
	Slave	SGR 10-xxx-0xx-x1-x-S-07-x-xx			

*S14 version only available on C profile.

Connection

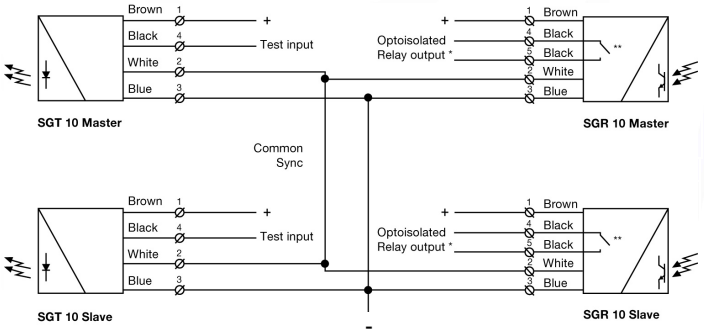
Wiring Diagrams



5 pole M12 male connector

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

** **Notice** that black wire on SGT10 must not be connected to +supply (brown wire) when voltage supply is V ac. If done the SGT10 will go into malfunction but will not be damaged.



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

Installation & Adjustments

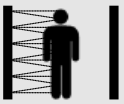
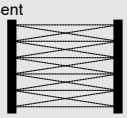
Adjustment

No initial set up or adjustments are required.

Notice:
- The SG 10 M/S system must not be placed on moving doors.
- The SG 10 Slave set need to be used in conjunction with a SG 10 Master.

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.
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.

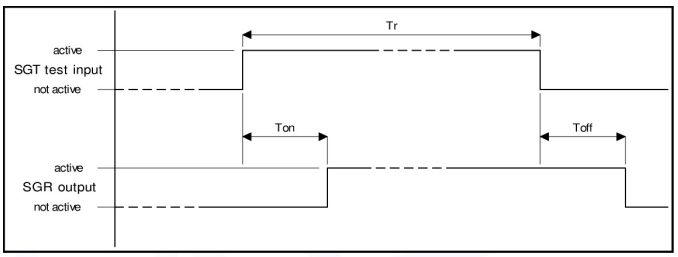
Output Logic

Detection	Output mode	Output status	Output indicator (yellow led)
Present 	Light operated (N.C.)	Open	Off
Absent 	Light operated (N.C.)	Closed	On

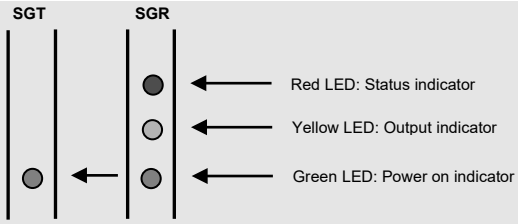
Test Input

The SGT10 M and SGT 10 S transmitters 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.

SGT/SGR test input response time			
SGT A1 version	Ton = 70 ms (max.)	Toff = 500 ms (max.)*	Tr >= 85 ms
* Active height ≤ 1755 mm ➔ Toff = 360 ms (max.)			
SGT B1 version	Ton = 70 ms (max.)	Toff = 260 ms (max.)**	Tr >= 85 ms
** Active height ≤ 1755 mm ➔ Toff = 180 ms (max.)			



Indicators



Troubleshooting

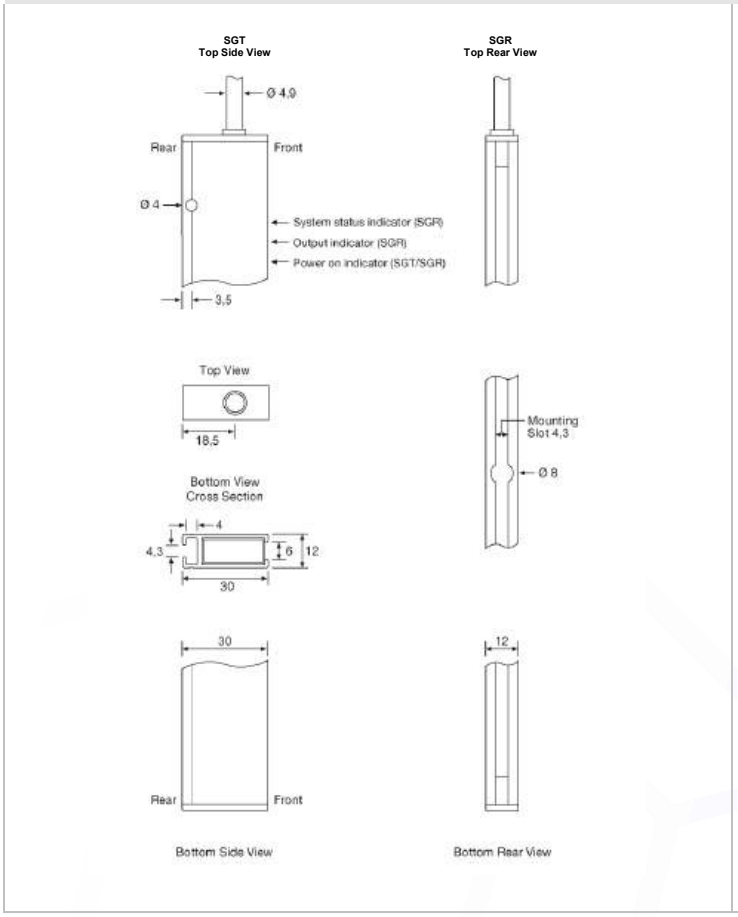
Probable Reason	Corrective Action
1. Symptom: Status indicator (Red LED) on SGR is constant on.	
Master SGT is disabled	Check supply and cable to the master SGT
No synchronization signal	Connect SGR to SGT master
2. Symptom: Output indicator (Yellow LED) is flashing	
Severe electrical interference	Separate SGR and SGT supply cable from high voltage cables
Severe ambient light	Swap position of SGT and SGR
Cross talk from a nearby HF strip light	Swap position of SGT and SGR or remove the strip light.
3. Symptom: Output indicator (Yellow LED) is constant off	
SGR cannot see SGT	Remove obstruction

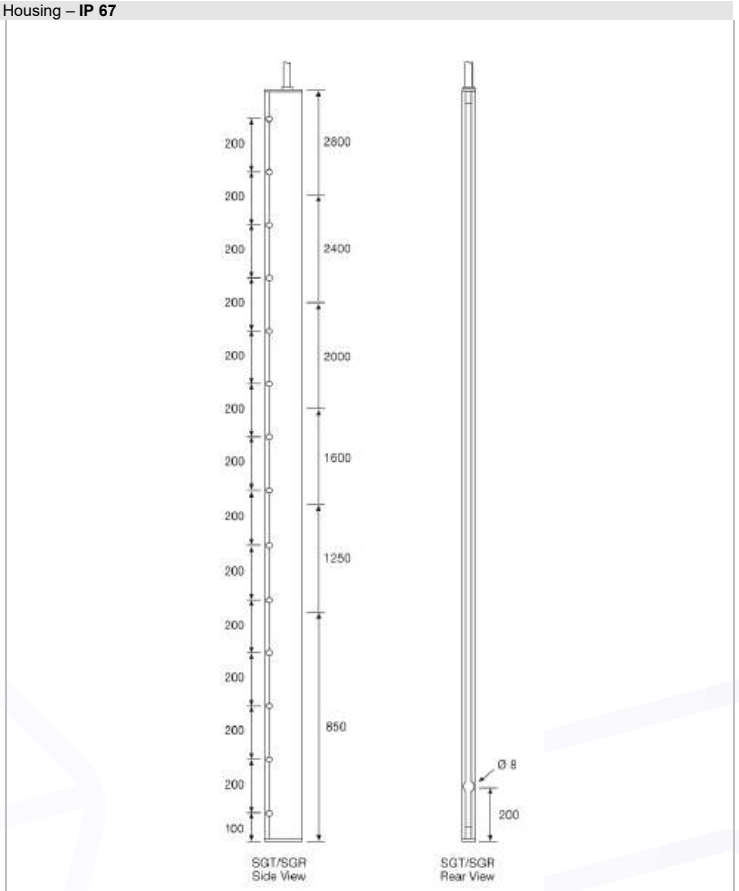
Warning
This device is not to be used for Personnel Protection in Machine Guarding Safety applications. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel machine guarding stand-alone safety applications.

V 1.4 Part Number: 0666220608
June 2022 edition

Dimensions and Descriptions

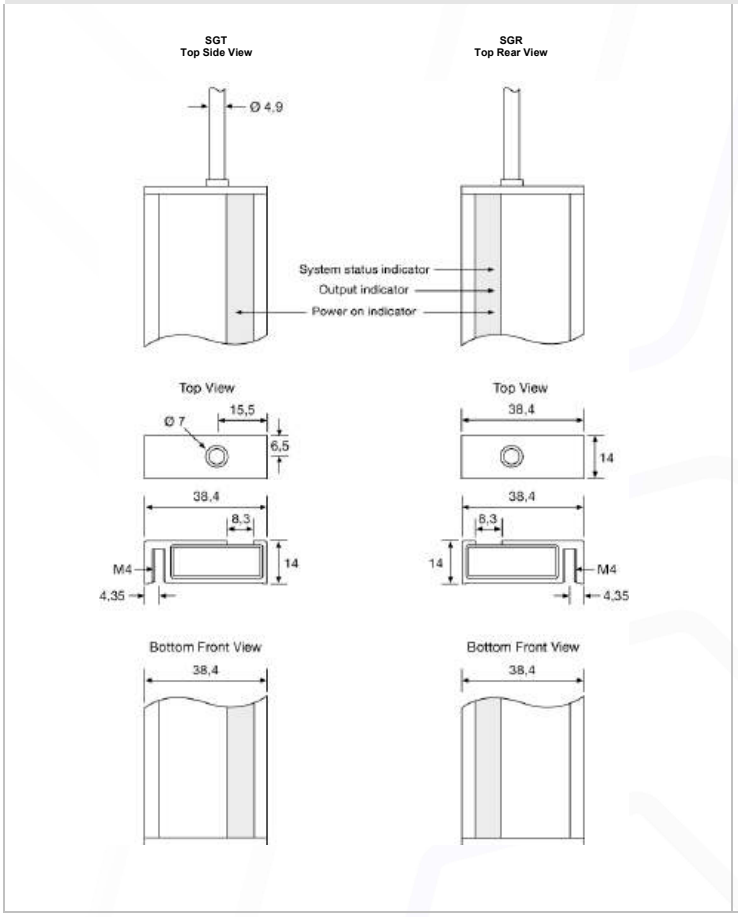
Slim Line **"C"** Housing – **IP 67**

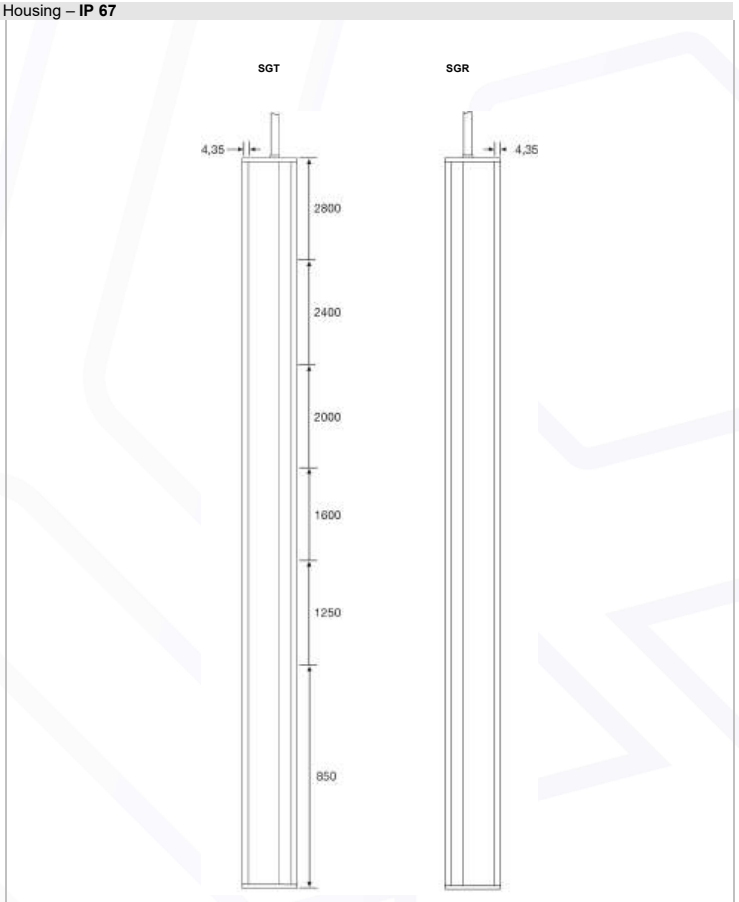




Dimensions and Descriptions

Slim Line **"D"** Housing – **IP 67**





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Position of Channels & Channel spacing

46 mm channel spacing
(Drawing of 2000 mm housing length, 40 channels model)

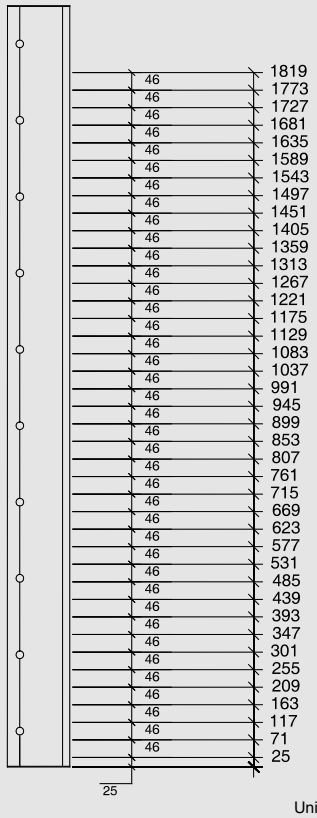

Fig. 1 Units in mm.

Housing Length & Number of Channels

Housing Length	Active height	Number of Channels	Channel Spacing
850 mm	669 mm	8	92 mm
	715 mm	16	46 mm
1250 mm	1037 mm	12	92 mm
	1083 mm	24	46 mm
1600 mm	1405 mm	16	92 mm
	1451 mm	32	46 mm
2000 mm	1773 mm	20	92 mm
	1819 mm	40	46 mm

To determine the position of channels on each different model use this table and refer to fig. 1 & 2.

92 mm channel spacing
(Drawing of 2000 mm housing length, 20 channels model)

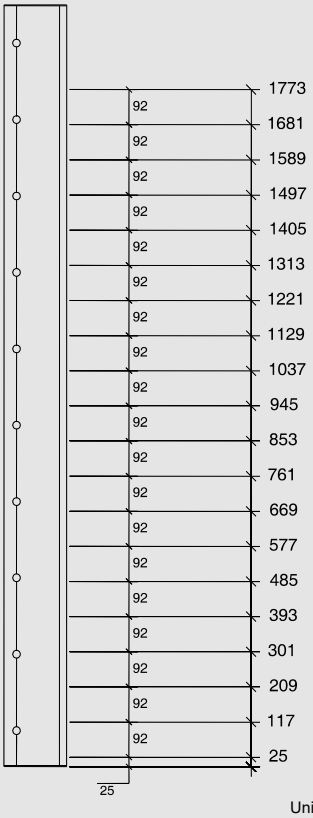

Fig. 2 Units in mm.

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