

# SGSMA4-400Q12

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

### Technical data

|                              |                                     |
|------------------------------|-------------------------------------|
| Type                         | SGSMA4-400Q12                       |
| ID no.                       | 3803236                             |
| <b>Optical data</b>          |                                     |
| Function                     | Light screen                        |
| Light type                   | IR                                  |
| Wavelength                   | 950 nm                              |
| Optical resolution           | 400 mm                              |
| Range                        | 0.5...8                             |
| Scan field                   | 1200 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        | < 12 ms                             |
| <b>Mechanical data</b>       |                                     |
| Design                       | Rectangular, SGS Safety Grid System |
| Dimensions                   | 56.9 x 52 x 1306.35 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: 4
- Resolution: 400 mm
- M12 male connector, 12-pin and 5-pin (muting sensor)
- Scan codes, automatic/manual — start/restart, integrated muting, EDM
- Requires passive reflector element SGSB4-400
- Range: 8 m
- Operating voltage 24 VDC ±20 %
- Scan field: 1200 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.  |
|-------------------|-----------|---------|
|                   | SGSB4-400 | 3803240 |