



Model Number

ML100-8-1000-RT/103/115a-1M

Diffuse mode sensor
with fixed cable and 4-pin, M8 connector

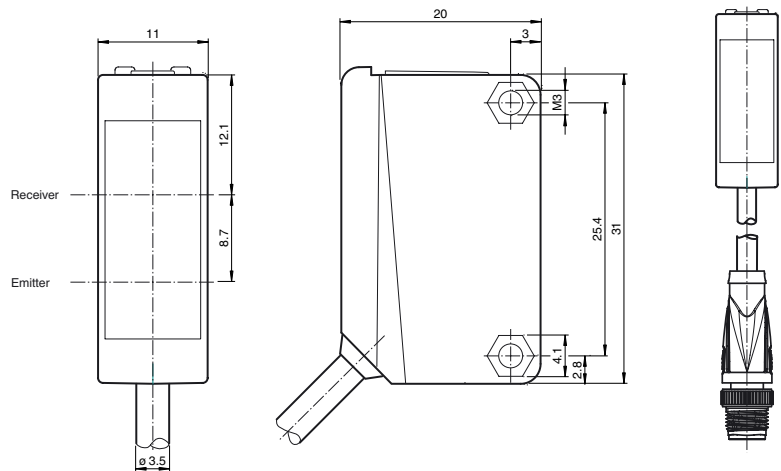
Features

- Miniature design
- Easy to use
- Very bright, highly visible light spot
- Full metal thread mounting
- Highly visible LEDs for Power ON and switching state
- Not sensitive to ambient light

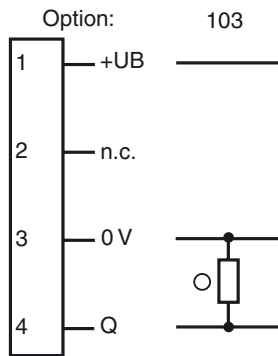
Product information

The ML100 series is characterized by its miniature housing with integral, all-metal threaded bushings. All versions are equipped with a visible red transmitter LED. This greatly simplifies installation and commissioning. The switching states are easily visible from all directions thanks to the highly visible LEDs.

Dimensions

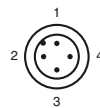


Electrical connection



○ = Light on
● = Dark on

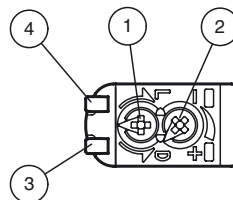
Pinout



Wire colors in accordance with EN 60947-5-2

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

Indicators/operating means



| | | |
|---|----------------------|--------|
| 1 | Light-Dark-switching | |
| 2 | Sensitivity adjuster | |
| 3 | Signal display | yellow |
| 4 | Operating display | green |

Release date: 2019-01-16 09:50 Date of issue: 2019-01-16 70102035_eng.xml

Technical data**General specifications**

| | |
|----------------------------|--|
| Detection range | 0 ... 1000 mm |
| Adjustment range | 100 ... 1000 mm |
| Reference target | standard white, 100 mm x 100 mm |
| Light source | LED |
| Light type | modulated visible red light |
| Polarization filter | no |
| Diameter of the light spot | approx. 75 mm at a distance of 1000 mm |
| Angle of divergence | approx. 2 ° |
| Optical face | frontal |
| Ambient light limit | EN 60947-5-2:2007+A1:2012 |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 860 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|---------------------|---|
| Operation indicator | LED green: power on |
| Function indicator | LED yellow, lights up with receiver lit |
| Control elements | sensitivity adjustment |
| Control elements | Light-on/dark-on changeover switch |

Electrical specifications

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

Output

| | | |
|---------------------|---|------------|
| Switching type | The switching type of the sensor is adjustable. The default setting is: 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 , resistive load | |
| Voltage drop | U _d | ≤ 1.5 V DC |
| Switching frequency | f | 1000 Hz |
| Response time | 0.5 ms | |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -30 ... 60 °C (-22 ... 140 °F) |
| Storage temperature | -40 ... 70 °C (-40 ... 158 °F) |

Mechanical specifications

| | |
|----------------------|---|
| Housing width | 11 mm |
| Housing height | 31 mm |
| Housing depth | 20 mm |
| Degree of protection | IP67 |
| Connection | Fixed cable 1000 mm with 4-pin M8 connector |
| Material | |
| Housing | PC (Polycarbonate) |
| Optical face | PMMA |
| Mass | approx. 30 g |
| Cable length | 1 m |

Compliance with standards and directives

| | |
|---------------------------|--------------|
| Directive conformity | |
| EMC Directive 2004/108/EC | EN 60947-5-2 |
| Standard conformity | |
| Standards | UL 60947-5-2 |

Approvals and certificates

| | |
|----------------|---|
| EAC conformity | TR CU 020/2011 |
| UL approval | cULus Listed, Class 2 Power Source or listed Power Supply with a limited voltage output with (maybe integrated) fuse (max. 3.3 A according UL248), Type 1 enclosure |
| CCC approval | CCC approval / marking not required for products rated ≤36 V |

Accessories**OMH-ML100-01**

Mounting aid for ML100 series, Mounting bracket

OMH-ML100-02

Mounting aid for ML100 series, Mounting bracket

OMH-ML100-03

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-ML100-04

Mounting aid for ML100 series, Mounting bracket

OMH-ML100-05

Mounting aid for ML100 series, Mounting bracket

OMH-F10-ML100

Mounting aid for ML100 series

OMH-10

Mounting aid

OMH-ML100-S1

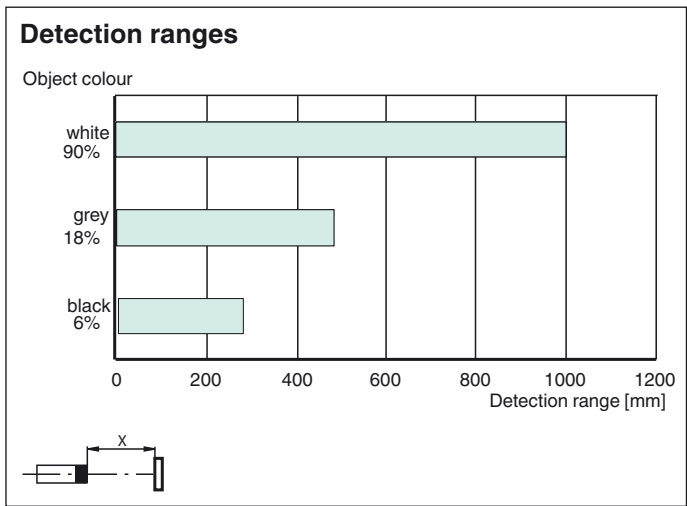
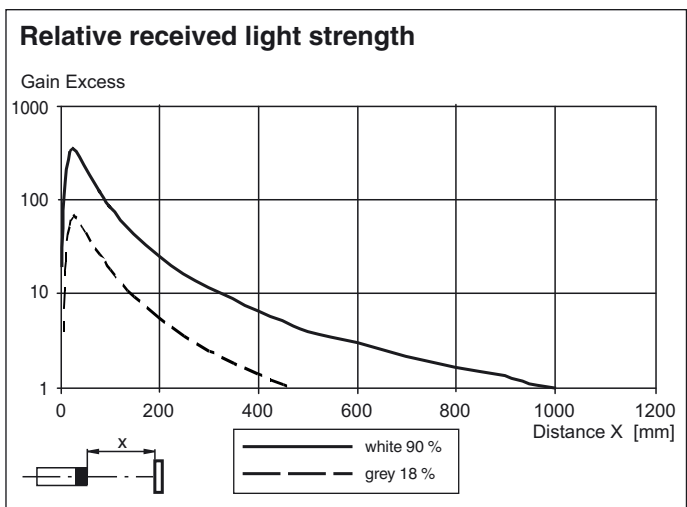
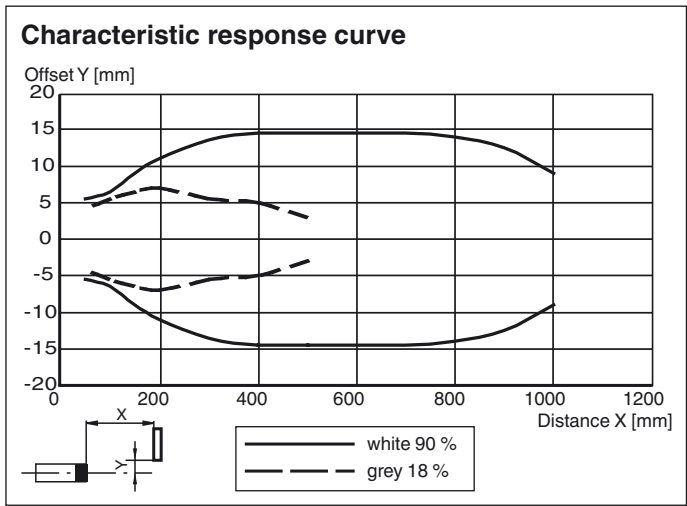
Mounting bracket

OMH-ML100-08

Mounting aid for ML100 series, Snap-in

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

Curves/Diagrams



Release date: 2019-01-16 09:50 Date of issue: 2019-01-16 70102035_eng.xml

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".