

Safety edge

SIGNAL12ECO-P-12M- OS-1/10.5MOL

WITTSensoric



- closing edge monitoring for industrial doors up to 12 m width
- for use in GP series rubber profiles
- Safety thru-beam sensor with OSE output
- Extremely low quiescent current
- Comprehensive accessories

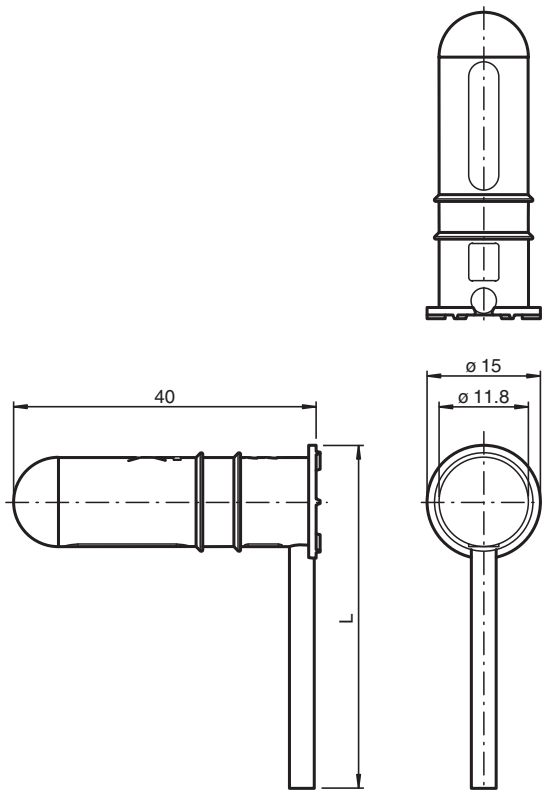
Safety edge



Function

The SIGNAL safety edge sensor can be used to monitor closing edges at industrial doors. The photoelectric sensor consists of an emitter and receiver element and is particularly suitable for sectional and high-speed doors to limit the force at closing edges. This makes it possible to meet the safety requirements of EN 12978 and EN 12453. The safety light barrier is designed for an installation in a rubber profile.

Dimensions



Technical Data

General specifications

Effective detection range	1 ... 12 m
Threshold detection range	12 m
Number of protective field beams	1

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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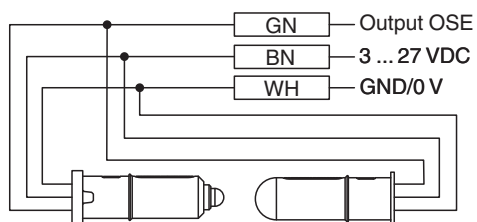
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PEPPERL+FUCHS

Technical Data

Light source		IRED
Light type		950 nm IR light pulsed
Marking		CE
Optical face		frontal
Electrical specifications		
Operating voltage	U_B	battery operated 3 ... 6 V DC Coiled Cable: 9 ... 27 V DC
Operating current	I_B	battery operated 1.6 mA coiled 3.8 mA
Output		
Output type		OSE
Switching type		light-on
Signal output		900 Hz , Transistor output loadable with max. 20 mA , short-circuit protected
Energized/De-energized delay		typ. 100 ms
Conformity		
Functional safety		ISO 13849-1 , Cat. 2 PL d , certified by TÜV Nord
Product standard		EN 61000-6-2, EN 61000-6-3 , EN 12978
Ambient conditions		
Ambient temperature		-25 ... 75 °C (-13 ... 167 °F)
Storage temperature		-25 ... 75 °C (-13 ... 167 °F)
Mechanical specifications		
Connection type		
Degree of protection		IP67 according to EN 60529 molded
Material		
Housing		Emitter: black ABS / Receiver: Lexan (PC) , black
Connector		
Type		Molex SL series
Number of pins		3
Connection assembly		
Cable		
Cable diameter		3.4 mm
Material		PUR , halogen-free
Number of cores		3
Core cross section		0.14 mm ²
Length	L	Emitter: 1 m Receiver: 10.5 m
Mass		at 1 m Cable: 21 g at 10,5 m Cable: 155 g
Dimensions		
Length		40 mm
Diameter		12 mm

Wiring Diagram



System Description

The modular **SIGNAL** system comprises the following components:

SIGNAL safety thru-beam sensors

The plug electronics are fully encapsulated in the housing to achieve a high level of resistance to environmental influences such as water, dust, and moisture. Degree of protection IP67 is achieved.

Rubber profiles RUBFLEX GP-12/20-30

The rubber profile is designed as a double-chamber profile. The emitter and receiver are inserted in the round hollow chamber at the top. When the profile is actuated, the optical channel is interrupted and the enable circuits on the control unit open.

AOS 3000-W safety control units

Controller for the emitter/receiver system.

Functional principle safety edge

The emitter transmits pulses of infrared light, which are detected by the receiver. When the emitter light is detected, the receiver turns off the emitter via a control input. The "luminous flux" stops. The receiver also detects this status and the emitter is then switched on again after a specified time. This coupling produces a dynamic signal that is conveyed.

Any errors in the emitter/receiver system affect the optical or electrical signal, which results in the absence of a dynamic signal.