

# SGSMA2-500Q12

## Safety Technology – Multi-Beam Safety Light Curtain Transceiver

### Technical data

Type	SGSMA2-500Q12
ID no.	3803233
<b>Optical data</b>	
Function	Light screen
Light type	IR
Wavelength	950 nm
Optical resolution	500 mm
Range	0.5...8
Scan field	500 mm
With muting function	yes
Scan Code	None
<b>Electrical data</b>	
Operating voltage	19.2...28.8 VDC
DC rated operational current	≤ 500 mA
Max. current safe output	0.5 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	2 × OSSD, NO contacts, PNP
Protection class	III
Response time typical	< 11 ms
<b>Mechanical data</b>	
Design	Rectangular, SGS Safety Grid System
Dimensions	56.9 x 52 x 606.35 mm
Housing material	Metal, AL, Yellow polyester
Pollution degree	2
Lens	plastic, PMMA
Electrical connection	Connectors, M12 × 1
Number of cores	12
Ambient temperature	0...+55 °C
Storage temperature	-25...+70 °C
Relative humidity	15...95 %
Protection class	IP65
Power-on indication	LED, Green
<b>Tests/approvals</b>	
Vibration resistance	10-55 Hz bei 0,35 mm
Shock test	10 g bei 16 ms (6000 Zyklen)



### Features

- Active emitter/receiver element
- Light beams: 2
- Resolution: 500 mm
- M12 male connector, 12-pin and 5-pin (muting sensor)
- Scan codes, automatic/manual — start/restart, integrated muting, EDM
- Requires passive reflector element SGSB2-500
- Range: 8 m
- Operating voltage 24 VDC ±20 %
- Scan field: 500 mm
- SIL 3 (IEC 61508)
- PL e (ISO 13849-1)

### Functional principle

The SGS multi-beam safety light barrier with integrated muting is a two-part system consisting of an active transmitter/receiver unit and a passive reflector unit. Models are available in 2-beam (500 mm resolution), 3-beam (400 mm resolution) or 4-beam (300 mm and 400 mm resolution) versions. The detection range extends from 0.5 m to 6.5 m (8 m) and is reduced when using deflection mirrors. The SGS system can be configured for trip output (automatic start/restart) or latch output (manual start/restart). If the light beams are interrupted, two redundant safety outputs (OSSDs) switch off. The connected sensors are monitored redundantly via the separate muting sensor connection on the transceiver and automatically interrupt the protective function of the multi-beam safety light barrier during the safe part of the machine cycle. The transceiver has a 7-segment diagnostic indicator and individual LEDs for continuous indication of the operating status, configuration and error conditions.

## Technical data

PL acc. to DIN EN 13849-1:2008	e
Category acc. to DIN EN 13849-1:2008	4
SIL according IEC 61508	3
Useful Lifetime	20 years

## Accessories

Dimension drawing	Type	ID no.
	SGSB2-500	3803237