

Description

- 1-12 metre sensing range
- 16 to 56 parallel scanning beams
- Active height of 1800 mm to 2520 mm
- Detector length of 1928 mm to 2648 mm
- 3 different channel placement models
- Cable or plug connection
- Automatic sensitivity adjustment
- Compact aluminium IP67 detector housings
- Power, output and system status indicators
- 10-30 V dc supply voltage
- OSE output
- EN 12978 compliant
- TÜV approved as E-device acc. EN 12453



The SG 15 series is especially designed as a safety device for doors and gates. The system is approved by TÜV to be an E-device according to EN 12453, allowing it to be a stand-alone safety device on a power operated door or gate.

The SG 15 light curtain system consists of a self-contained transmitter, SGT and receiver, SGR, which are to be positioned opposite of each other. The units are housed in compact, but sturdy, aluminium profiles, available in two different designs.

The SG 15 OSE system is supplied with a 10-30 V dc power supply. The SGR has a 3 wire connection and a 900 Hz output 5 V square signal output. The SGT has a 2 wire connection for supply and no test input.

The advanced automatic signal-tracking (AST) feature ensures that no onsite set up or adjustments are required. The signal of each individual channel is adjusted automatically, which

compensates for misalignment and contamination during operation. Transmitter and receiver units are optically synchronised.

The SG 15 series features the Dynamic Sequential Blanking Function which allows the detectors to be positioned in the guide tracks of an industrial door, where the door travels directly in front of the protection area, interrupting the beams sequentially from top to bottom. The special feature ensures that the system can distinguish between the closing door and an object by ignoring the beams that are obstructed by the moving door whilst leaving the below remaining beams active to detect an object in the protection area.

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		SGT	SGR
Supply voltage		10-30 V dc	
Current consumption		70 mA (RMS)	30 mA
Output	OSE	-	Push-pull, 900 Hz 5 V square signal
Max output load	OSE	-	15 mA (24 V dc)
Short circuit protected		-	Yes
Inductive load protection		-	Yes
Reverse polarity protected		Yes	
Number of channels (diodes per detector)		16, 18, 20, 28, 30, 32, 40, 48 or 56	
Number of parallel beams		16, 18, 20, 28, 30, 32, 40, 48 or 56	
Active height		1800, 2160 or 2520 mm	
Bottom spacing to Ch 1		45 mm	
Channel spacing	C1	45 mm : all channels	
	D1	45 mm : up to 1035 mm and two top channels 180 mm : from 1035 mm to top	
	E1	45 mm : up to 315 mm and two top channels 180 mm : from 315 mm to top	
Response time		-	50 ms
Maximum sequential blanking speed		0,9 m/s	
Minimum size of detectable objects		50 mm / 200 mm	
Power on indicator		Green LED	
Output indicator		-	Yellow LED
System status indicator		Red LED	
Light source		Infrared (880 nm)	-
Opening angle		-	+/- 4°
Emission angle		+/- 5°	-
Housing dimensions (w x d)	E-profile	25,5 mm x 14,3 mm	
	G-profile	19,5 mm x 20,8 mm	
Housing material	Profile	Aluminium (black anodised)	
	Lens cover	Polycarbonate	
Connection		15 m fixed cable or 5 pin, M12 plug	5 m fixed cable or 5 pin, M12 plug

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	IP 67	
Certificates	CE	
Safety category	EN 12978:2003 EN 13849-1, Cat. 2, PL d IEC 61496-2, Type 2 ESPE	
Tested	EN 12978:2003 +A1:2009 EN ISO 13849-1:2008 EN 61508:2010 Parts 1-7 IEC 61000-6-2:2005, EN 61000-6-3:2007 +A1:2011 IEC 61326-3-1:2008	

Available Types

E-profile

Transmitter	Housing Length	Active Height	Number of Channels	Channel Placement	Connection	15 m cable	0.5 m cable with 5 pin, M12 plug		
					Output	Order Reference			
					-				
1928 mm	1800 mm	40	C1	D1	-	SGT 15-193-040-C1-E-OSE-15	SGT 15-193-040-C1-E-OSE-0.5-J5		
						SGT 15-193-028-D1-E-OSE-15	SGT 15-193-028-D1-E-OSE-0.5-J5		
						SGT 15-193-016-E1-E-OSE-15	SGT 15-193-016-E1-E-OSE-0.5-J5		
	2288 mm	2160 mm	48	C1		D1	SGT 15-229-048-C1-E-OSE-15	SGT 15-229-048-C1-E-OSE-0.5-J5	
							SGT 15-229-030-D1-E-OSE-15	SGT 15-229-030-D1-E-OSE-0.5-J5	
							SGT 15-229-018-E1-E-OSE-15	SGT 15-229-018-E1-E-OSE-0.5-J5	
		2648 mm	2520 mm	56		C1	D1	SGT 15-265-056-C1-E-OSE-15	SGT 15-265-056-C1-E-OSE-0.5-J5
								SGT 15-265-032-D1-E-OSE-15	SGT 15-265-032-D1-E-OSE-0.5-J5
								SGT 15-265-020-E1-E-OSE-15	SGT 15-265-020-E1-E-OSE-0.5-J5

Receiver	1928 mm	1800 mm	40 <th rowspan="3">C1 <th rowspan="9">OSE</th> <td>SGR 15-193-040-C1-E-OSE-5</td> <td>SGR 15-193-040-C1-E-OSE-0.5-J5</td> </th>	C1 <th rowspan="9">OSE</th> <td>SGR 15-193-040-C1-E-OSE-5</td> <td>SGR 15-193-040-C1-E-OSE-0.5-J5</td>	OSE	SGR 15-193-040-C1-E-OSE-5	SGR 15-193-040-C1-E-OSE-0.5-J5
						SGR 15-193-028-D1-E-OSE-5	SGR 15-193-028-D1-E-OSE-0.5-J5
						SGR 15-193-016-E1-E-OSE-5	SGR 15-193-016-E1-E-OSE-0.5-J5
	2288 mm	2160 mm	48	C1		SGR 15-229-048-C1-E-OSE-5	SGR 15-229-048-C1-E-OSE-0.5-J5
						SGR 15-229-030-D1-E-OSE-5	SGR 15-229-030-D1-E-OSE-0.5-J5
						SGR 15-229-018-E1-E-OSE-5	SGR 15-229-018-E1-E-OSE-0.5-J5
	2648 mm	2520 mm	56	C1		SGR 15-265-056-C1-E-OSE-5	SGR 15-265-056-C1-E-OSE-0.5-J5
						SGR 15-265-032-D1-E-OSE-5	SGR 15-265-032-D1-E-OSE-0.5-J5
						SGR 15-265-020-E1-E-OSE-5	SGR 15-265-020-E1-E-OSE-0.5-J5

G-profile

Transmitter	1928 mm	1800 mm	40 <th rowspan="3">C1 <th rowspan="9">-</th> <td>SGT 15-193-040-C1-G-OSE-15</td> <td>SGT 15-193-040-C1-G-OSE-0.5-J5</td> </th>	C1 <th rowspan="9">-</th> <td>SGT 15-193-040-C1-G-OSE-15</td> <td>SGT 15-193-040-C1-G-OSE-0.5-J5</td>	-	SGT 15-193-040-C1-G-OSE-15	SGT 15-193-040-C1-G-OSE-0.5-J5	
						SGT 15-193-028-D1-G-OSE-15	SGT 15-193-028-D1-G-OSE-0.5-J5	
						SGT 15-193-016-E1-G-OSE-15	SGT 15-193-016-E1-G-OSE-0.5-J5	
	2288 mm	2160 mm	48	C1		SGT 15-229-048-C1-G-OSE-15	SGT 15-229-048-C1-G-OSE-0.5-J5	
						SGT 15-229-030-D1-G-OSE-15	SGT 15-229-030-D1-G-OSE-0.5-J5	
						SGT 15-229-018-E1-G-OSE-15	SGT 15-229-018-E1-G-OSE-0.5-J5	
		2648 mm	2520 mm	56		C1	SGT 15-265-056-C1-G-OSE-15	SGT 15-265-056-C1-G-OSE-0.5-J5
							SGT 15-265-032-D1-G-OSE-15	SGT 15-265-032-D1-G-OSE-0.5-J5
							SGT 15-265-020-E1-G-OSE-15	SGT 15-265-020-E1-G-OSE-0.5-J5

Receiver	1928 mm	1800 mm	40 <th rowspan="3">C1 <th rowspan="9">OSE</th> <td>SGR 15-193-040-C1-G-OSE-5</td> <td>SGR 15-193-040-C1-G-OSE-0.5-J5</td> </th>	C1 <th rowspan="9">OSE</th> <td>SGR 15-193-040-C1-G-OSE-5</td> <td>SGR 15-193-040-C1-G-OSE-0.5-J5</td>	OSE	SGR 15-193-040-C1-G-OSE-5	SGR 15-193-040-C1-G-OSE-0.5-J5
						SGR 15-193-028-D1-G-OSE-5	SGR 15-193-028-D1-G-OSE-0.5-J5
						SGR 15-193-016-E1-G-OSE-5	SGR 15-193-016-E1-G-OSE-0.5-J5
	2288 mm	2160 mm	48	C1		SGR 15-229-048-C1-G-OSE-5	SGR 15-229-048-C1-G-OSE-0.5-J5
						SGR 15-229-030-D1-G-OSE-5	SGR 15-229-030-D1-G-OSE-0.5-J5
						SGR 15-229-018-E1-G-OSE-5	SGR 15-229-018-E1-G-OSE-0.5-J5
	2648 mm	2520 mm	56	C1		SGR 15-265-056-C1-G-OSE-5	SGR 15-265-056-C1-G-OSE-0.5-J5
						SGR 15-265-032-D1-G-OSE-5	SGR 15-265-032-D1-G-OSE-0.5-J5
						SGR 15-265-020-E1-G-OSE-5	SGR 15-265-020-E1-G-OSE-0.5-J5

Connections

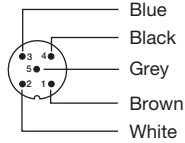
	Cable	M12 Plug / Cable
Supply +	Brown	Pin 1 / Brown
Supply -	Blue	Pin 3 / Blue
SGR OSE output	Black	Pin 4 / Black

5 pin, M12

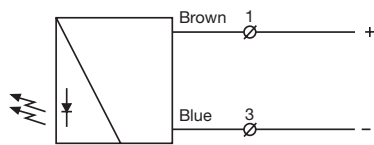
Sensor Plug
(Male)



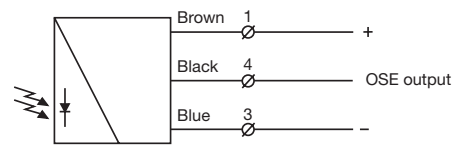
Cable Plug
(Female)



Wiring Diagrams



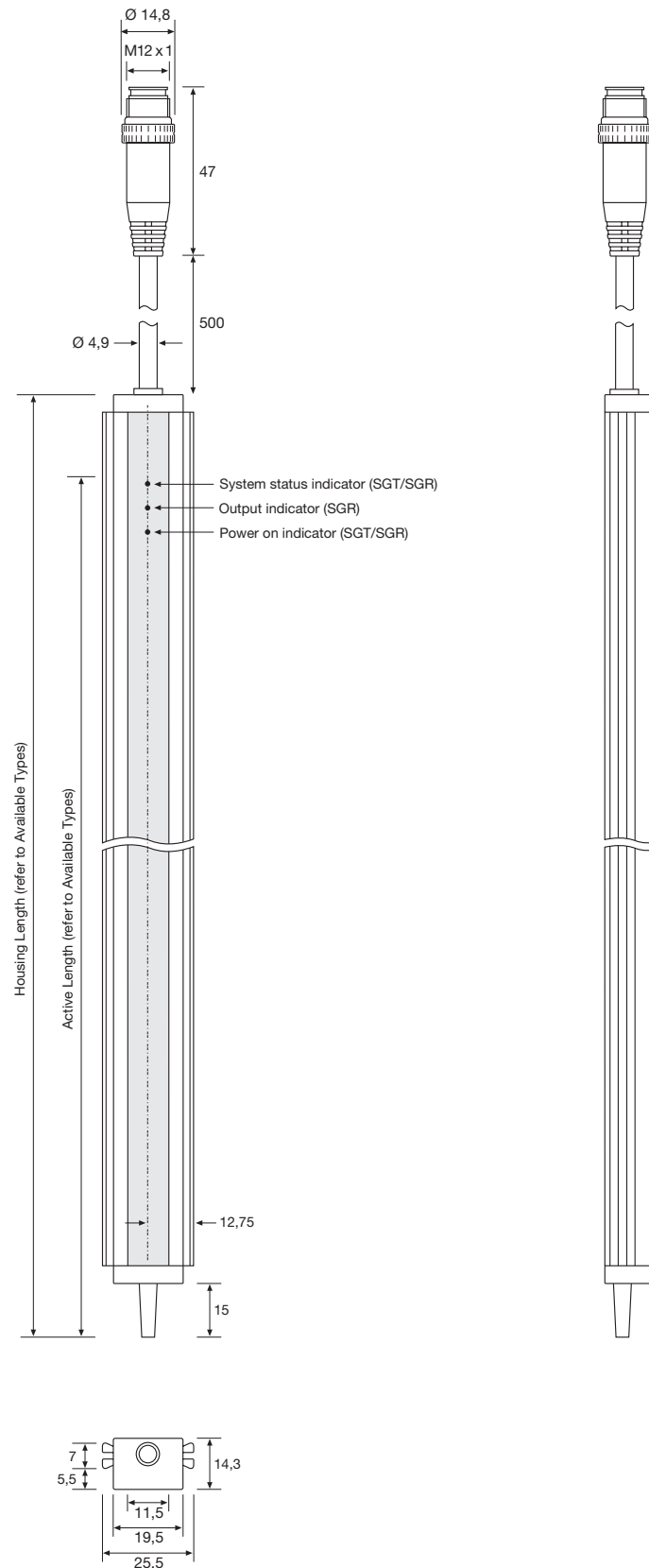
SGT 15 OSE



SGR 15 OSE

Dimensions and Descriptions

E-profile

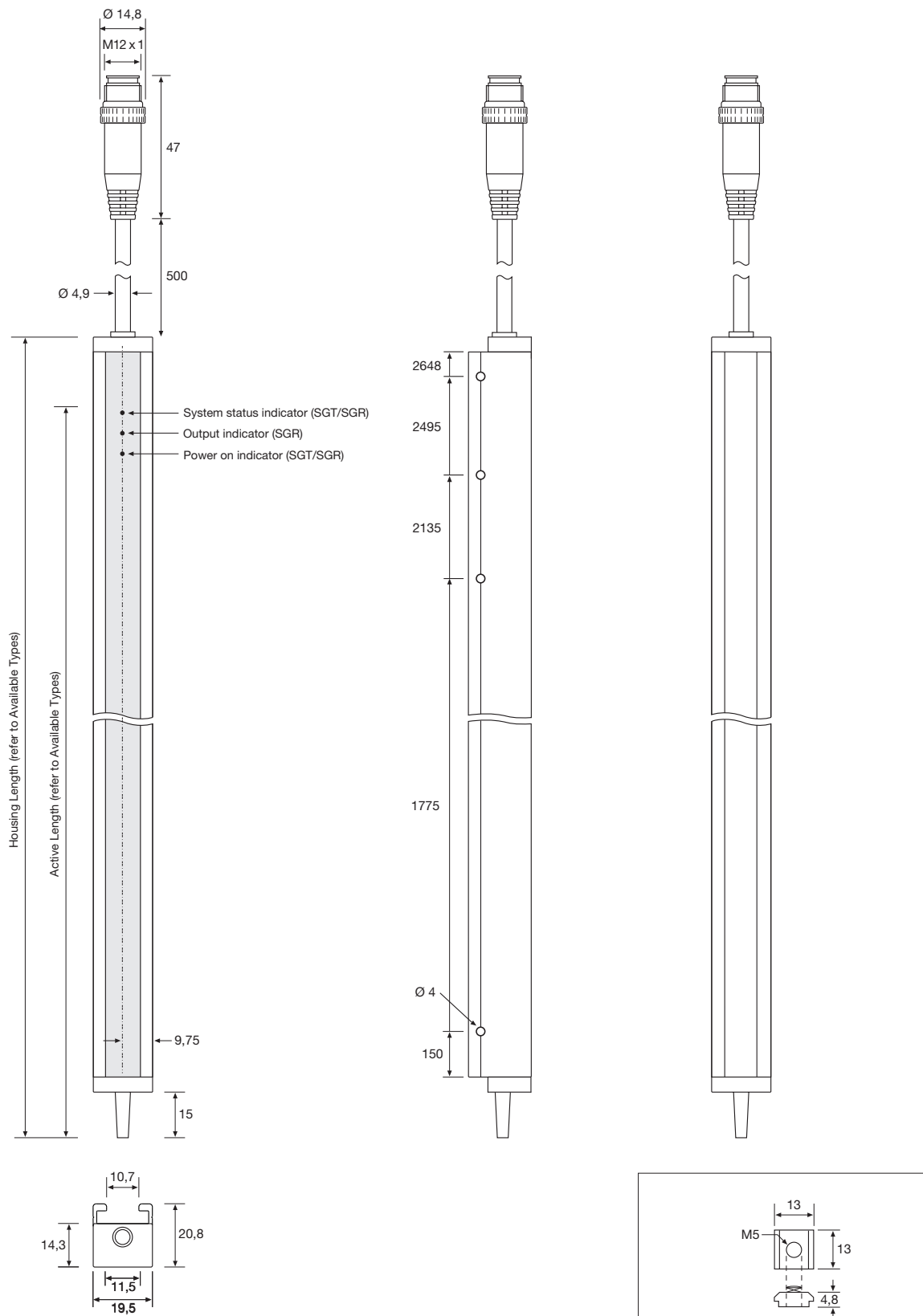


Note: Drawing shows model with M12 plug

(Units in mm)

Dimensions and Descriptions

G-profile

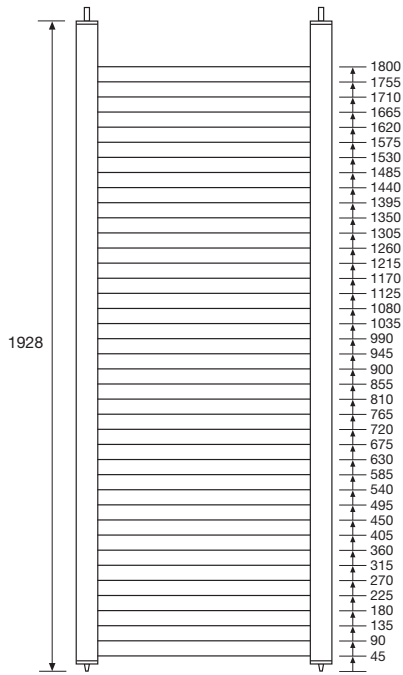


Note: Drawing shows model with M12 plug

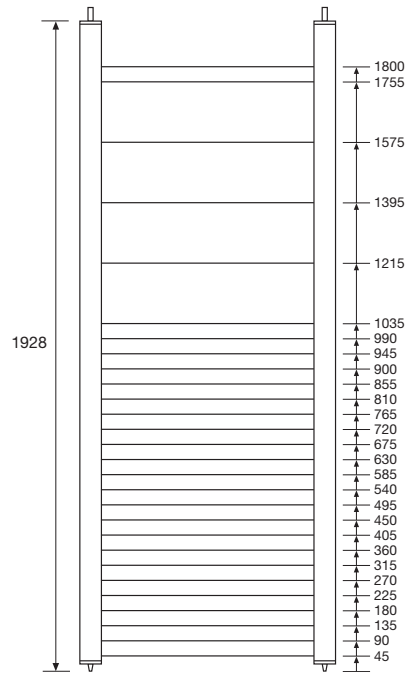
(Units in mm)

Beam Patterns

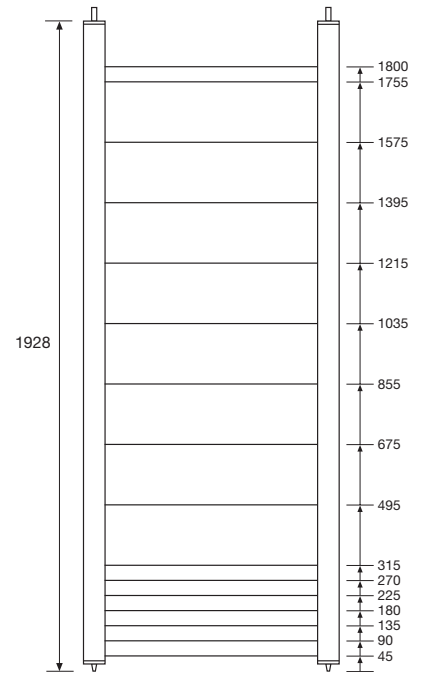
1928 mm housing length



C1

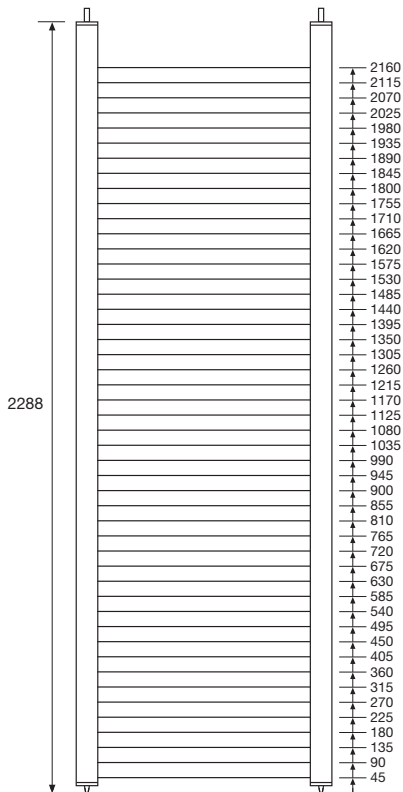


D1

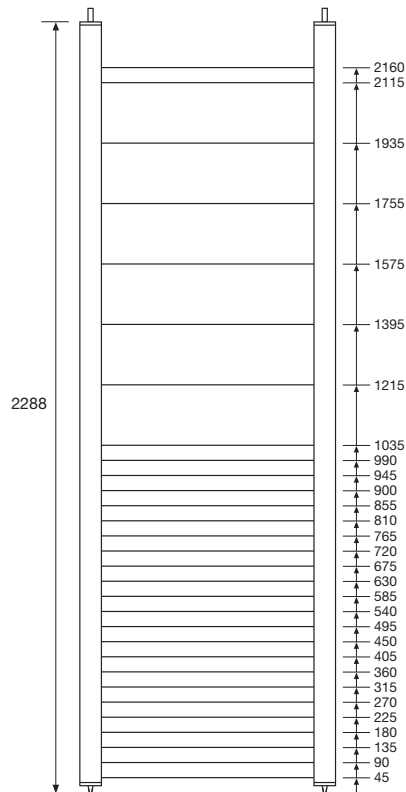


E1

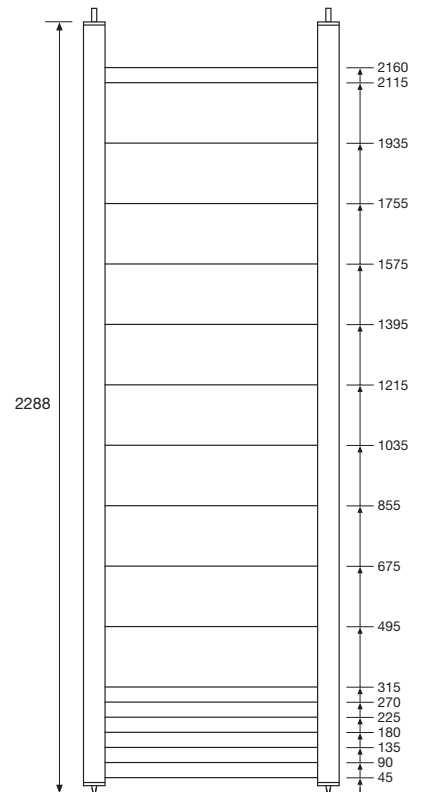
2288 mm housing length



C1



D1

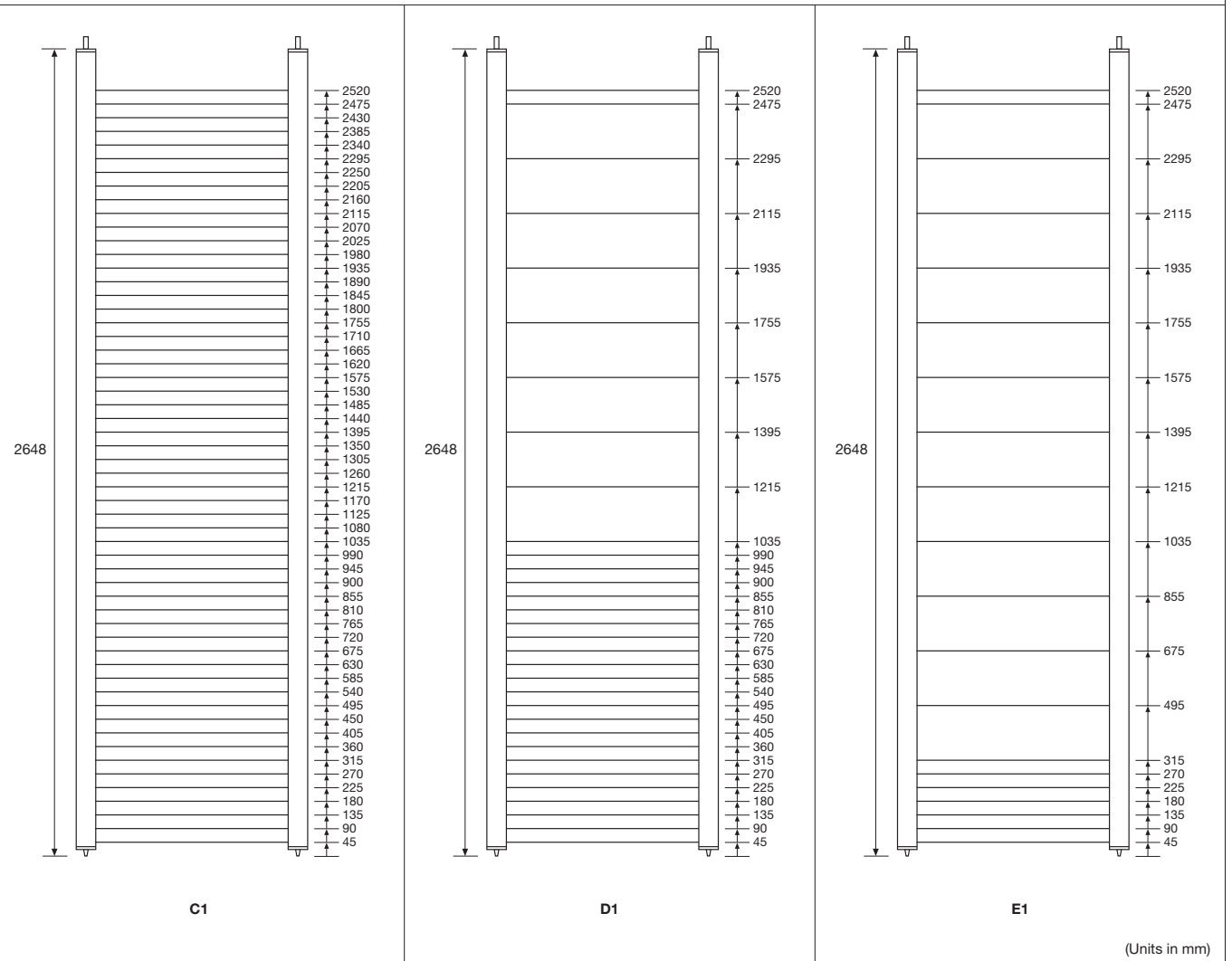


E1

(Units in mm)

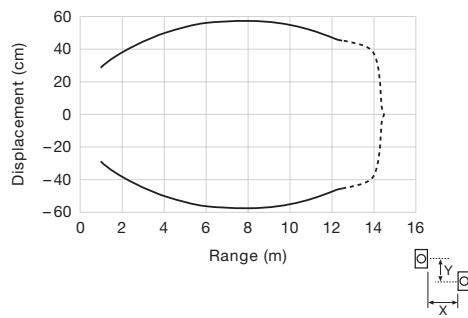
Beam Patterns

2648 mm housing length

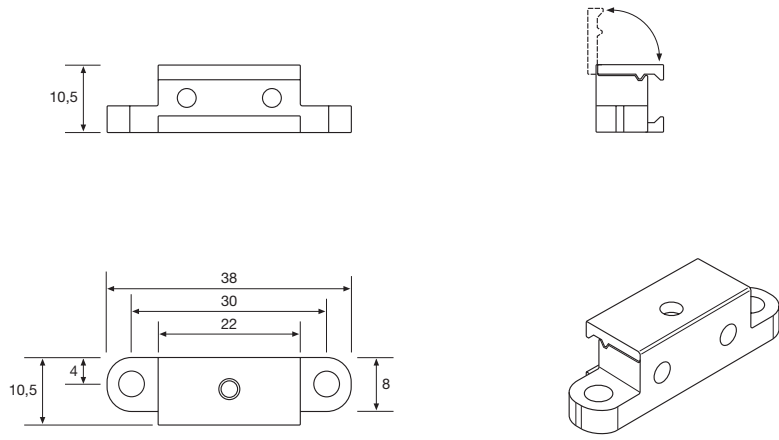


Sensing Characteristics

Parallel Displacement



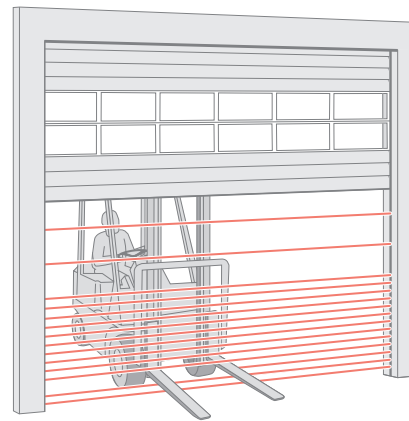
Mounting bracket for E-profile



TR MC38 E
Plastic material
(4 pcs included with each set)

(Units in mm)

Applications



OVERHEAD DOOR

Telco reserves the right to change specifications without notice.