



Model Number

MLV41-8-H-350-RT/59/95/136

Background suppression sensor
with 4-pin, M8 x 1 connector

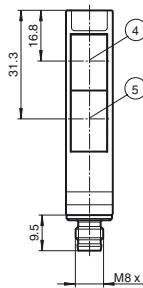
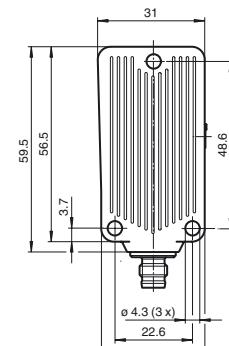
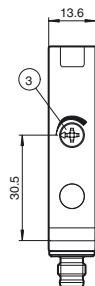
Features

- Rugged series in corrosion-resistant metal housing
- Reliable detection of all surfaces, independent of color and structure
- Minimal black/white difference
- Precision background suppression, adjustable
- Extremely high switching frequency
- Clear and functional display concept for the operating modes

Product information

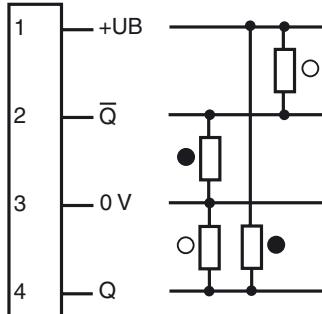
The unique and extremely popular design of the MLV41 series enables it to be mounted correctly in confined areas and offers all the functions that are normally only found on larger phototelectric sensors. The MLV41 series comes with a range of functions grouped together under the VISO+ quality symbol. For example, highly visible status LEDs on the front and back, resistance to ambient light, crosstalk protection and universally applicable output stages that permit every possible switching logic and polarity to be realized. The enhanced resistance to ambient light ensures reliable operation even where modern energy-saving lamps with electronic ballasts are in use. The same applies where multiple devices are present, i.e. the use of a number of sensors in the same vicinity causes no problems.

Dimensions



Electrical connection

Option:

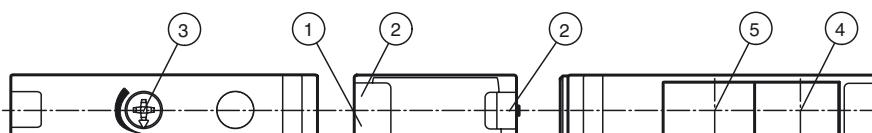


○ = Light on
● = Dark on

Pinout



Indicators/operating means



1	Operating display green	3	Sensing range adjuster	5	Optical axis receiver
2	Function display yellow	4	Optical axis transmitter		

Technical data

General specifications

Detection range	50 ... 350 mm , adjustable
Detection range min.	10 ... 50 mm
Detection range max.	30 ... 350 mm
Adjustment range	50 ... 350 mm
Background suppression	+ 10 % of the upper limit of the detection range
Light source	LED
Light type	modulated visible red light , 660 nm
Black/White difference (6 %/90 %)	< 15 % at 350 mm
Diameter of the light spot	approx. 8 mm at 350 mm sensor range
Angle of divergence	1.5 °
Ambient light limit	40000 Lux

Functional safety related parameters

MTTF _d	1260 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operating display	LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz)
Function display	2 LEDs yellow ON: object inside the scanning range OFF: object outside the scanning range
Controls	Detection range adjuster

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	max. 25 mA

Output

Signal output	2 push-pull (4 in 1) outputs, complementary, short-circuit proof, reverse polarity protected
Switching voltage	max. 30 V DC
Switching current	max. 100 mA
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	M8 x 1 connector, 4-pin
Material	
Housing	aluminum , Delta-Seal coated
Optical face	glass pane
Connector	metal
Mass	50 g

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

UL approval	cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure)
CCC approval	CCC approval / marking not required for products rated ≤36 V

Accessories

OMH-40

Mounting bracket

OMH-09

Mounting bracket for Sensors series
MLV41 for M12 rod mounting

V31-WM-2M-PUR

4-pin, M8 socket, PUR cable

V31-GM-2M-PUR

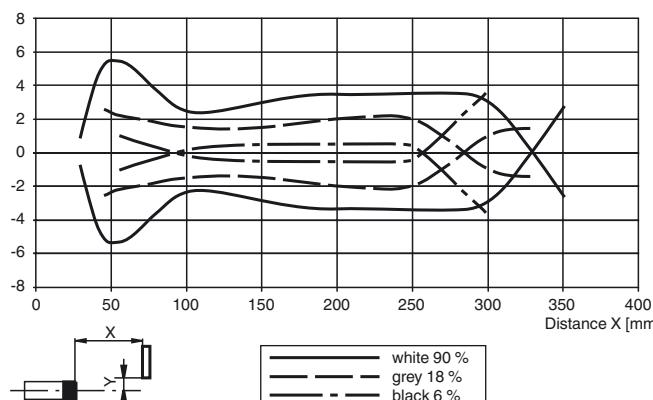
4-pin, M8 socket, PUR cable

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

Curves/Diagrams

Characteristic response curve

Offset Y [mm]



Difference in detection distance

Measured detection distance Y [mm]

