



Model Number

ML8-8-H-100-RT/65a/102/143/162

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

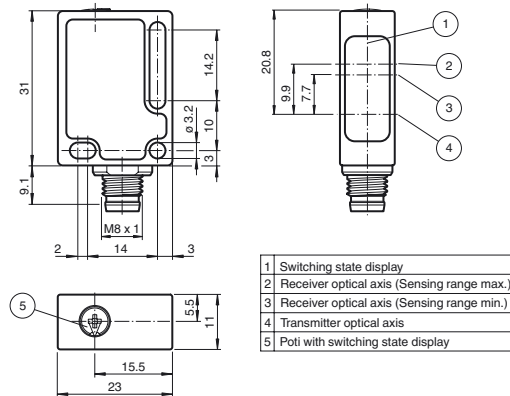
Features

- Diffuse mode sensor with multiple light spots
- Specially designed for detecting critical objects such as PCBs
- Detects objects in front of a close background through precise background suppression
- Can be adapted to the application in question thanks to the adjustable detection range
- Precision object detection, almost irrespective of the color
- Not sensitive to ambient light, even with switched energy saving lamps

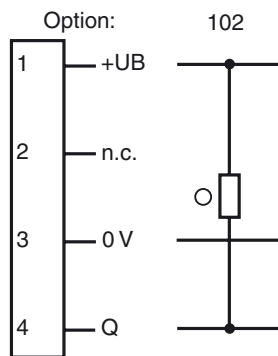
Product information

Small, robust and reliable, the ML8 series of miniature sensors is particularly suitable for non-contact detection of objects in confined spaces. The LED indicator is located behind the lens and provides reliable information on the sensor's operating status. The LED is always visible, even if the sensor is completely embedded. Flexible mounting options and fixed preset detection ranges simplify setup and operation.

Dimensions



Electrical connection



○ = 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)

Technical data

General specifications

Detection range	20 ... 100 mm
Detection range min.	10 ... 25 mm
Detection range max.	25 ... 100 mm
Adjustment range	25 ... 100 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light , 640 nm
Black/White difference (6 %/90 %)	< 20 %
Diameter of the light spot	2 light spots, 12 mm apart, spotsize 4 mm at a distance of 50 mm, 25 mm apart, spotsize 10 mm at a distance of 100 mm (outer spot to outer spot)
Ambient light limit	EN 60947-5-2

Functional safety related parameters

MTTF _d	794 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Function indicator	2 LEDs yellow, light up in case of detection
Control elements	Sensing range adjuster

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC , class 2
Ripple		max. 10 %
No-load supply current	I ₀	< 15 mA

Output

Switching type	light on	
Signal output	1 NPN output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U _d	≤ 1.5 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	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

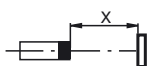
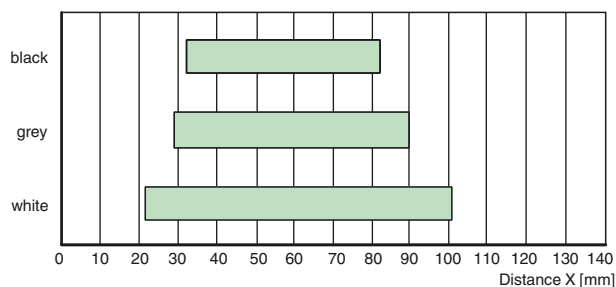
Housing width	23 mm
Housing height	31 mm
Housing depth	11 mm
Degree of protection	IP67
Connection	M8 x 1 connector, 4-pin
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Connector	plastic
Mass	approx. 10 g

Approvals and certificates

UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

Detection ranges

Object colour



Accessories

Montagekit OMH-ML7-01

Mounting set consisting of bracket OMH-ML-01 sheet OMH-ML7-03, and fastening material

Montagekit OMH-ML7-02

Mounting set consisting of bracket OMH-ML-02 sheet OMH-ML7-03, and fastening material

OMH-ML7-01

Mounting aid for ML7 and ML8 series, Mounting bracket

OMH-ML7-02

Mounting aid for ML7 and ML8 series, Mounting bracket

OMH-ML7-03

Mounting aid for ML7 and ML8 series, Fixing plate

V31-WM-2M-PUR

Female cordset single-ended, M8, 4-pin, PUR cable

V31-GM-2M-PUR

Female cordset single-ended, M8, 4-pin, PUR cable

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