



Model Number

ML8-8-200-RT/102/143

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

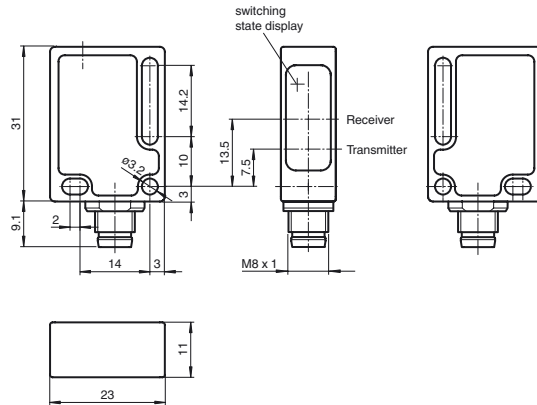
Features

- Miniature design
- Yellow LED indicator behind the front panel
- Flexible mounting possibilities due to slotted hole
- Waterproof, degree of protection IP67
- Protection class II

Product information

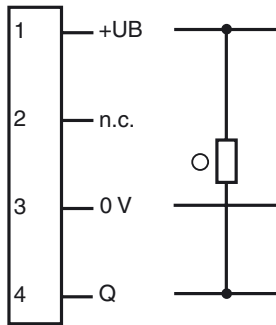
Small, robust and reliable, the ML8 series of miniature sensors is particularly suitable for non-contact detection of objects in confined spaces. The LED indicator is located behind the lens and provides reliable information on the sensor's operating status. The LED is always visible, even if the sensor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

Dimensions



Electrical connection

Option: 102



○ = Light on
● = Dark on

Pinout



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Technical data

General specifications

| | |
|----------------------------|---------------------------------------|
| Detection range | 20 ... 200 mm |
| Reference target | standard white, 100 mm x 100 mm |
| Light source | LED |
| Light type | modulated visible red light |
| Diameter of the light spot | approx. 15 mm at a distance of 200 mm |
| Angle of divergence | approx. 4.5 ° |
| Ambient light limit | 40000 Lux |

Functional safety related parameters

| | |
|--------------------------------|--------|
| MTTF _d | 2340 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|--------------------|-----------------------------|
| Function indicator | LED yellow: switching state |
|--------------------|-----------------------------|

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 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 |
| Response time | | 1.8 ms |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -20 ... 60 °C (-4 ... 140 °F) |
| Storage temperature | -40 ... 75 °C (-40 ... 167 °F) |

Mechanical specifications

| | |
|----------------------|--------------------------------------|
| 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 |

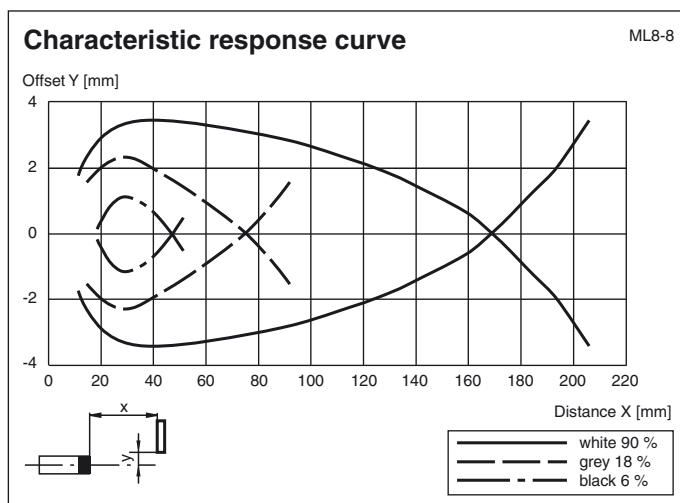
Compliance with standards and directives

| | |
|----------------------|---------------------------|
| Directive conformity | EMC Directive 2004/108/EC |
| Standard conformity | |
| Product standard | EN 60947-5-2:2007 |
| Degree of protection | EN 60529 |
| Standards | EN 50178, UL 508 |

Approvals and certificates

| | |
|------------------|---|
| Protection class | II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 |
| UL approval | cULus Listed, Class 2 Power Source, Type 1 enclosure |
| CCC approval | CCC approval / marking not required for products rated ≤ 36 V |

Curves/Diagrams



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

