



Model Number

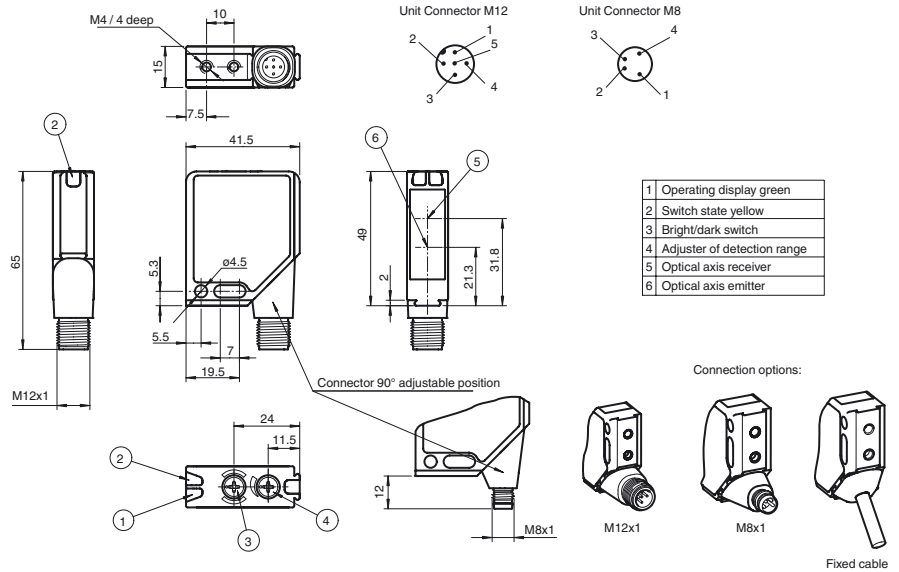
MLV12-8-HW-RT/47/65b/95

Background evaluation sensor
with M8, 4-pin metal connector

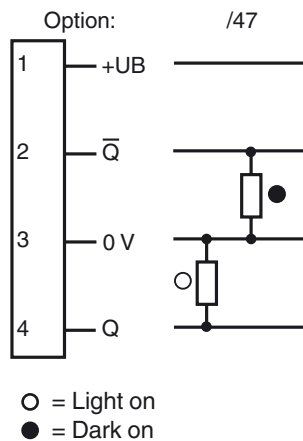
Features

- Series of sensors in a widely used standard housing
- Reliable detection of all surfaces, independent of color and structure
- Minimal black/white difference
- High level of stability thanks to the metal housing frame
- Resistant against noise: reliable operation under all conditions

Dimensions



Electrical connection



Pinout



Technical data**General specifications**

Detection range	50 ... 150 mm , adjustable
Adjustment range	50 ... 150 mm
Light source	LED
Light type	modulated visible red light , 680 nm
Diameter of the light spot	4 mm at Tw 150 mm
Angle of divergence	1.5 °
Ambient light limit	
Continuous light	30000 Lux
Modulated light	5000 Lux

Functional safety related parameters

MTTF _d	650 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operating display	LED green, flashes in case of short-circuit
Function display	LED yellow ON: sensor detects background
Controls	potentiometer for light/dark, detection range adjustment

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	≤ 55 mA

Output

Switching type	light/dark on switchable	
Signal output	2 PNP outputs, complementary, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 0.2 A	
Voltage drop	U _d	≤ 2.5 V DC
Switching frequency	f	1000 Hz
Response time	0.5 ms	

Ambient conditions

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

Mechanical specifications

Protection degree	IP67
Connection	4-pin M8 metal connector, 90° rotatable
Material	
Housing	Frame: nickel plated, die cast zinc, Laterals: glass-fiber reinforced plastic PC
Optical face	Plastic pane
Mass	60 g

Compliance with standards and directives

Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007
Shock and impact resistance	IEC / EN 60068. half-sine, 40 g in each X, Y and Z directions
Vibration resistance	IEC / EN 60068-2-6. Sinus. 10 -150 Hz, 5 g in each X, Y and Z directions
Standards	UL 508

Approvals and certificates

UL approval	cULus
CCC approval	CCC approval / marking not required for products rated ≤36 V

Accessories**OMH-MLV12-HWG**

Mounting bracket for series MLV12 sensors

OMH-MLV12-HWK

Mounting bracket for series MLV12 sensors

OMH-K01

dove tail mounting clamp

OMH-K02

dove tail mounting clamp

OMH-K03

dove tail mounting clamp

OMH-06

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

V31-WM-2M-PUR

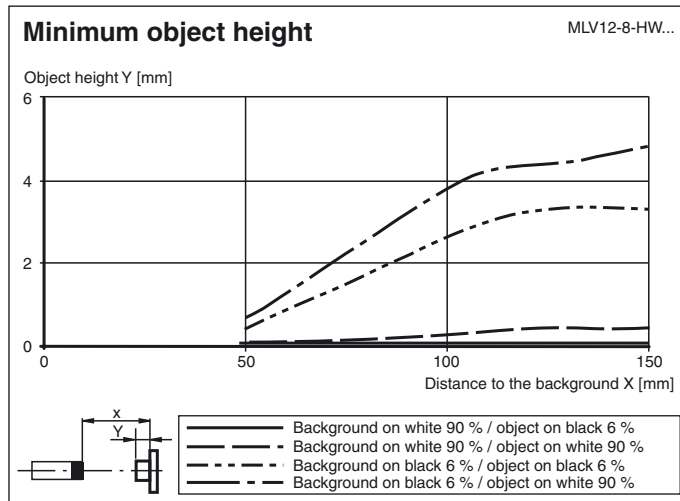
4-pin, M8 socket, PUR cable

V31-GM-2M-PUR

4-pin, M8 socket, PUR cable

Other suitable accessories can be found at www.pepperl-fuchs.com

Curves/Diagrams



Notes

1. Mount sensor at a distance of 50 mm to 150 mm to the background.
2. Set the detection range in such a way that the yellow LEDs just switch.
3. Place the object and move between background and sensor; the yellow LEDs must extinguish.

Preferably the background should be light or white.

Object should move transversely to the sensor.

The background should not vary in height.