



Model Number

ML8-8-HGU-50-RT/103/143/162

Convergent mode sensor
with 4-pin, M8 x 1 connector

Features

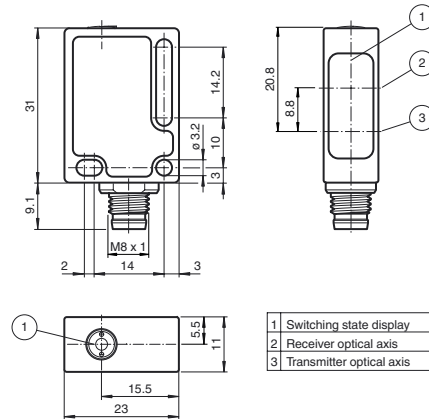
- Diffuse mode sensor with long, narrow light spot
- Specially designed for detecting critical objects such as PCBs
- Background interference suppression
- Tamper-proof, no operating controls
- Plug and Play
- Not sensitive to ambient light, even with switched energy saving lamps

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.

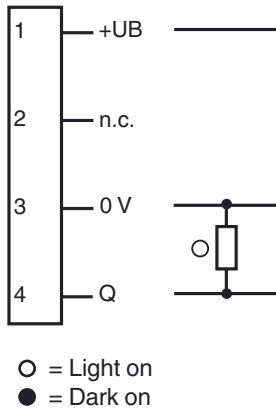
Release date: 2014-01-22 14:45 Date of issue: 2014-01-22 204318_eng.xml

Dimensions



Electrical connection

Option: 103



Pinout



Technical data

General specifications

Detection range	25 ... 50 mm
Reference target	standard black, 100 mm x 100 mm
Light source	LED , 645 nm
Light type	modulated visible red light
Diameter of the light spot	approx. 4 mm x 35 mm at 50 mm
Angle of divergence	Emitter 1.5° vertical 35° horizontal
Ambient light limit	EN 60947-5-2

Functional safety related parameters

MTTF _d	830 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
--------------------	--

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC , class 2
Ripple		max. 10 %
No-load supply current	I ₀	< 20 mA

Output

Switching type	light on	
Signal output	1 PNP 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
Response time		1 ms

Ambient conditions

Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Protection degree	IP65 / IP67
Connection	M8 x 1 connector, 4-pin
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Connector	plastic
Mass	approx. 10 g

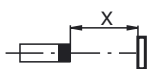
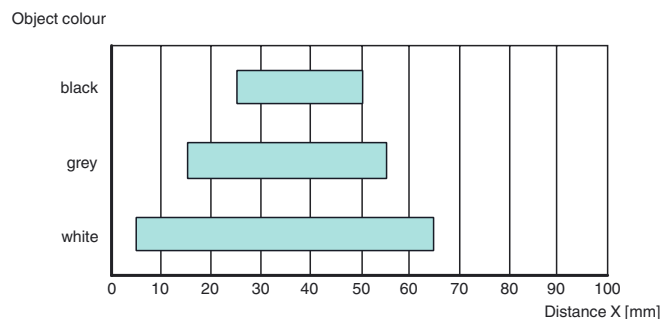
Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 60947-5-2:2007
Protection degree	EN 60529
Standards	EN 50178, UL 508

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



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 bracket

OMH-ML7-02

Mounting bracket

OMH-ML7-03

Fixing plate

V31-WM-2M-PUR

Female cordset, M8, 4-pin, PUR cable

V31-GM-2M-PUR

Female cordset, M8, 4-pin, PUR cable

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