



**Model Number**

**MLV12-54-2563/49/124**

Fire protection retroreflective sensor with 4-pin or 5-pin M12 connector, 90° adjustable position

**Features**

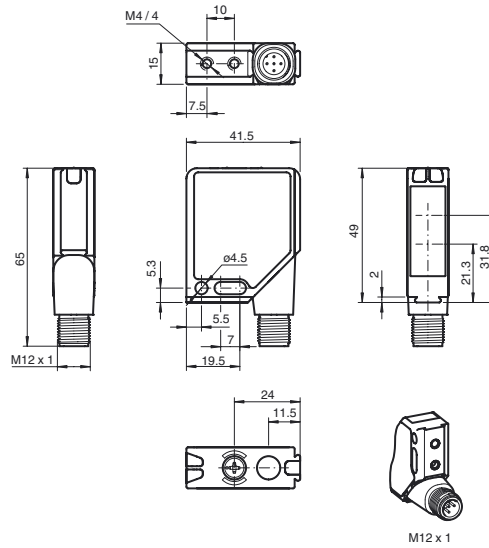
- Small fire protection photoelectric sensor for safety devices on fire barriers
- Approval in accordance with VdS Test Report FSA and externally monitored manufacture (Ü Symbol)
- In the event of fire the smoke is disregarded, while persons in the smoke are detected
- High protection against contact
- Not sensitive to ambient light, even with switched energy saving lamps

**Product information**

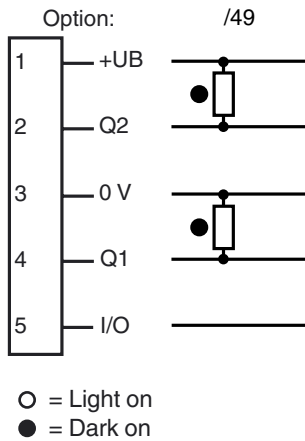
It is essential that fire is not allowed to spread in buildings should it break out. Fire protection regulations therefore prescribe fire barriers. These include fire doors, industrial fire doors and fire dampers, which are generally kept closed at all times. In areas where doors are left open, such as heavily traveled passageways and corridors, a self-closing mechanism must be automatically triggered in case of fire. However, the door must not close when persons or objects are in the closing area. Legislation consequently requires monitoring with appropriate safety devices. The technical challenge is to ignore the smoke and at the same time reliably detect people and objects in it. These certified photoelectric sensors fulfill this function.

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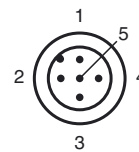
**Dimensions**



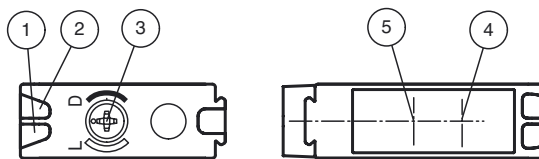
**Electrical connection**



**Pinout**



**Indicators/operating means**



1	Operating display	green
2	Switch state	yellow
3	Light/dark switch	
4	Optical axis emitter	
5	Optical axis receiver	

## Technical data

### General specifications

Effective detection range	0 ... 2.1 m (with H60 reflector)
Reflector distance	0.2 ... 2.1 m
Reference target	H60 reflector
Light source	LED 645 nm
Light type	modulated visible red light
Diameter of the light spot	approx. 70 mm
Angle of divergence	1.5 °
Ambient light limit	50000 Lux

### Indicators/operating means

Operation indicator	LED green, flashes in case of short-circuit
Function indicator	2 LEDs yellow, light up when light beam is free, flash when falling short of the stability control, off when light beam is interrupted
Control elements	rotary switch for light/dark

### Electrical specifications

Operating voltage	$U_B$	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	$I_0$	max. 40 mA
Protection class		2 in acc. with VDE

### Output

Switching type	light/dark on switchable	
Signal output	1 NPN and 1 PNP output, direct switching, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 0.2 A	
Voltage drop	$U_d$	$\leq 2.5$ V DC
Switching frequency	$f$	$\leq 40$ Hz
Response time		10 ms

### Standard conformity

Standards	EN 60947-5-2
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### Ambient conditions

Ambient temperature	-40 ... 60 °C (-40 ... 140 °F)
Storage temperature	-40 ... 75 °C (-40 ... 167 °F)

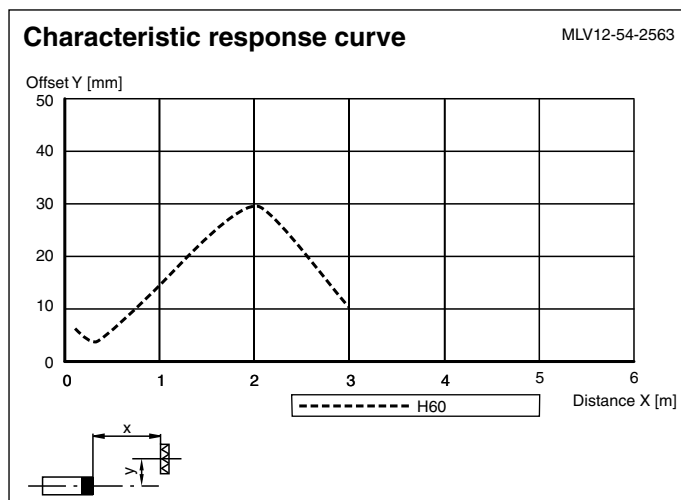
### Mechanical specifications

Protection degree	IP67
Connection	5-pin M12 x 1 connector with metal thread, 90° rotatable
Material	
Housing	Frame: nickel plated, die cast zinc, Laterals: glass-fiber reinforced plastic PC
Optical face	Plastic pane
Mass	60 g

### Approvals and certificates

CCC approval	CCC approval / marking not required for products rated $\leq 36$ V
Approvals	CE

## Curves/Diagrams



## Typical applications

- Protection of barriers that can be walked through, such as fire doors, industrial fire doors and fire dampers
- Protection of barriers in the vicinity of track-based conveyor systems
- Reliable detection of people and objects for hold-open systems on fire barriers, even in smoky conditions

## Detection area



## Accessories

### REF-H60-2

Reflector with mounting holes

### OMH-MLV12-HWG

Mounting bracket for series MLV12 sensors

### OMH-MLV12-HWK

Mounting bracket for series MLV12 sensors

### OMH-06

Mounting aid for round steel  $\varnothing$  12 mm or sheet 1.5 mm ... 3 mm

### OMH-K01

dove tail mounting clamp

### OMH-K02

dove tail mounting clamp

### OMH-K03

dove tail mounting clamp

### V15-W-2M-PUR

Female cordset, M12, 5-pin, PUR cable

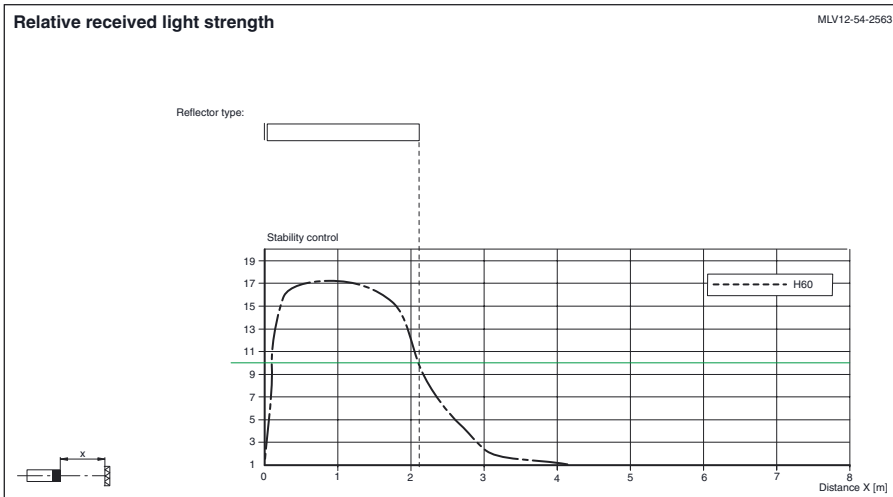
### V15-G-2M-PUR

Female cordset, M12, 5-pin, PUR cable

### V15-G-PG9

Female connector, M12, 5-pin, field attachable

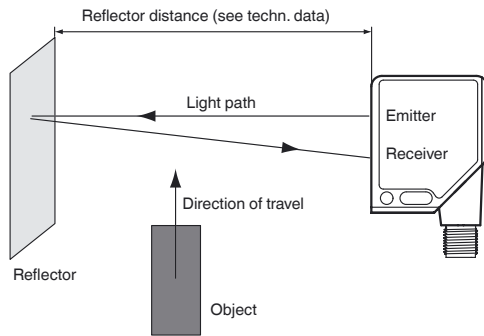
Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)



### Functional principle

The MLV12-54-2563 is a diffuse-mode photoelectric sensor with polarization filter. The diffuse-mode photoelectric sensor is an emitter and a receiver in a single housing. The emitted light is reflected back to the receiver by a reflector. When the light beam is interrupted, the switching function is triggered.

#### Characteristics



#### Marking

Due to its high excess gain, the MLV12-54-2563 diffuse-mode photoelectric sensor is suitable as a safety device for hold-open devices on fire barriers. The safety functionality has been tested by VdS (German Association of Property Insurers) (Test Report FSA 02009).

The MLV12-54-2563 diffuse-mode photoelectric sensor detects people or objects and is also insensitive to defined smoke levels (test fires 2 to 5).

The MLV12-54-2563 diffuse-mode photoelectric sensor is used as a safety device with a range of 0.2 m to 2.1 m onto the H60 reflector.