

Description

- 0-4 m sensing range
- 34 to 194 cross scanning beams
- Active height of 650 mm to 1800 mm
- Length of 850 mm to 2100 mm
- Flexible cable connection
- Automatic sensitivity adjustment
- Slim line (10x28 mm), leading edge (37,5x13 mm) or water-resistant slim line (12x30 mm) housing
- Power, output and signal status indicators
- 12-36 V dc supply voltage
- 5 wire, solid state relay output
- Test input
- Time-out function via control wire
- Static and dynamic applications



The SG 1 light curtain system consists of a self-contained transmitter SGT and receiver SGR, which are to be positioned opposite of each other. The detectors are housed in a sturdy aluminium profile available in a slim line design (10 x 28 mm), a leading edge design (37,5 x 13 mm) or a water-resistant 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, and 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 light curtains also include time-out function, which allows a pre-set number of non-adjacent channels to be automatically ignored if

permanently obstructed for 10 seconds or more. This function can be enabled or disabled via the control wire.

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. Transmitter and receiver are optically synchronised. The system can be used both in static and dynamic installations.

Both the transmitter and receiver units 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 (940 nm)	–	Infrared (940 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			46 mm		92 mm	
Bottom spacing to Ch 1			25 mm			
Pinch point beam spacing			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	
Housing dimensions (w x d)	Slim Line A		10 x 28 mm			
	Leading Edge B		37,5 x 13 mm			
	Slim Line C		12 x 30 mm			
Housing material	Profile		Aluminium (black anodised)			
	Lens cover		Polycarbonate			
Connection			3 m fixed flexible cable			
Cable, PVC Ø 4,1 mm			3 x 0,14 mm²	5 x 0,14 mm²	3 x 0,14 mm²	5 x 0,14 mm²

Environmental Data		
	SGT	SGR
Light immunity @ 5° incidence	–	100 000 lux
Temperature, operation	–20 to +65 °C	
Temperature, storage	–40 to +80 °C	
Sealing class	A / B housing	IP 54
	C housing	IP 67
Approvals	CE	

Available Types									
Slim Line A									
	Housing Length	Active Height	Number of Channels	Number of Beams	Beam Spacing	Connection		3 m flexible cable	Range
						Output		Order Reference	
Transmitter	850 mm	650 mm	8	34	92 mm	–	–	SGT 1-085-008-B1-A-00-3F	4 m
		695 mm	16	74	46 mm			SGT 1-085-016-A1-A-00-3F	
	1250 mm	1020 mm	12	54	92 mm			SGT 1-125-012-B1-A-00-3F	
		1065 mm	24	114	46 mm			SGT 1-125-024-A1-A-00-3F	
	1600 mm	1385 mm	16	74	92 mm			SGT 1-160-016-B1-A-00-3F	
		1430 mm	32	154	46 mm			SGT 1-160-032-A1-A-00-3F	
	2000 mm	1755 mm	20	94	92 mm			SGT 1-200-020-B1-A-00-3F	
		1800 mm	40	194	46 mm			SGT 1-200-040-A1-A-00-3F	
	2100 mm	1755 mm	20	94	92 mm			SGT 1-210-020-B1-A-00-3F	
		1800 mm	40	194	46 mm			SGT 1-210-040-A1-A-00-3F	
Receiver	850 mm	650 mm	8	34	92 mm	Solid State Relay	DO (NO)	SGR 1-085-008-B1-A-04-3F	0-4 m
		695 mm	16	74	46 mm		LO (NC)	SGR 1-085-008-B1-A-05-3F	
	1250 mm	1020 mm	12	54	92 mm		DO (NO)	SGR 1-085-016-A1-A-04-3F	
		1065 mm	24	114	46 mm		LO (NC)	SGR 1-085-016-A1-A-05-3F	
	1600 mm	1385 mm	16	74	92 mm		DO (NO)	SGR 1-125-012-B1-A-04-3F	
		1430 mm	32	154	46 mm		LO (NC)	SGR 1-125-012-B1-A-05-3F	
	2000 mm	1755 mm	20	94	92 mm		DO (NO)	SGR 1-125-024-A1-A-04-3F	
		1800 mm	40	194	46 mm		LO (NC)	SGR 1-125-024-A1-A-05-3F	
	2100 mm	1755 mm	20	94	92 mm		DO (NO)	SGR 1-160-016-B1-A-04-3F	
		1800 mm	40	194	46 mm		LO (NC)	SGR 1-160-016-B1-A-05-3F	
							DO (NO)	SGR 1-160-032-A1-A-04-3F	
							LO (NC)	SGR 1-160-032-A1-A-05-3F	
							DO (NO)	SGR 1-200-020-B1-A-04-3F	
							LO (NC)	SGR 1-200-020-B1-A-05-3F	
							DO (NO)	SGR 1-200-040-A1-A-04-3F	
							LO (NC)	SGR 1-200-040-A1-A-05-3F	
							DO (NO)	SGR 1-210-020-B1-A-04-3F	
							LO (NC)	SGR 1-210-020-B1-A-05-3F	
							DO (NO)	SGR 1-210-040-A1-A-04-3F	
							LO (NC)	SGR 1-210-040-A1-A-05-3F	

Note: 1. The transmitter SGT and receiver SGR set must have the same number of channels and beam spacing.
 2. The transmitter SGT is available in a long range model to be used in conjunction with standard receiver SGR. Sensing range is increased by 50%.
 Add "H" after the series number of the SGT for long range model, e.g. SGT 1H-200-040-A1-A-00-3F.

Available Types

Leading Edge B

	Housing Length	Active Height	Number of Channels	Number of Beams	Beam Spacing	Connection		3 m flexible cable	Range
						Output		Order Reference	
Transmitter	850 mm	650 mm	8	34	92 mm	-	-	SGT 1-085-008-B1-B-00-3F	3 m
		695 mm	16	74	46 mm			SGT 1-085-016-A1-B-00-3F	
	1250 mm	1020 mm	12	54	92 mm			SGT 1-125-012-B1-B-00-3F	
		1065 mm	24	114	46 mm			SGT 1-125-024-A1-B-00-3F	
	1600 mm	1385 mm	16	74	92 mm			SGT 1-160-016-B1-B-00-3F	
		1430 mm	32	154	46 mm			SGT 1-160-032-A1-B-00-3F	
	2000 mm	1755 mm	20	94	92 mm			SGT 1-200-020-B1-B-00-3F	
		1800 mm	40	194	46 mm			SGT 1-200-040-A1-B-00-3F	
	2100 mm	1755 mm	20	94	92 mm			SGT 1-210-020-B1-B-00-3F	
		1800 mm	40	194	46 mm			SGT 1-210-040-A1-B-00-3F	
Receiver	850 mm	650 mm	8	34	92 mm	Solid State Relay	DO (NO)	SGR 1-085-008-B1-B-04-3F	0-3 m
		695 mm	16	74	46 mm		LO (NC)	SGR 1-085-008-B1-B-05-3F	
	1250 mm	1020 mm	12	54	92 mm		DO (NO)	SGR 1-085-016-A1-B-04-3F	
		1065 mm	24	114	46 mm		LO (NC)	SGR 1-085-016-A1-B-05-3F	
	1600 mm	1385 mm	16	74	92 mm		DO (NO)	SGR 1-125-012-B1-B-04-3F	
		1430 mm	32	154	46 mm		LO (NC)	SGR 1-125-012-B1-B-05-3F	
	2000 mm	1755 mm	20	94	92 mm		DO (NO)	SGR 1-125-024-A1-B-04-3F	
		1800 mm	40	194	46 mm		LO (NC)	SGR 1-125-024-A1-B-05-3F	
	2100 mm	1755 mm	20	94	92 mm		DO (NO)	SGR 1-160-016-B1-B-04-3F	
		1800 mm	40	194	46 mm		LO (NC)	SGR 1-160-016-B1-B-05-3F	
							DO (NO)	SGR 1-160-032-A1-B-04-3F	
							LO (NC)	SGR 1-160-032-A1-B-05-3F	
							DO (NO)	SGR 1-200-020-B1-B-04-3F	
							LO (NC)	SGR 1-200-020-B1-B-05-3F	
							DO (NO)	SGR 1-200-040-A1-B-04-3F	
							LO (NC)	SGR 1-200-040-A1-B-05-3F	
							DO (NO)	SGR 1-210-020-B1-B-04-3F	
							LO (NC)	SGR 1-210-020-B1-B-05-3F	
							DO (NO)	SGR 1-210-040-A1-B-04-3F	
							LO (NC)	SGR 1-210-040-A1-B-05-3F	

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Add "H" after the series number of the SGT for long range model, e.g. SGT 1H-200-040-A1-B-00-3F.

Available Types

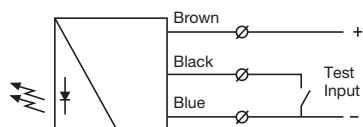
Slim Line C

	Housing Length	Active Height	Number of Channels	Number of Beams	Beam Spacing	Connection		3 m flexible cable	Range
						Output		Order Reference	
Transmitter	850 mm	650 mm	8	34	92 mm	-	-	SGT 1-085-008-B1-C-00-3F	4 m
		695 mm	16	74	46 mm			SGT 1-085-016-A1-C-00-3F	
	1250 mm	1020 mm	12	54	92 mm			SGT 1-125-012-B1-C-00-3F	
		1065 mm	24	114	46 mm			SGT 1-125-024-A1-C-00-3F	
	1600 mm	1385 mm	16	74	92 mm			SGT 1-160-016-B1-C-00-3F	
		1430 mm	32	154	46 mm			SGT 1-160-032-A1-C-00-3F	
	2000 mm	1755 mm	20	94	92 mm			SGT 1-200-020-B1-C-00-3F	
		1800 mm	40	194	46 mm			SGT 1-200-040-A1-C-00-3F	
Receiver	850 mm	650 mm	8	34	92 mm	Solid State Relay	DO (NO)	SGR 1-085-008-B1-C-04-3F	0-4 m
		695 mm	16	74	46 mm		LO (NC)	SGR 1-085-008-B1-C-05-3F	
	1250 mm	1020 mm	12	54	92 mm		DO (NO)	SGR 1-085-016-A1-C-04-3F	
		1065 mm	24	114	46 mm		LO (NC)	SGR 1-085-016-A1-C-05-3F	
	1600 mm	1385 mm	16	74	92 mm		DO (NO)	SGR 1-125-012-B1-C-04-3F	
		1430 mm	32	154	46 mm		LO (NC)	SGR 1-125-012-B1-C-05-3F	
	2000 mm	1755 mm	20	94	92 mm		DO (NO)	SGR 1-125-024-A1-C-04-3F	
		1800 mm	40	194	46 mm		LO (NC)	SGR 1-125-024-A1-C-05-3F	
							DO (NO)	SGR 1-160-016-B1-C-04-3F	
							LO (NC)	SGR 1-160-016-B1-C-05-3F	
							DO (NO)	SGR 1-160-032-A1-C-04-3F	
							LO (NC)	SGR 1-160-032-A1-C-05-3F	
							DO (NO)	SGR 1-200-020-B1-C-04-3F	
							LO (NC)	SGR 1-200-020-B1-C-05-3F	
							DO (NO)	SGR 1-200-040-A1-C-04-3F	
							LO (NC)	SGR 1-200-040-A1-C-05-3F	

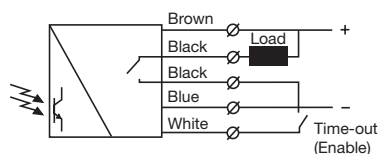
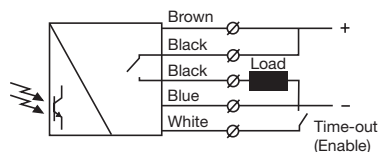
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Wiring Diagrams



SGT 1

SGR 1
Load as NPNSGR 1
Load as PNP

Slim Line A

Top Side View

- Dimension: $\varnothing 4,1$
- Labels: Rear, Front
- Indicators: System status indicator (SGR), Output indicator (SGR), Power on indicator (SGT/SGR)

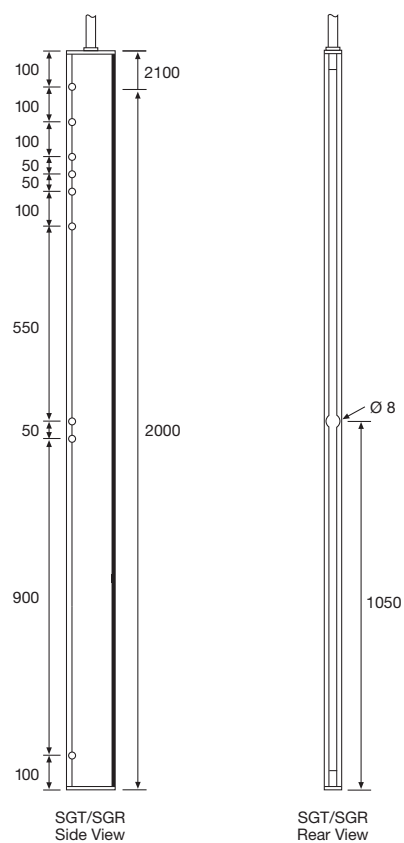
Top Rear View

Bottom Side View

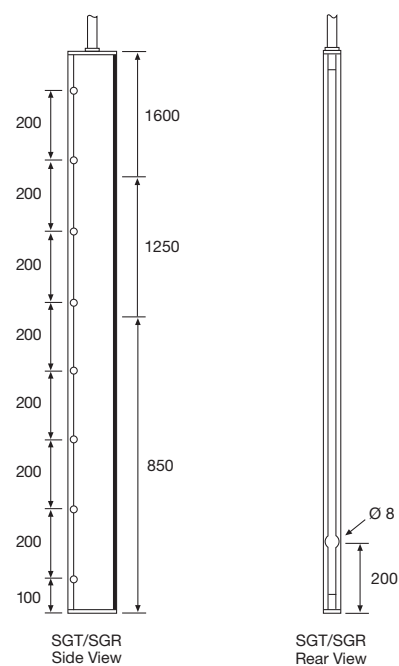
- Dimensions: 14, 7, 4, 10, 28, 4,3
- Label: Cross Section

Bottom Rear View

- Dimensions: 3,5, 4, 20,5, 14, 17,5, 10
- Label: Positioning Pin (removable)



SGT/SGR 1-200/210



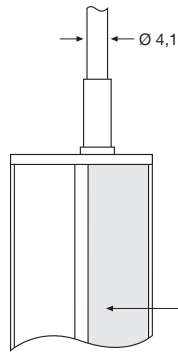
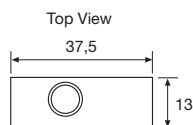
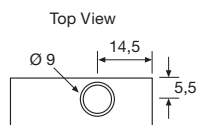
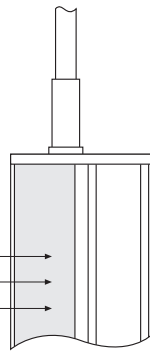
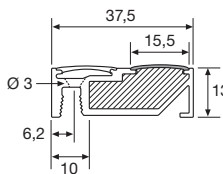
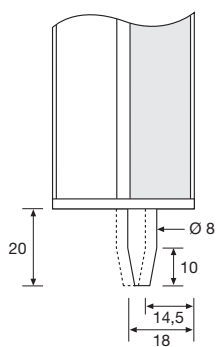
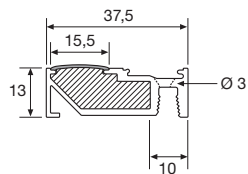
SGT/SGR 1-085/125/160

(Units in mm)

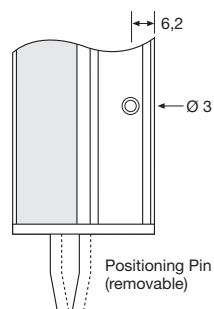
Dimensions and Descriptions

Leading Edge B

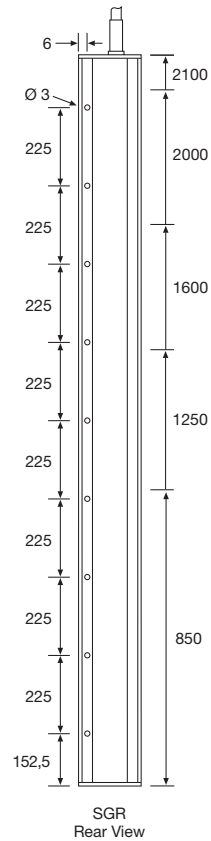
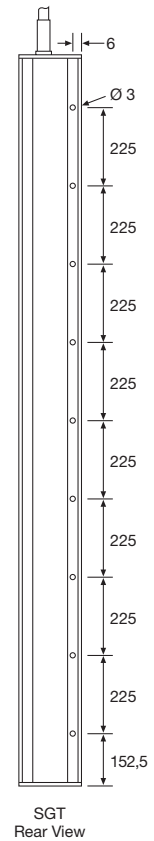
Details

SGT
Top Front View
(shown with screw cover strip)SGR
Top Front View
(shown without screw cover strip)Bottom View
Cross SectionBottom View
Cross Section

Bottom Front View



Bottom Front View

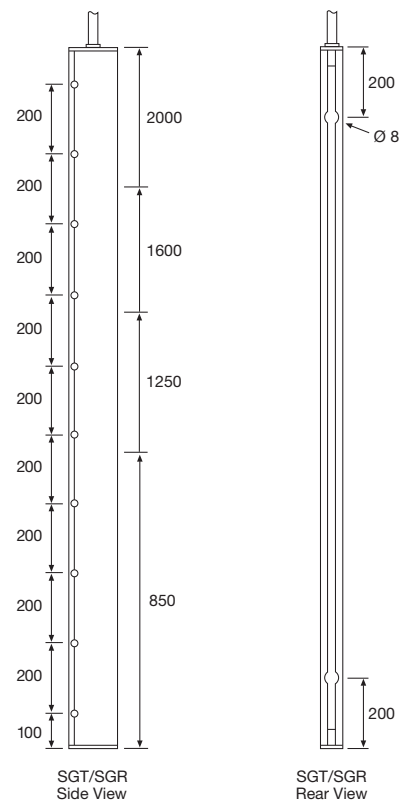
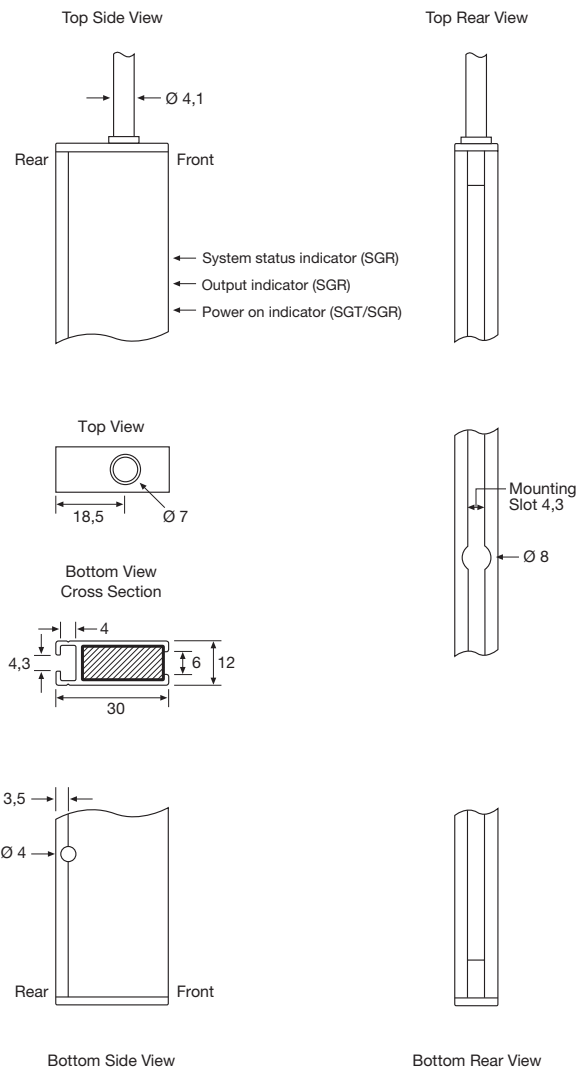
SGR
Rear ViewSGT
Rear View

(Units in mm)

Dimensions and Descriptions

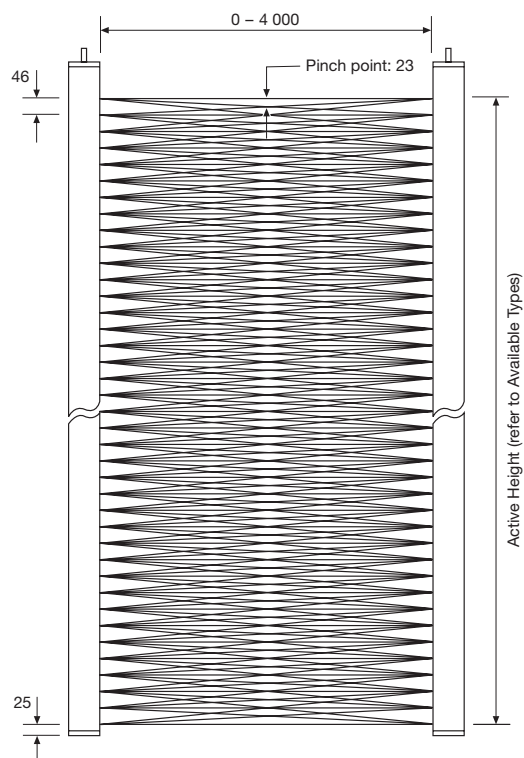
Slim Line C

Details

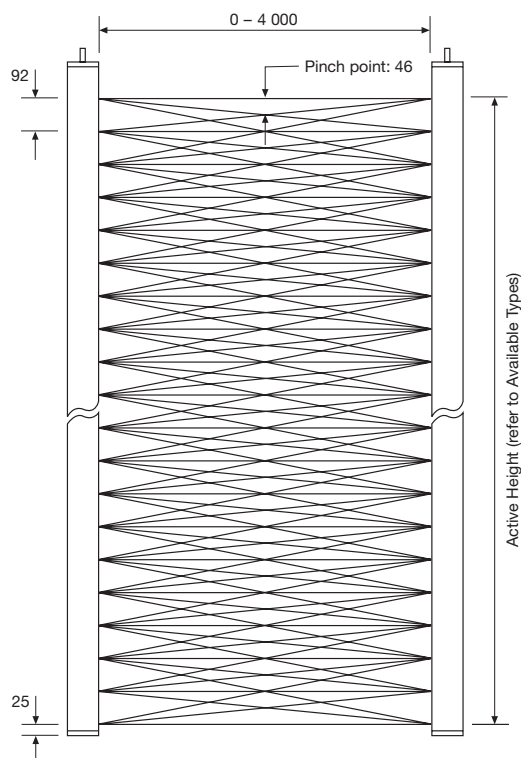


(Units in mm)

Beam Patterns



46 mm channel spacing

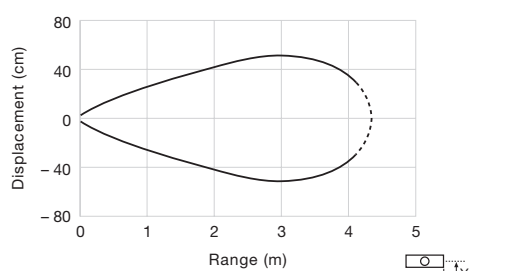


92 mm channel spacing

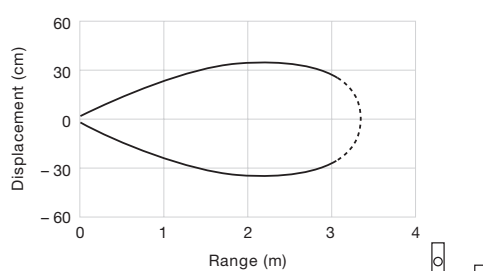
(Units in mm)

Sensing Characteristics

Parallel Displacement



Slim Line A / C



Leading Edge B

Telco reserves the right to change specifications without notice.