

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			–	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 Profile Lens cover			Aluminium (black anodised)			
			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 mm²	5 x 0,20 mm²	3 x 0,20 mm²	5 x 0,20 mm²

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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
Approvals	IP 67
	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			
	850 mm	650 mm	8	34	92 mm	-	-	SGT 10-085-008-B1-C-01-5	SGT 10-085-008-B1-C-01-0.5-J5	10 m
		695 mm	16	74	46 mm			SGT 10-085-016-A1-C-01-5	SGT 10-085-016-A1-C-01-0.5-J5	
	1250 mm	1020 mm	12	54	92 mm			SGT 10-125-012-B1-C-01-5	SGT 10-125-012-B1-C-01-0.5-J5	
		1065 mm	24	114	46 mm			SGT 10-125-024-A1-C-01-5	SGT 10-125-024-A1-C-01-0.5-J5	
	1600 mm	1385 mm	16	74	92 mm			SGT 10-160-016-B1-C-01-5	SGT 10-160-016-B1-C-01-0.5-J5	
		1430 mm	32	154	46 mm			SGT 10-160-032-A1-C-01-5	SGT 10-160-032-A1-C-01-0.5-J5	
	2000 mm	1755 mm	20	94	92 mm			SGT 10-200-020-B1-C-01-5	SGT 10-200-020-B1-C-01-0.5-J5	
		1800 mm	40	194	46 mm			SGT 10-200-040-A1-C-01-5	SGT 10-200-040-A1-C-01-0.5-J5	

Receiver Detector	850 mm	650 mm	8	34	92 mm	Solid State Relay	Light/Dark	SGR 10-085-008-B1-C-07-5	SGR 10-085-008-B1-C-07-0.5-J5	1-10 m
		695 mm	16	74	46 mm			SGR 10-085-016-A1-C-07-5	SGR 10-085-016-A1-C-07-0.5-J5	
	1250 mm	1020 mm	12	54	92 mm			SGR 10-125-012-B1-C-07-5	SGR 10-125-012-B1-C-07-0.5-J5	
		1065 mm	24	114	46 mm			SGR 10-125-024-A1-C-07-5	SGR 10-125-024-A1-C-07-0.5-J5	
	1600 mm	1385 mm	16	74	92 mm			SGR 10-160-016-B1-C-07-5	SGR 10-160-016-B1-C-07-0.5-J5	
		1430 mm	32	154	46 mm			SGR 10-160-032-A1-C-07-5	SGR 10-160-032-A1-C-07-0.5-J5	
	2000 mm	1755 mm	20	94	92 mm			SGR 10-200-020-B1-C-07-5	SGR 10-200-020-B1-C-07-0.5-J5	
		1800 mm	40	194	46 mm			SGR 10-200-040-A1-C-07-5	SGR 10-200-040-A1-C-07-0.5-J5	

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

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Connections

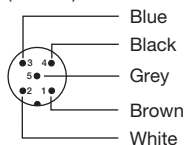
	Cable	M12 Plug/Cable
Supply +	Brown	Pin 1/Brown
Supply -	Blue	Pin 3/Blue
SGT test input	Black	Pin 4/Black
SGR output	Black	Pin 4/Black
SGR output	Black	Pin 5/Grey
SGR light/dark control	White	Pin 2/White

5 pin, M12

Sensor Plug
(Male)

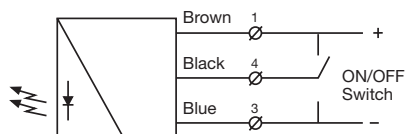


Cable Plug
(Female)



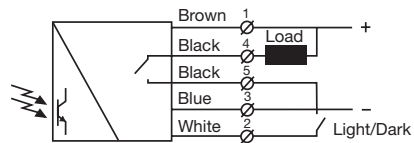
Refer to page 155 for extension cables

Wiring Diagrams

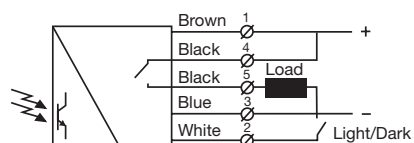


SGT 10

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

Top Side View

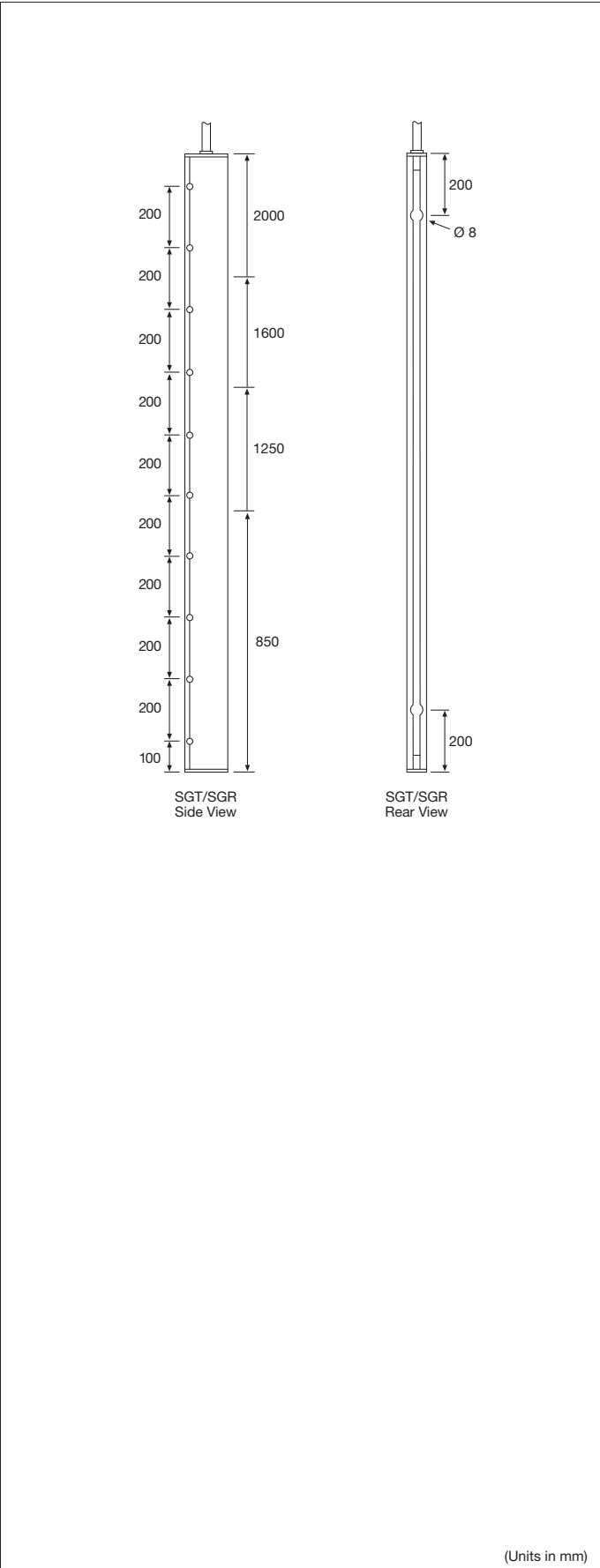
Top View

Bottom View
Cross Section

Bottom Side View

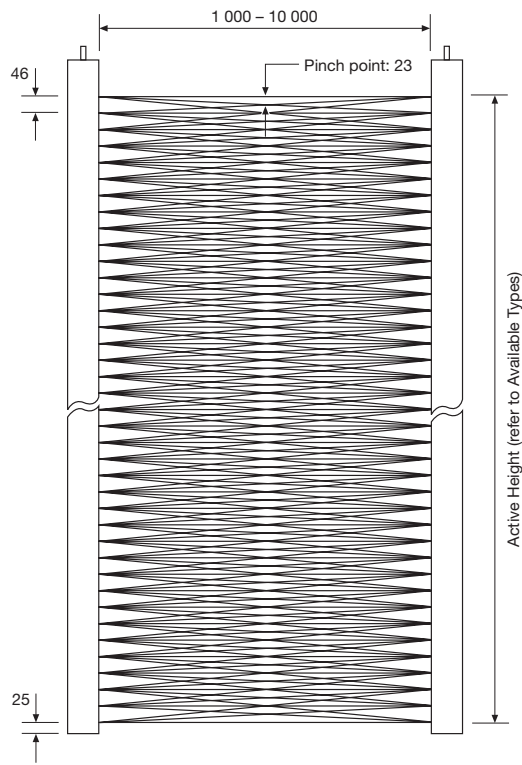
Top Rear View

Bottom Rear View

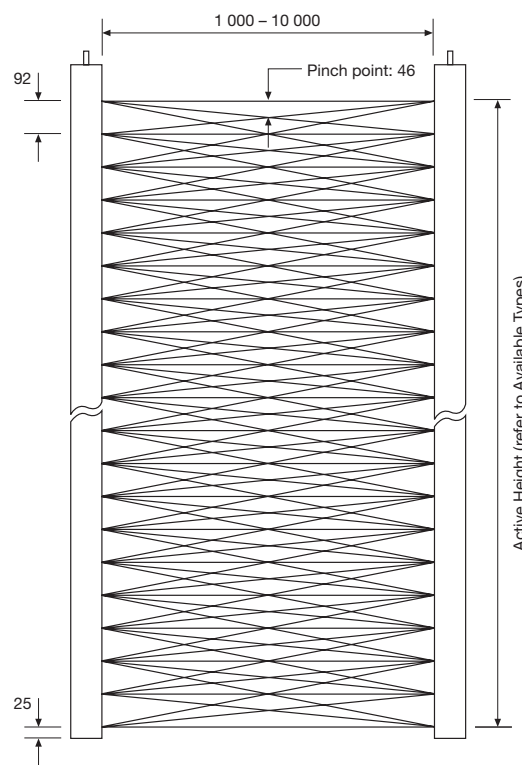


(Units in mm)

Beam Patterns



46 mm channel spacing

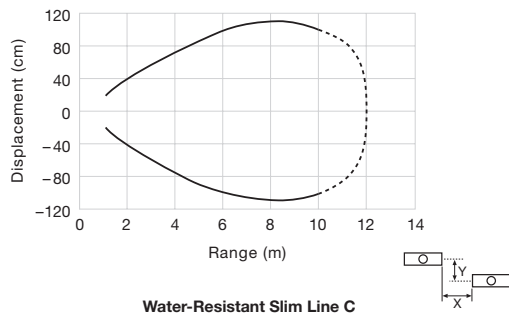


92 mm channel spacing

units in mm

Sensing Characteristics

Parallel Displacement



Vektor reserves the right to change specifications without notice