

Safety Light Curtain Set

Hand Protection

SEFG451

Part Number



- Higher levels of safety and availability thanks to intelligent muting functions
- Multifunctional thanks to measuring function
- Quick duplication of settings via microSD memory card
- Simple configuration and diagnosis with wTeach2 software

The safety light curtain can be flexibly integrated into systems thanks to the well-conceived mounting technology and the compact housing. Alignment of the emitter and the receiver is simplified by the visible red light and the signal strength display. User-friendly wTeach2 software make settings and diagnosis via the IO-Link interface extremely easy. Settings can be subsequently saved to a microSD card and quickly duplicated on other products. Extensive blanking and muting functions ensure an ideal solution for every application, in order to safely transport objects into and out of the danger zone.



Technical Data

Optical Data

Range	0,25...20 m
Housing Length (L)	258 mm
Safety Field Height (SFH)	159 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	8,2 ms
Temperature Range	-30...55 °C
Storage temperature	-30...70 °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
Interface	IO-Link V1.1
Protection Class	III

Mechanical Data

Housing Material	Aluminum
Disc Material	Polycarbonate
Degree of Protection	IP65/IP67

Safety-relevant Data

ESPE Type (EN 61496)	4
Performance Level (EN ISO 13849-1)	Cat. 4 PL e
Mission Time TM (EN ISO 13849-1)	20 a
Safety Integrity Level (EN 61508)	SIL3
Safety Integrity Level (EN 62061)	SILCL3

Function

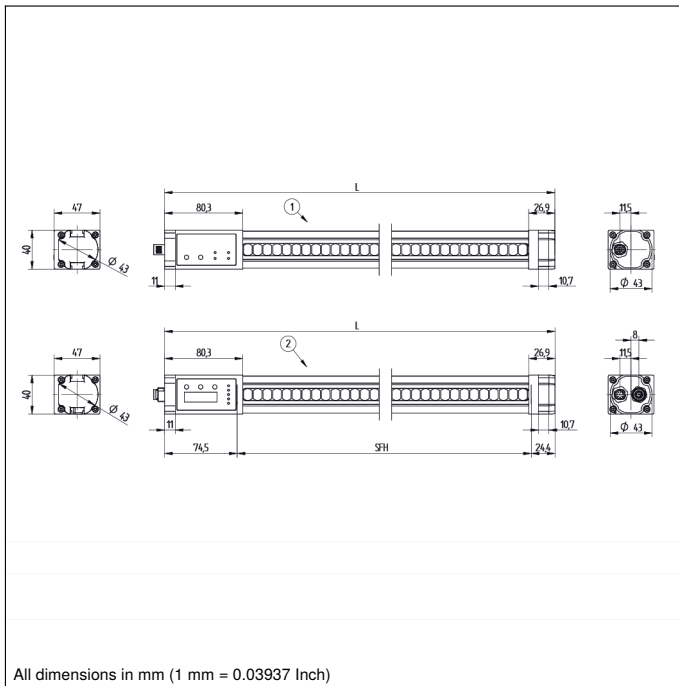
Hand Protection	yes
Scope of Functions	Muting
Scope of delivery	ZEFX001 mounting
Scope of delivery (Emitter; Receiver)	SEFG511; SEFG651

IO-Link

Connection Diagram No.	1029 1030 1031
Control Panel No.	A38 A39
Suitable Connection Equipment No.	35 89
Suitable Mounting Technology No.	860 870 880

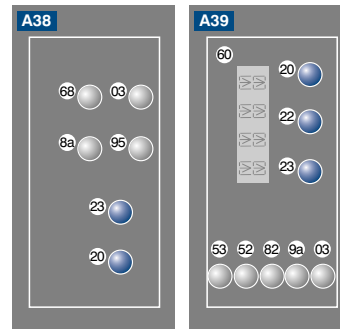
Complementary Products

IO-Link Master
Laser Alignment Tool Z98G001
LED indicator strip set Z99G001
microSD card ZNNG013
Protection column with Z2SU001 path-folding mirror
Protection columns with/without protective screen (Z2SS001/ Z2SM001)
Safety Relay SG4-00VA000R2, SR4B3B01S, SR4D3B01S
ZEMG003 and ZEMG009 test rods
ZFBB001 muting connection box
ZMZG005 muting arm

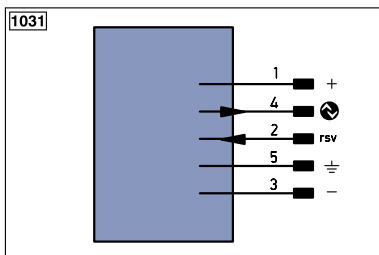
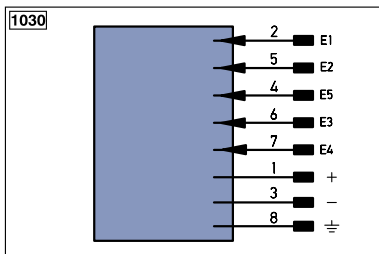
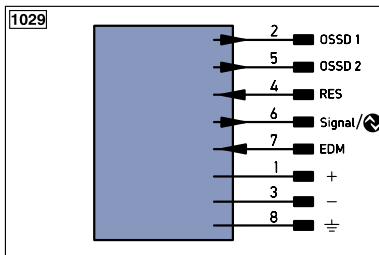


All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



- 03 = Error Indicator
- 20 = Enter Button
- 22 = UP Button
- 23 = Down Button
- 52 = OSSD ON
- 53 = OSSD OFF
- 60 = Display
- 68 = Supply Voltage Indicator
- 82 = Acknowledgement Request
- 8a = Coding
- 95 = Diagnosis/Large Detection Range
- 9a = Weak signal



Legend

+	Supply Voltage +	PT	Platinum measuring resistor	ENAR542Z	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	ENB542Z	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	ENa	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	ENb	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	AMIN	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
Ū	Contamination/Error Output (NC)	O	Analog Output	AOK	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY in	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
Z	Time Delay (activation)	AWV	Valve Output	OLT	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance
RxD	Interface Receive Path	b	Valve Control Output 0 V	rsv	reserved
TxD	Interface Send Path	SY	Synchronization	Wire Colors according to IEC 60757	
RDY	Ready	SY-	Ground for the Synchronization	BK	Black
GND	Ground	E+	Receiver-Line	BN	Brown
CL	Clock	S+	Emitter-Line	RD	Red
E/A	Output/Input programmable	⊕	Grounding	OG	Orange
IO-Link	IO-Link	SnR	Switching Distance Reduction	YE	Yellow
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path	GN	Green
IN	Safety Input	Tx+/-	Ethernet Send Path	BU	Blue
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
Signal	Signal Output	La	Emitted Light disengageable	GY	Grey
BLD+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN0.542Z	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contacting Monitoring	GNYE	Green/Yellow

