

# Safety Light Curtain Type SC2 Hand Series

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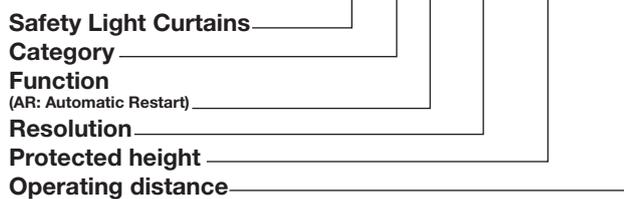
- Integrated light curtain for hand protection
- Up to 19m operating distance
- Controlled heights ranging from 150 to 1500 mm
- New sturdy profile and rotating brackets
- Reset/Text + Automatic Restart
- Ideal for Industrial Applications, such as:
  - Automatic machines
  - Machines for packaging , material handling and storing
  - Weaving machines, wood-working machines and ceramic working machines
  - Automatic and semi-automatic assembly lines
  - Automatic warehouses

## Approvals



## Ordering Key

**SC 2 AR 30 300 D19**



## Product Description

The new SC2 range of hand resolution (30mm) safety light curtains offers improved response times, among the lowest in the market, allowing the installation of the safety

light curtains nearer to the dangerous area. Better than competition response times combined with new sturdy and more functional compact body (32x37mm profile), make the

new SC2 range one of the best performing safety light curtains for industrial applications. Also the quicker installation, thanks to new rotating fixing brackets, eases alignment in the harshest

conditions, which together with full compatibility with the former SB range makes the new SC range a natural industrial automation evolution and choice.

## Model Selection

Model	Description
<b>SC2</b>	
SC2-AR-30-150-D19	Type 2 safety light curtain h=150mm
SC2-AR-30-300-D19	Type 2 safety light curtain h=300mm
SC2-AR-30-450-D19	Type 2 safety light curtain h=450mm
SC2-AR-30-600-D19	Type 2 safety light curtain h=600mm
SC2-AR-30-750-D19	Type 2 safety light curtain h=750mm
SC2-AR-30-900-D19	Type 2 safety light curtain h=900mm
SC2-AR-30-1050-D19	Type 2 safety light curtain h=1050mm
SC2-AR-30-1200-D19	Type 2 safety light curtain h=1200mm
SC2-AR-30-1350-D19	Type 2 safety light curtain h=1350mm
SC2-AR-30-1500-D19	Type 2 safety light curtain h=1500mm

## General Data

<b>Power Supply</b>	24VDC ± 20%	<b>Response time</b>	Refer to page 4 table
<b>Consumption (emitter)</b>	2W max	<b>Controlled height</b>	150... 1500 mm
<b>Consumption (receiver)</b>	3.5W max (without load)	<b>Safety category</b>	Type 2
<b>OSSD output</b>	2 PNP	<b>Auxiliary functions</b>	Reset / Test and Auto Restart
<b>Short-circuit protection</b>	1.4 A max	<b>Electrical protection</b>	Class I / Class III
<b>Output current</b>	0.5A max on each output	<b>Connection</b>	M12 4-pole for emitter M12 5-pole for receiver
<b>Output voltage - ON status</b>	Vdd - 1V min	<b>Cable lenght</b>	50m max*
<b>Output voltage - OFF status</b>	0.2 V max.		
<b>Leakage current</b>	< 1mA		
<b>Capacitive load</b>	2.2uF @ 24VDC max		

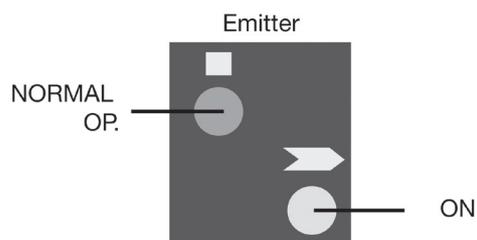
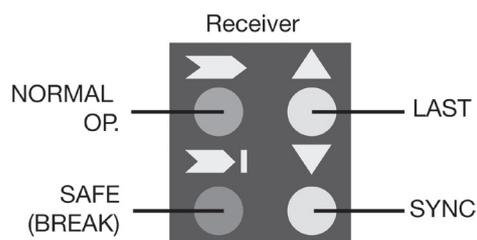
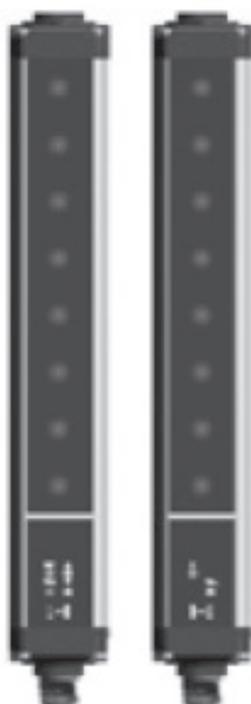
## Optical Data

<b>Light emission</b>	Infrared LED (950 nm)	<b>Aperture angle (EAA)</b>	± 5° max
<b>Resolution</b>	30mm	<b>Ambient light rejection</b>	IEC-61496-2
<b>Operating distance</b>	0.2... 19m		

## Mechanical and Environmental Data

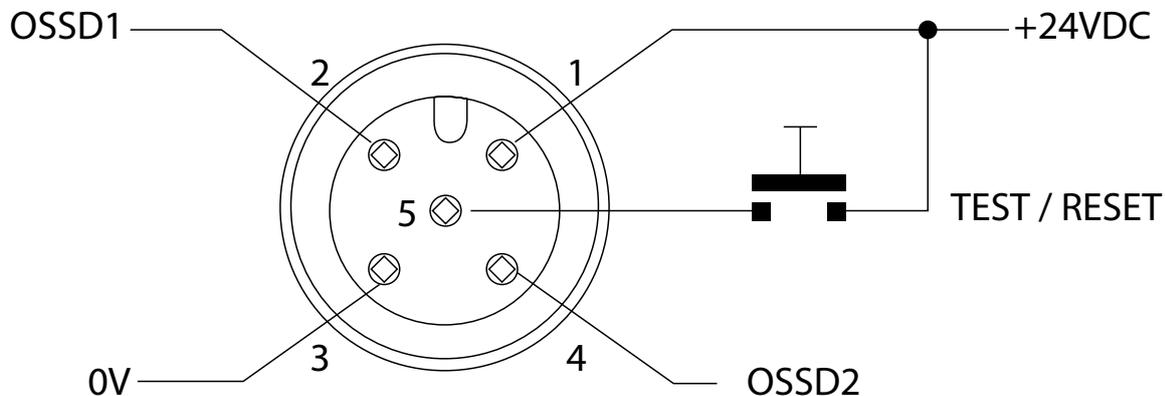
<b>Operating temperature</b>	0... + 55°C	<b>Mechanical protection</b>	IP65 (EN 60529)
<b>Storage temperature</b>	-25°... +70°C	<b>Shock resistance</b>	16 ms (10 G) 1.000 shock per axis
<b>Temperature class</b>	T6	<b>Housing material</b>	Painted aluminium
<b>Humidity</b>	15... 95% (non condensing)	<b>Protective shield material</b>	PMMA
<b>Vibration</b>	Width 0.35mm Frequency 10... 55 Hz 20 sweep per axis, 1 octave/min (EN 60068-2-6)	<b>Cap material</b>	PC MAKROLON
		<b>Weight</b>	1 KG / m

## Indicators and Settings

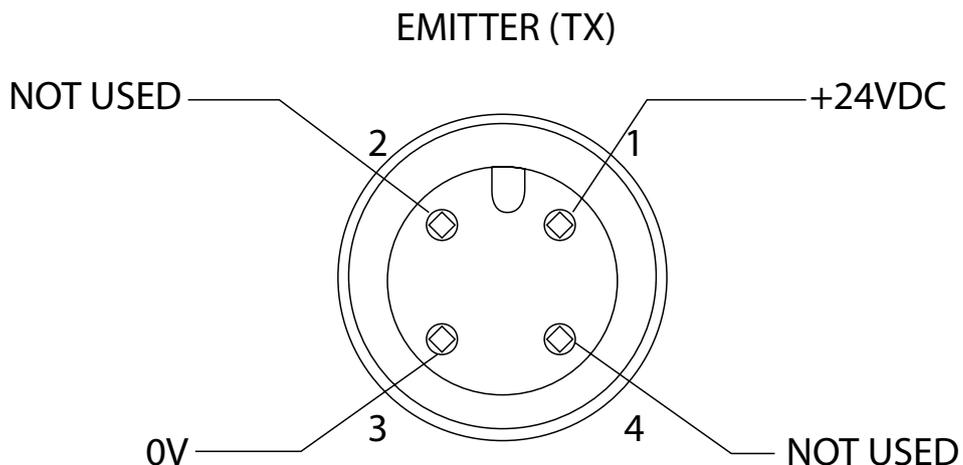


## Connections

RX: M12 5-POLE CONNECTOR



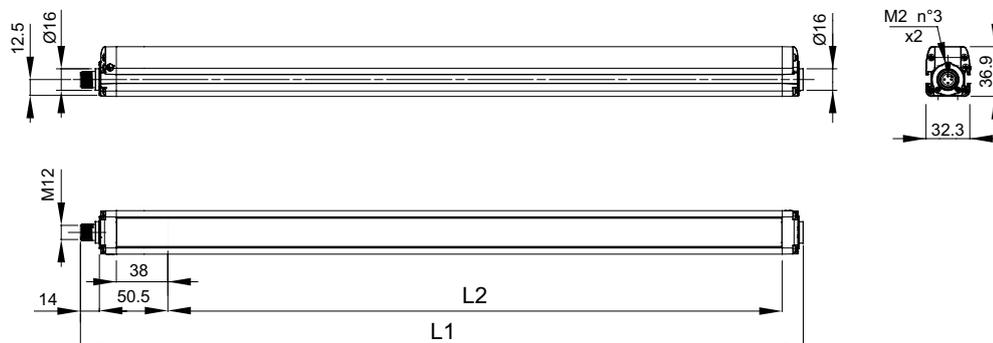
TX: M12 4-POLE CONNECTOR



1 = Brown = 24VDC  
 2 = White = OSSD1  
 3 = Blue = 0 V  
 4 = Black = OSSD2  
 5 = Grey = TEST / RESET

1 = Brown = +24VDC  
 2 = White = NOT USED  
 3 = Blue = 0 V  
 4 = Black = NOT USED

## Dimensions



Version	L <sub>1</sub>	L <sub>2</sub>
SC2-AR-30-150-D19	233.3	153.3
SC2-AR-30-300-D19	383.2	303.2
SC2-AR-30-450-D19	533.2	453.3
SC2-AR-30-600-D19	683.2	603.2
SC2-AR-30-750-D19	833.2	753.3
SC2-AR-30-900-D19	983.2	903.2
SC2-AR-30-1050-D19	1133.2	1053.2
SC2-AR-30-1200-D19	1283.3	1203.3
SC2-AR-30-1350-D19	1433.2	1353.2
SC2-AR-30-1500-D19	1583.3	1503.3

Number of Controlled Beams	
SC2 height 150	8
SC2 height 300	16
SC2 height 450	24
SC2 height 600	32
SC2 height 750	40
SC2 height 900	48
SC2 height 1050	56
SC2 height 1200	64
SC2 height 1350	72
SC2 height 1500	80

Controlled Height (mm)	
SC2 height 150	150
SC2 height 300	300
SC2 height 450	450
SC2 height 600	600
SC2 height 750	750
SC2 height 900	900
SC2 height 1050	1050
SC2 height 1200	1200
SC2 height 1350	1350
SC2 height 1500	1500

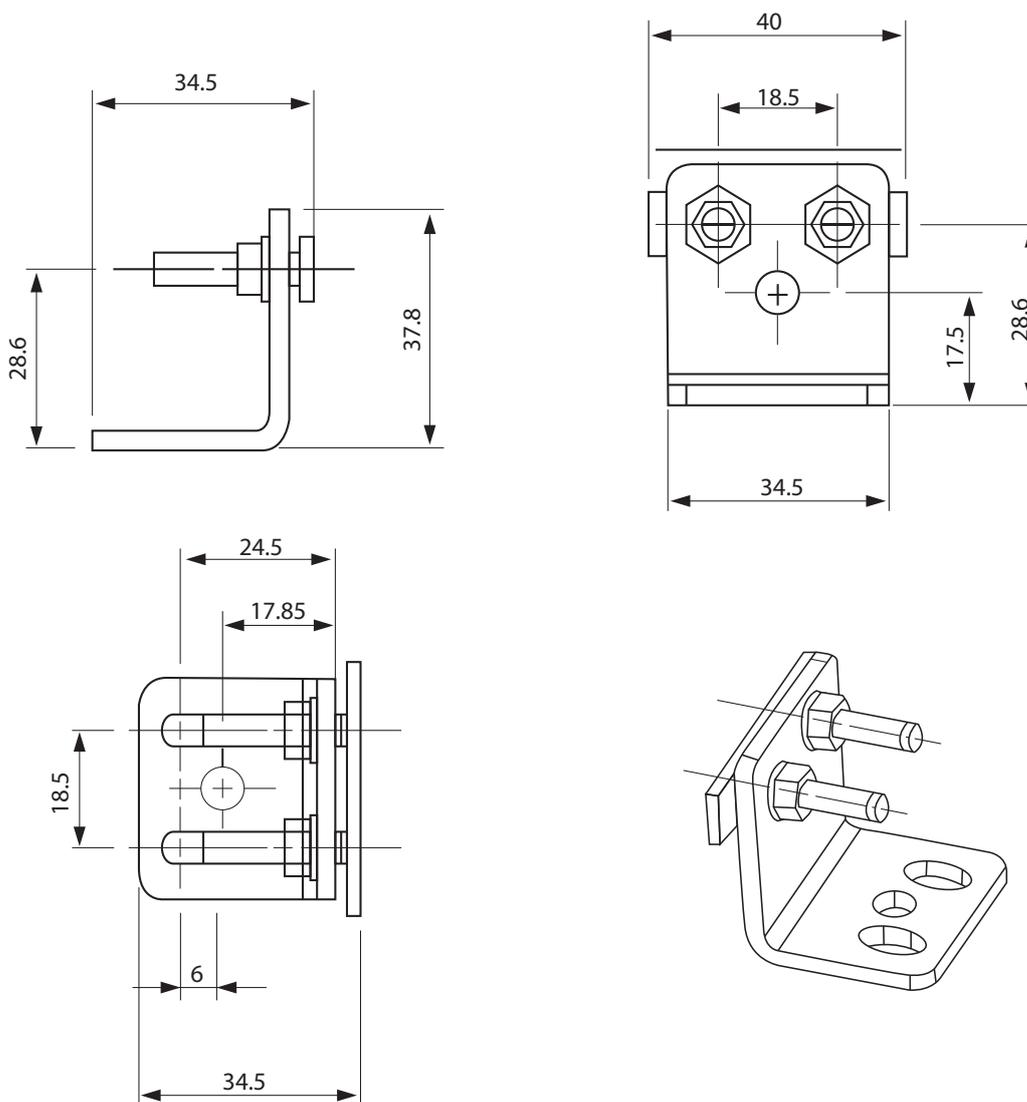
Response Time (ms)	
SC2 height 150	8
SC2 height 300	9
SC2 height 450	11
SC2 height 600	12
SC2 height 750	14
SC2 height 900	15
SC2 height 1050	17
SC2 height 1200	18
SC2 height 1350	20
SC2 height 1500	21

Reliability Data SC2	
PL (Ref. EN ISO 13849-1)	d
CAT (Ref. EN 954-1)	2
SIL (Ref. EN 954-1)	2
SIL CL (Ref. EN IEC 62061)	2
PHFD - Probability of Danger Failure (1/h)	1.04E-08
T1 - Life Time (years)	20
MTTFD - Mean Time to Danger Failure (years)	273
DC - Diagnostic Coverage (%)	97.50%
SFF - Safe Failure Fraction (%)	98.40%
HTF - Hardware Fault Tolerance	0

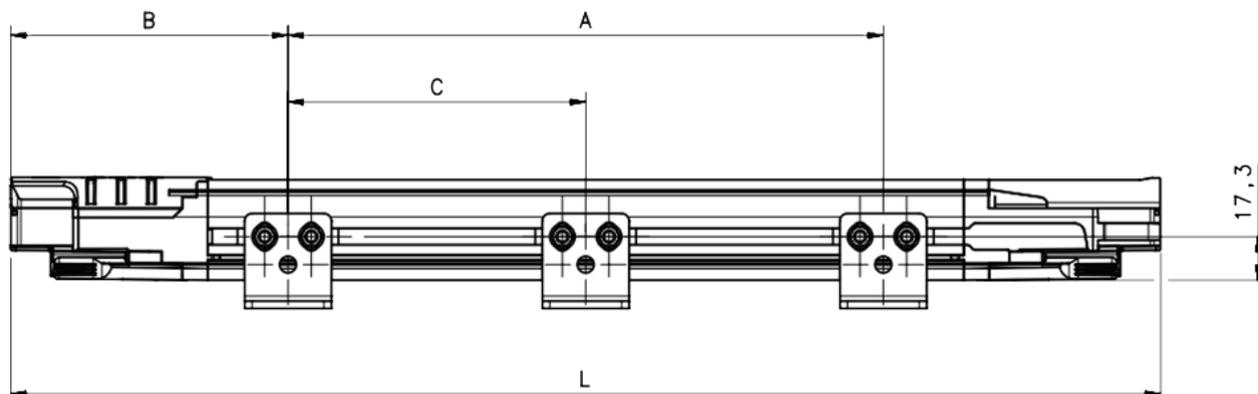
## Accessory Table

<b>SC FB4P</b>	Std mounting brackets 4 pcs kit
<b>SC AV4P</b>	Anti Vibration supports 4 pcs kit
<b>SC AV6P</b>	Anti Vibration supports 6 pcs kit
<b>SC OS4P</b>	Orienable Supports 4 pcs kit
<b>SC OS6P</b>	Orienable Supports 6 pcs kit
<b>SC TP14</b>	Test Piece Ø 14mm L = 300mm
<b>SC TP30</b>	Test Piece Ø 30mm L = 300mm

## Standard Mounting Brackets

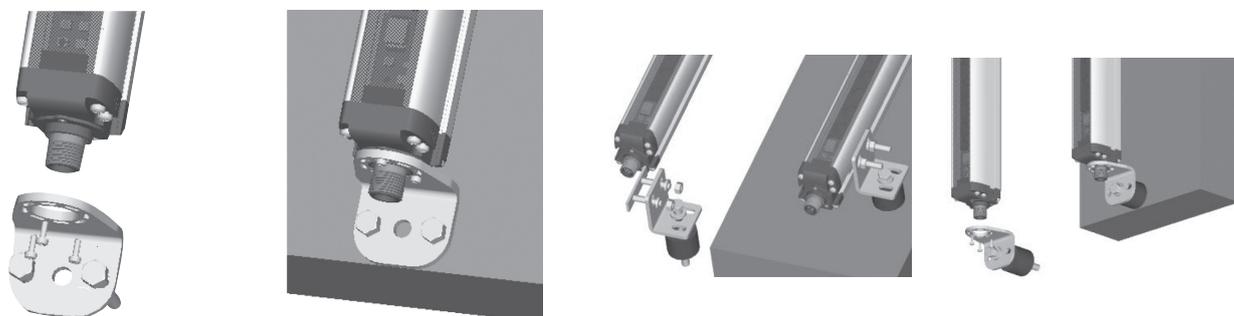


## Installation with Anti-Vibration Supports



Models	L (mm)	A (mm)	B (mm)	C (mm)
SC2-AR-30-150-D19	216.3	108	54	-
SC2-AR-30-300-D19	366.2	216	75	-
SC2-AR-30-450-D19	516.3	316	100	-
SC2-AR-30-600-D19	666.2	366	150	-
SC2-AR-30-750-D19	816.3	466	175	-
SC2-AR-30-900-D19	966.2	566	200	-
SC2-AR-30-1050-D19	1116.2	666	225	-
SC2-AR-30-1200-D19	1266.3	966	150	483
SC2-AR-30-1350-D19	1416.2	1066	175	533
SC2-AR-30-1500-D19	1566.3	1166	200	583

### Installation with anti-vibration supports





## Connection Cables

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Cable part number	Description
<b>CONGSC-4P-5M</b>	4 poles, 5m cable
<b>CONGSC-4P-7M</b>	4 poles, 7m cable
<b>CONGSC-5P-5M</b>	5 poles, 5m cable
<b>CONGSC-5P-7M</b>	5 poles, 7m cable
<b>CONGSC-8P-5M</b>	8 poles, 5m cable
<b>CONGSC-8P-7M</b>	8 poles, 7m cable

### Ordering key:

**CONG** = cable group  
**SC** = safety light curtains  
**xP** = number of poles  
**xM** = cable length