



**Model Number**

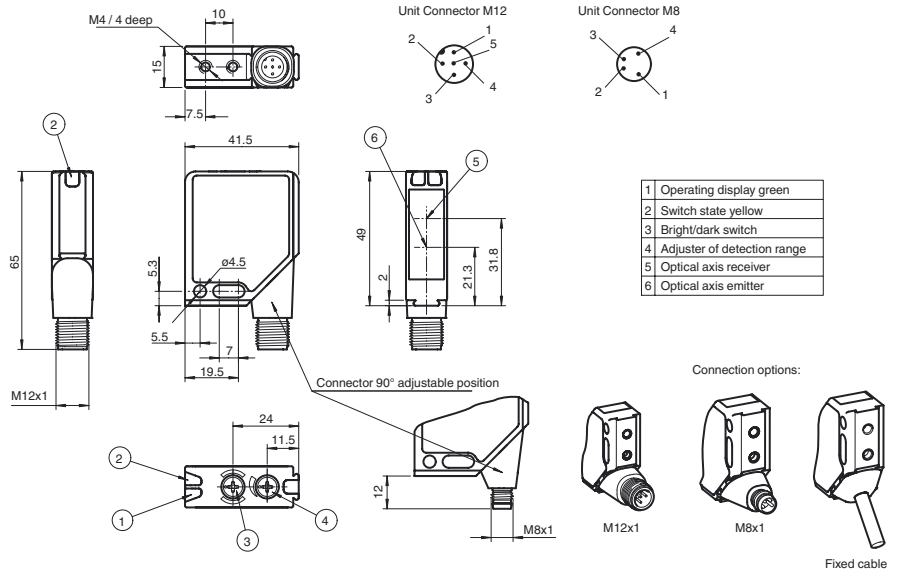
**MLV12-8-HW-RT/47/65b/95**

Background evaluation sensor with M8, 4-pin metal connector

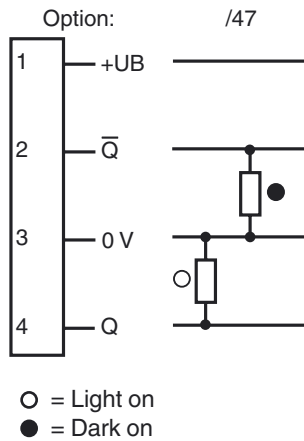
**Features**

- 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**



Release date: 2013-03-11 09:27 Date of issue: 2013-03-22 121200\_eng.xml

**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 <sub>d</sub>	650 a
Mission Time (T <sub>M</sub> )	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 <sub>B</sub>	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	≤ 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 <sub>d</sub>	≤ 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**

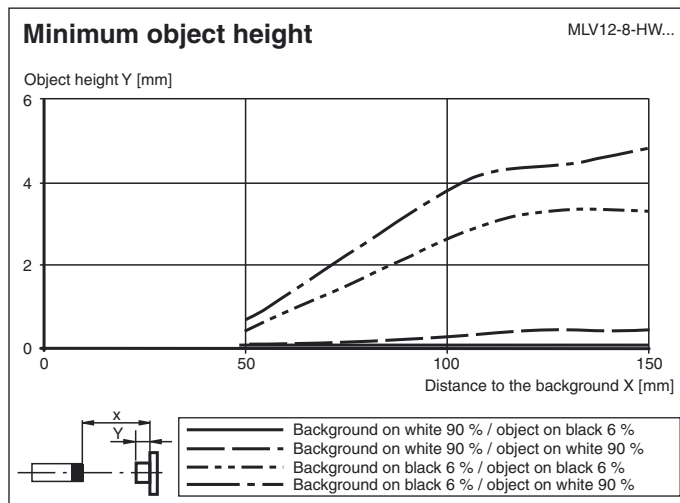
4-pin, M8 socket, PUR cable

**V31-GM-2M-PUR**

4-pin, M8 socket, PUR cable

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