

# Set Safety Light Curtain Type 4

## Hand Protection

# SEMG414

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...14 m
Housing Length (L)	611 mm
Safety Field Height (SFH)	626 mm
Resolution	30 mm
Light Source	Red Light
Wave Length	630 nm
Max. Ambient Light	10000 Lux
Opening Angle	± 2,5 °

Electrical Data	
Sensor Type	Set
Supply Voltage	19,2...28,8 V DC
Response Time	8,3 ms
Temperature Range	-25...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
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
Disk Material	Polycarbonate
Degree of Protection	IP65/IP67
Connection	M12 × 1
Cable Length	300 mm

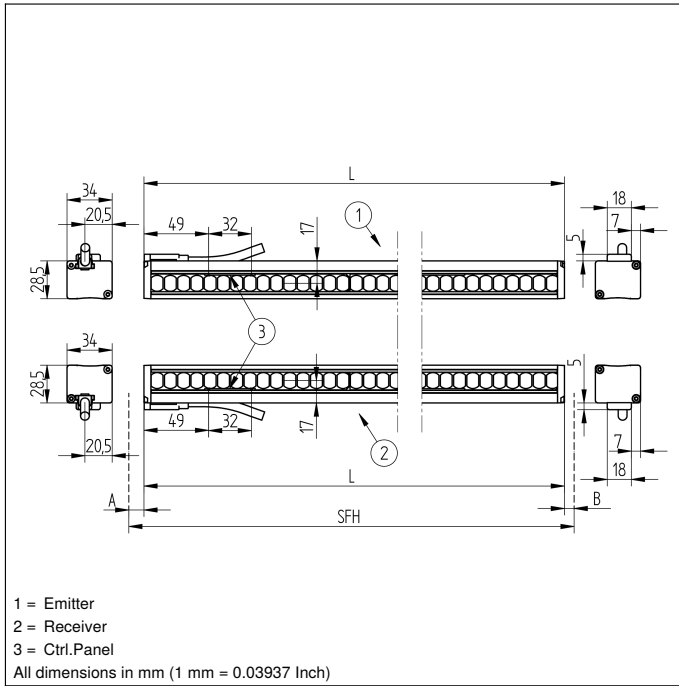
Safety-relevant Data	
ESPE Type (EN 61496)	4
Safety Category (EN ISO 13849-1)	4
Performance Level (EN ISO 13849-1)	PL e
PFHd	1,60 × E-8 1/h
Service Life TM (EN ISO 13849-1)	20 a
Safety Integrity Level (EN 61508)	SIL3
Safety Integrity Level (EN 62061)	SILCL3

Function	
Hand Protection	yes
Restart Inhibit	yes
Safety Operating Mode	yes
Contactors Monitoring	yes

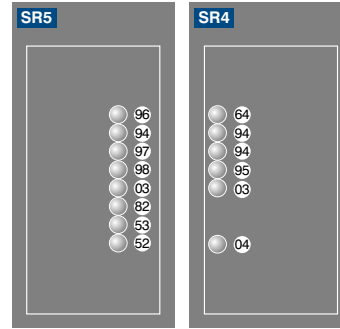
Scope of delivery	Mounting ZEMX001	
Scope of delivery (Emitter; Receiver)	SEMG514; SEMG614	
Connection Diagram No.	361	362
Control Panel No.	SR4	SR5
Suitable Connection Technology No.	35	89
Suitable Mounting Technology No.	790	810 820

## Complementary Products

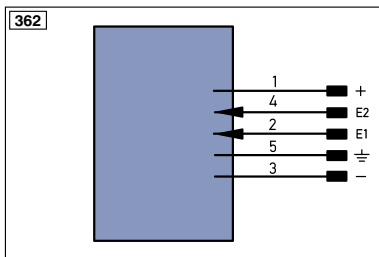
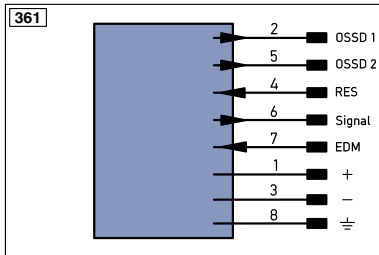
Deflection Mirror Z2UG002
Protection Column with Deflection Mirror SZ000EU125NN01
Protection Column with Screening Grid SZ000EG125NN01
Safety Relay SG4-00VA000R2, SR4B3B01S, SR4D3B01S
Sistema Library software DNNF007



### Ctrl. Panel



- 03 = Error Indicator
- 04 = Function Indicator
- 52 = OSSD ON
- 53 = OSSD OFF
- 64 = Diagnosis/Test
- 82 = Acknowledgement Request
- 94 = Diagnosis
- 95 = Diagnosis/Large Detection Range
- 96 = Diagnosis/Signal weak
- 97 = Diagnosis/Contactor Monitoring
- 98 = Diagnosis/Synchronization



### Legend

<b>+</b> Supply Voltage +	<b>PT</b> Platinum measuring resistor	<b>ENa</b> Encoder A
<b>-</b> Supply Voltage 0 V	<b>nc</b> not connected	<b>ENb</b> Encoder B
<b>~</b> Supply Voltage (AC Voltage)	<b>U</b> Test Input	<b>AMIN</b> Digital output MIN
<b>A</b> Switching Output (NO)	<b>U</b> Test Input inverted	<b>AMAX</b> Digital output MAX
<b>Ā</b> Switching Output (NC)	<b>W</b> Trigger Input	<b>AOK</b> Digital output OK
<b>V</b> Contamination/Error Output (NO)	<b>O</b> Analog Output	<b>SY In</b> Synchronization In
<b>V̄</b> Contamination/Error Output (NC)	<b>O-</b> Ground for the Analog Output	<b>SY OUT</b> Synchronization OUT
<b>E</b> Input (analog or digital)	<b>BZ</b> Block Discharge	<b>Out</b> Brightness output
<b>T</b> Teach Input	<b>AWV</b> Valve Output	<b>M</b> Maintenance
<b>Z</b> Time Delay (activation)	<b>a</b> Valve Control Output +	
<b>S</b> Shielding	<b>b</b> Valve Control Output 0 V	
<b>RxD</b> Interface Receive Path	<b>SY</b> Synchronization	
<b>TxD</b> Interface Send Path	<b>E+</b> Receiver-Line	
<b>RDY</b> Ready	<b>S+</b> Emitter-Line	
<b>GND</b> Ground	$\perp$ Grounding	
<b>CL</b> Clock	<b>SnR</b> Switching Distance Reduction	
<b>E/A</b> Output/Input programmable	<b>Rx+/-</b> Ethernet Receive Path	
<b>IO-Link</b>	<b>Tx+/-</b> Ethernet Send Path	
<b>PoE</b> Power over Ethernet	<b>Bus</b> Interfaces-Bus A(+)/B(-)	
<b>IN</b> Safety Input	<b>La</b> Emitted Light disengageable	
<b>OSSD</b> Safety Output	<b>Mag</b> Magnet activation	
<b>Signal</b> Signal Output	<b>RES</b> Input confirmation	
<b>Bl..D +/-</b> Ethernet Gigabit bidirect. data line (A-D)	<b>EDM</b> Contactor Monitoring	
<b>EN0..RS422</b> Encoder 0-pulse 0-0 (TTL)	<b>ENAR5422</b> Encoder A/Ā (TTL)	
	<b>ENBR5422</b> Encoder B/B̄ (TTL)	

### Wire Colors according to DIN IEC 757

<b>BK</b> Black
<b>BN</b> Brown
<b>RD</b> Red
<b>OG</b> Orange
<b>YE</b> Yellow
<b>GN</b> Green
<b>BU</b> Blue
<b>VT</b> Violet
<b>GY</b> Grey
<b>WH</b> White
<b>PK</b> Pink
<b>GNYE</b> Green/Yellow

