

# Safety Light Curtain Set

## Hand Protection

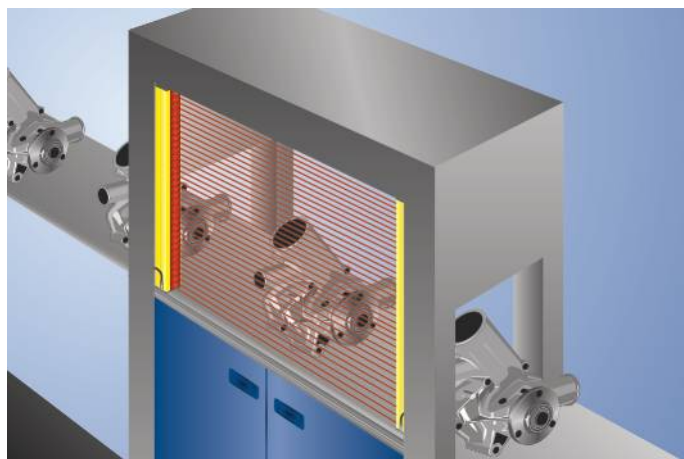
# SEMG416

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

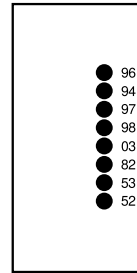
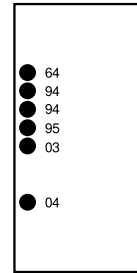
Optical Data	
Range	0,25...14 m
Housing Length (L)	912 mm
Safety Field Height (SFH)	927 mm
Resolution	30 mm
Light Source	Red Light
Wavelength	630 nm
Max. Ambient Light	10000 Lux
Opening Angle	± 2,5 °
Electrical Data	
Sensor Type	Set
Supply Voltage	19,2...28,8 V DC
Response Time	9,9 ms
Temperature Range	-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
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
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
Mission Time TM (EN ISO 13849-1)	20 a
Safety Integrity Level (EN 61508)	SIL3
Safety Integrity Level (EN 62061)	SILCL3
Function	
Hand Protection	yes
Scope of functions	Basic function
Scope of delivery	Mounting ZEMX001
Scope of delivery (Emitter; Receiver)	SEMG516; SEMG616
Connection Diagram No.	<b>361</b> <b>362</b>
Control Panel No.	<b>SR4</b> <b>SR5</b>
Suitable Connection Equipment No.	<b>35</b> <b>89</b>
Suitable Mounting Technology No.	<b>790</b> <b>810</b> <b>820</b>

## Complementary Products

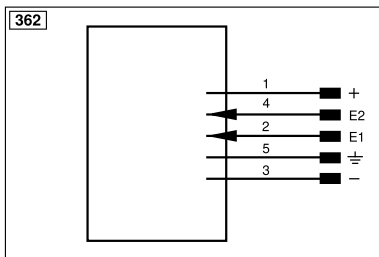
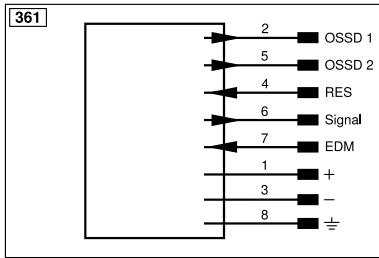
Path-Folding Mirror Z2UG003
Protection Column with Path-Folding Mirror SZ000EU125NN01
Protection Column with Protective Screen SZ000EG125NN01
Protection column with protective screen Z2SS001
Protection column with Z2SU001 deflection mirror
Safety Relay SG4-00VA000R2, SR4B3B01S, SR4D3B01S
Software



### Ctrl. Panel

**SR5**

**SR4**


- 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					
+	Supply Voltage +	nc	Not connected	EN <sub>RS422</sub>	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	EN <sub>B</sub>	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	Ack	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	$\perp$	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
	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
EN <sub>RS422</sub>	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	EN <sub>ARS422</sub>	Encoder A/Ā (TTL)		

