

# Safety Light Curtain

## Finger Protection

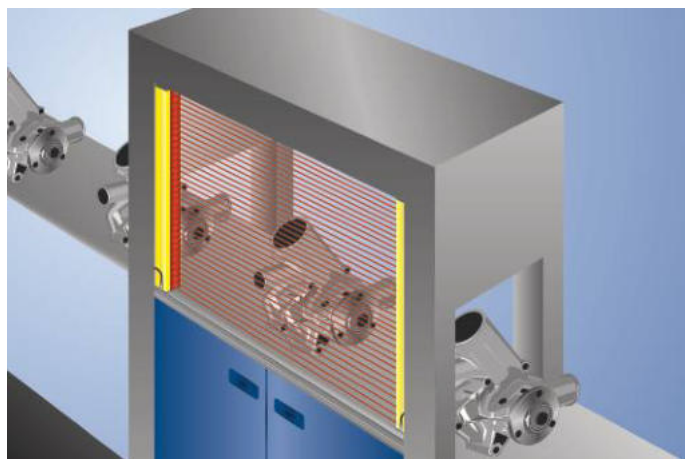
# SEMG640

Part Number



- Easy configuration via wiring
- Protection field over the entire length of the housing for an installation without protrusion
- Quick alignment through visible red light
- Slim design for easy integration

These safety light curtains confidently solve all basic tasks. The basic function protection mode, restart inhibit and protection monitoring are standard and can be easily configured. The protective field always extends up to the end of the housing without protrusion. As a result, protection is easily provided even in confined installation conditions. The adequate mounting angle ZEMX001 is included in the delivery.



## Technical Data

### Optical Data

|                           |            |
|---------------------------|------------|
| Range                     | 0,25...6 m |
| Housing Length (L)        | 1510 mm    |
| Safety Field Height (SFH) | 1511 mm    |
| Resolution                | 14 mm      |
| Light Source              | Red Light  |
| Max. Ambient Light        | 10000 Lux  |
| Opening Angle             | ± 2,5 °    |

### Electrical Data

|                                             |                  |
|---------------------------------------------|------------------|
| Sensor Type                                 | Receiver         |
| Supply Voltage                              | 19,2...28,8 V DC |
| Current Consumption (U <sub>b</sub> = 24 V) | 200 mA           |
| Response Time                               | 21,5 ms          |
| Temperature Range                           | -5...55 °C       |
| Storage temperature                         | -25...60 °C      |
| No. Safety Outputs (OSSDs)                  | 2                |
| Safety Output Voltage Drop                  | < 2,3 V          |
| PNP Safety Output/Switching Current         | 300 mA           |
| Number of Signal Outputs                    | 1                |
| Signal Output Voltage Drop                  | < 2,5 V          |
| Signal Output/Switching Current             | 100 mA           |
| Short Circuit and Overload Protection       | yes              |
| Reverse Polarity Protection                 | yes              |
| Protection Class                            | III              |

### Mechanical Data

|                      |                |
|----------------------|----------------|
| Housing Material     | Aluminum       |
| Disc Material        | Polycarbonate  |
| Degree of Protection | IP65/IP67      |
| Connection           | M12 × 1; 8-pin |
| Cable Length         | 300 mm         |

### Safety-relevant Data

|                                    |                |
|------------------------------------|----------------|
| ESPE Type (EN 61496)               | 4              |
| Performance Level (EN ISO 13849-1) | Cat. 4 PL e    |
| PFHD                               | 1,60 × E-8 1/h |
| Mission Time TM (EN ISO 13849-1)   | 20 a           |
| Safety Integrity Level (EN 61508)  | SIL3           |
| Safety Integrity Level (EN 62061)  | SILCL3         |

### Function

|                    |                  |
|--------------------|------------------|
| Finger Protection  | yes              |
| Scope of functions | Basic function   |
| Scope of delivery  | Mounting ZEMX001 |

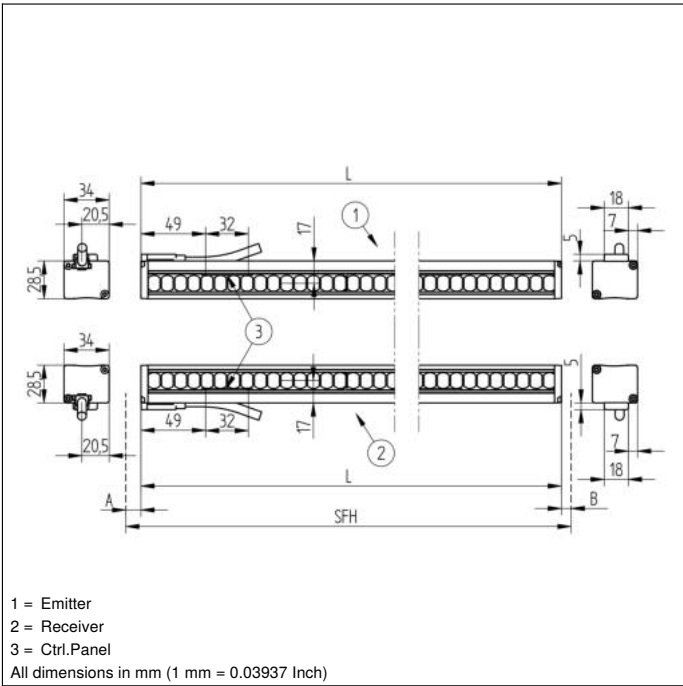
|                                   |             |
|-----------------------------------|-------------|
| Connection Diagram No.            | 361         |
| Control Panel No.                 | SR5         |
| Suitable Connection Equipment No. | 89          |
| Suitable Mounting Technology No.  | 790 810 820 |

## Suitable Emitter

SEMG540

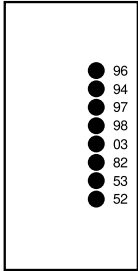
## Complementary Products

|                                                           |
|-----------------------------------------------------------|
| Protection column with deflection mirror Z2SU003          |
| Protection Column with Path-Folding Mirror SZ000EU170NN01 |
| Protection Column with Protective Screen SZ000EG170NN01   |
| Protection column with protective screen Z2SS003          |
| Safety Relay SG4-00VA000R2, SR4B3B01S, SR4D3B01S          |
| Software                                                  |

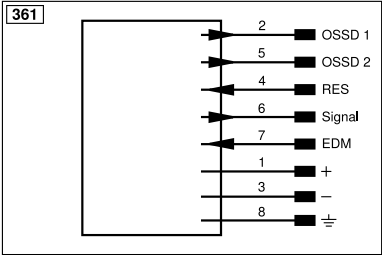


### Ctrl. Panel

SR5



- 03 = Error Indicator
- 52 = OSSD ON
- 53 = OSSD OFF
- 82 = Acknowledgement Request
- 94 = Diagnosis
- 96 = Diagnosis/Signal weak
- 97 = Diagnosis/Contactor Monitoring
- 98 = Diagnosis/Synchronization



| Legend    |                                            |          |                                |                                        |                     |
|-----------|--------------------------------------------|----------|--------------------------------|----------------------------------------|---------------------|
| +         | Supply Voltage +                           | nc       | Not connected                  | ENBRS422                               | Encoder B/B (TTL)   |
| -         | Supply Voltage 0 V                         | U        | Test Input                     | ENA                                    | Encoder A           |
| ~         | Supply Voltage (AC Voltage)                | Ü        | Test Input inverted            | ENB                                    | Encoder B           |
| A         | Switching Output (NO)                      | W        | Trigger Input                  | AMIN                                   | Digital output MIN  |
| Ä         | Switching Output (NC)                      | W-       | Ground for the Trigger Input   | AMAX                                   | Digital output MAX  |
| V         | Contamination/Error Output (NO)            | O        | Analog Output                  | AOK                                    | Digital output OK   |
| Ȳ         | Contamination/Error Output (NC)            | O-       | Ground for the Analog Output   | SY In                                  | Synchronization In  |
| E         | Input (analog or digital)                  | BZ       | Block Discharge                | SY OUT                                 | Synchronization OUT |
| T         | Teach Input                                | Amv      | Valve Output                   | OLT                                    | Brightness output   |
| Z         | Time Delay (activation)                    | a        | Valve Control Output +         | M                                      | Maintenance         |
| S         | Shielding                                  | b        | Valve Control Output 0 V       | rsv                                    | Reserved            |
| RxD       | Interface Receive Path                     | SY       | Synchronization                | Wire Colors according to DIN IEC 60757 |                     |
| TxD       | Interface Send Path                        | SY-      | Ground for the Synchronization | BK                                     | Black               |
| RDY       | Ready                                      | E+       | Receiver-Line                  | BN                                     | Brown               |
| GND       | Ground                                     | S+       | Emitter-Line                   | RD                                     | Red                 |
| CL        | Clock                                      | ±        | Grounding                      | OG                                     | Orange              |
| E/A       | Output/Input programmable                  | SnR      | Switching Distance Reduction   | YE                                     | Yellow              |
| IO-Link   | IO-Link                                    | Rx+/-    | Ethernet Receive Path          | GN                                     | Green               |
| PoE       | Power over Ethernet                        | Tx+/-    | Ethernet Send Path             | BU                                     | Blue                |
| IN        | Safety Input                               | Bus      | Interfaces-Bus A(+)/B(-)       | VT                                     | Violet              |
| OSSD      | Safety Output                              | La       | Emitted Light disengageable    | GY                                     | Grey                |
| Signal    | Signal Output                              | Mag      | Magnet activation              | WH                                     | White               |
| BI_D+/-   | Ethernet Gigabit bidirect. data line (A-D) | RES      | Input confirmation             | PK                                     | Pink                |
| ENo RS422 | Encoder 0-pulse 0/Ü (TTL)                  | EDM      | Contactor Monitoring           | GNYE                                   | Green/Yellow        |
| PT        | Platinum measuring resistor                | ENARs422 | Encoder A/A (TTL)              |                                        |                     |