



Model Number

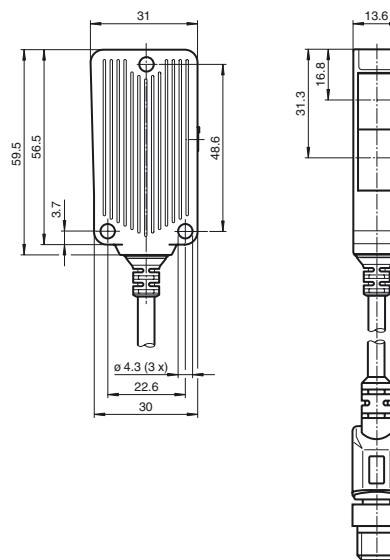
MLV41-8-H-RT-5036

Background suppression sensor
with fixed cable and M12 connector, 4-pin

Features

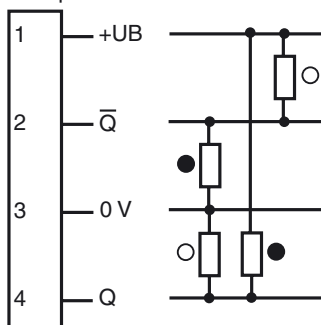
- Reliable detection of all surfaces, independent of color and structure
- Minimal black-white difference
- Precise background suppression
- Extremely high switching frequency
- Clearly visible function indicators
- Short circuit and low voltage indicator

Dimensions



Electrical connection

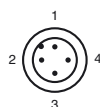
Option:



○ = Light on

● = Dark on

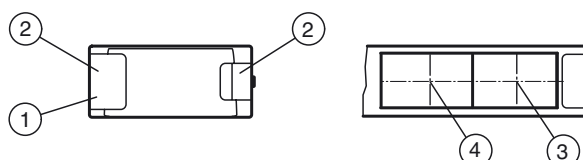
Pinout



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Indicators/operating means



1	Operating display green	3	Optical axis transmitter
2	Function display yellow	4	Optical axis receiver

**Technical data****General specifications**

Detection range	30 ... 320 mm fixed
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 320 mm
Diameter of the light spot	approx. 8 mm at sensor range 320 mm
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

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

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

Conformity

Product standard	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

Housing width	31 mm
Housing height	56.5 mm
Housing depth	13.6 mm
Degree of protection	IP67
Connection	fixed cable 300 mm with M12 connector, 4-pin
Material	
Housing	Aluminum , Delta-Seal coated
Optical face	glass pane
Mass	100 g

Approvals and certificates

Protection class	II, rated voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1 , functional insulation acc. to DIN EN 50178
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

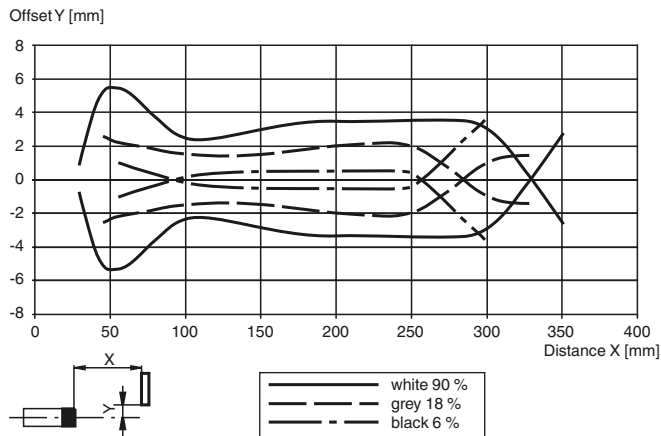
Accessories**OMH-40**

Mounting bracket

OMH-09Mounting bracket for Sensors series
MLV41 for M12 rod mountingOther suitable accessories can be found at
www.pepperl-fuchs.com

Curves/Diagrams

Characteristic response curve



Difference in detection distance

