



**Model Number**

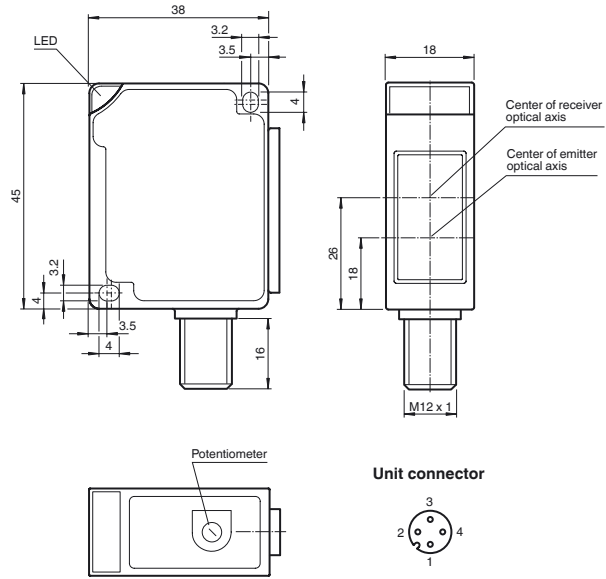
**MLV13-54/32/40b/73c**

Retroreflective sensor with polarization filter  
with 4-pin, M12 connector

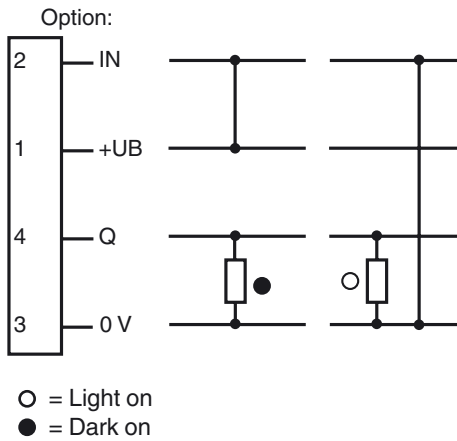
**Features**

- Visible red light
- Glare protected with polarization filter
- Pre-fault indication
- Control input for light/dark switching
- Degree of protection IP67

**Dimensions**



**Electrical connection**



Release date: 2019-11-26 15:11 Date of issue: 2019-11-26 088776\_eng.xml

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

## Technical data

### General specifications

Effective detection range	0 ... 6 m
Threshold detection range	7 m
Reference target	reflector C110-2
Light source	LED
Light type	modulated visible red light
Polarization filter	yes
Diameter of the light spot	200 mm at a distance of 6000 mm
Ambient light limit	10000 Lux

### Indicators/operating means

Function indicator	switching state: LED yellow pre-fault indicator: LED red
Control elements	sensitivity adjustment

### Electrical specifications

Operating voltage	$U_B$	10 ... 30 V DC
Ripple		10 %
No-load supply current	$I_0$	≤ 25 mA
Time delay before availability	$t_v$	≤ 80 ms

### Input

Control input	light on +UB dark on: 0 V
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### Output

Switching type	light/dark on	
Signal output	1 PNP output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 200 mA	
Voltage drop	$U_d$	≤ 2.5 V DC
Switching frequency	$f$	≤ 500 Hz
Response time		≤ 1 ms

### Conformity

Product standard	EN 60947-5-2
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### Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

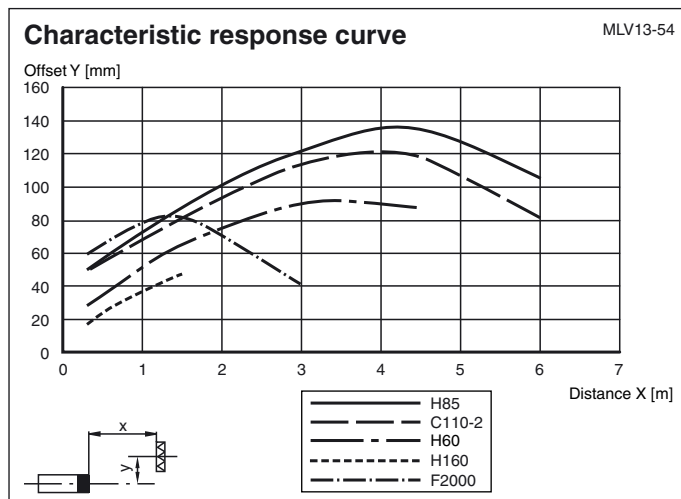
### Mechanical specifications

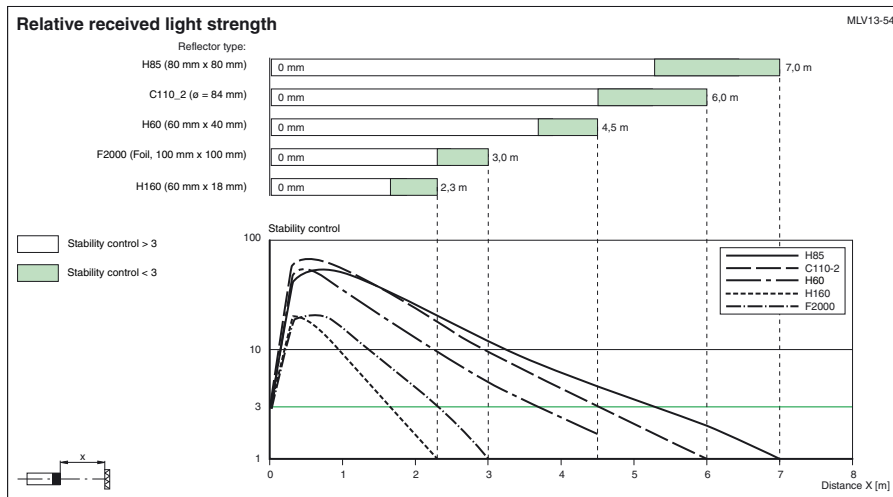
Housing width	18 mm
Housing height	45 mm
Housing depth	38 mm
Degree of protection	IP67
Connection	M12 connector, 4-pin
Material	
Housing	ABS
Optical face	scratch resistant plastic lens
Mass	40 g

### Approvals and certificates

CCC approval	CCC approval / marking not required for products rated ≤36 V
Approvals	CE

## Curves/Diagrams





## Additional Information

### Conventional use:

The reflex light beam switch contains the emitter and receiver in a single housing. The light from transmitter is beamed back from a reflector to the receiver. If an object interrupts the light beam the switching function is initiated.

### Mounting instructions:

The sensor can be fastened over the through-holes directly or with the included mounting bracket.

The base surface must be flat to avoid distorting the housing during mounting. It is advisable to secure the bolts and screws with washers to prevent misalignment of the sensor.

### Instructions for adjustment:

Connect the sensor to operating voltage, the LED green lights up constantly.

Mount suitable reflector opposite light beam switch and align roughly.

The exact adjustment takes by swivelling the sensor horizontally and vertically. With optimum light reception the yellow LED lights up constantly. In case of bad alignment, the red LED lights up.

### Object detection check:

Move the object into the light beam. If the object is recorded, the yellow LED goes off. If it isn't going off, reduce the sensitivity with the potentiometer until it goes off. It should light up constantly again when the object is removed.

The red LED lights up if reception deteriorates (e.g. soiled lenses or by maladjustment) and when falling short of the stability control.

### Illustration:

We recommend that you clean the optical interfaces and check the plug-in connections and screw connections at regular intervals.