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 muting functions ensure an ideal solution for every application, in order to safely transport objects into and out of the danger zone.

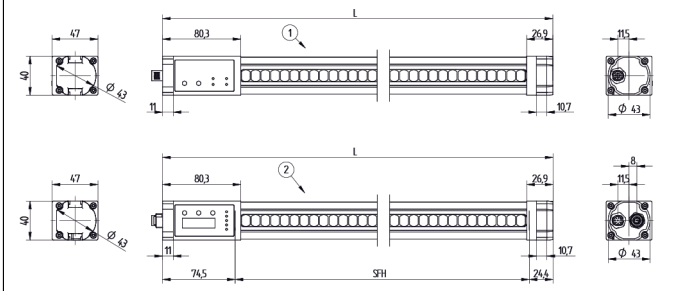


Technical Data

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

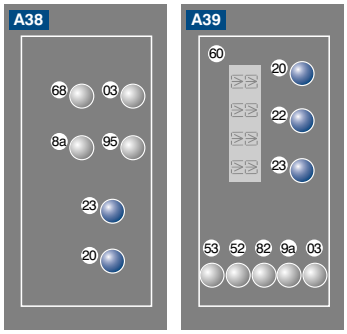
Complementary Products

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

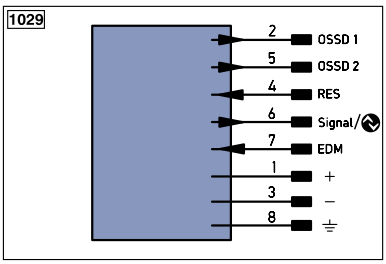


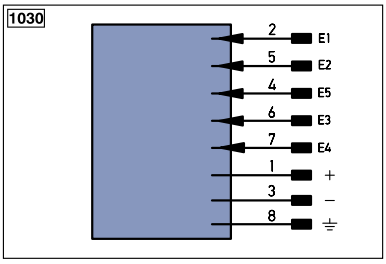
All dimensions in mm (1 mm = 0.03937 Inch)

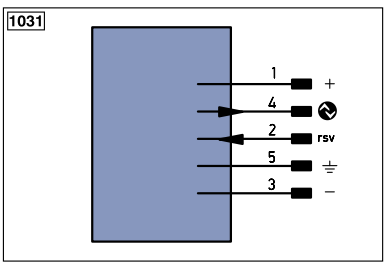
Ctrl. Panel



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

Wire Colors according to IEC 60757

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

Specifications are subject to change without notice