



Diffuse mode sensor ML100-8-1000-RT/103/115



- 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

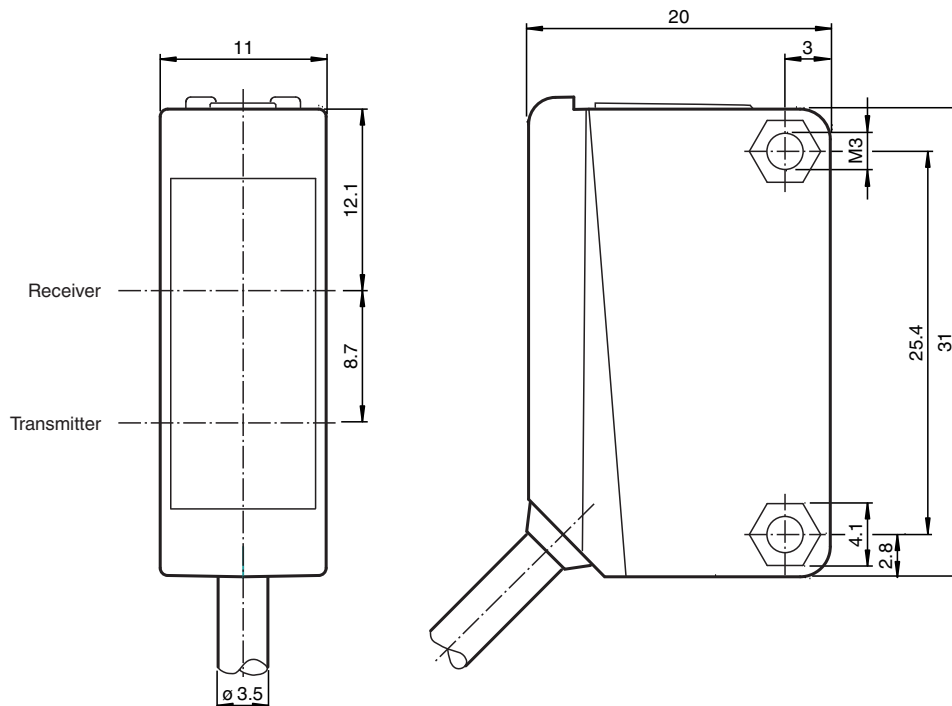
Diffuse mode sensor, plastic housing, 1000 mm adjustable detection range, red light, light/dark on, pnp output, fixed cable



Function

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.

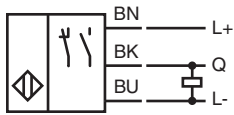
Dimensions



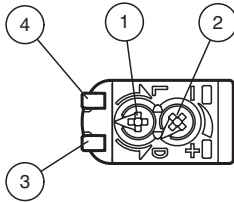
Technical Data

| 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 |
| Conformity | | |
| Product standard | | EN 60947-5-2 |
| Approvals and certificates | | |
| 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 |
| 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 | | 2 m fixed cable |
| Material | | |
| Housing | | PC (Polycarbonate) |
| Optical face | | PMMA |
| Mass | | approx. 50 g |
| Tightening torque, fastening screws | | 0.6 Nm |
| Cable length | | 2 m |

Connection

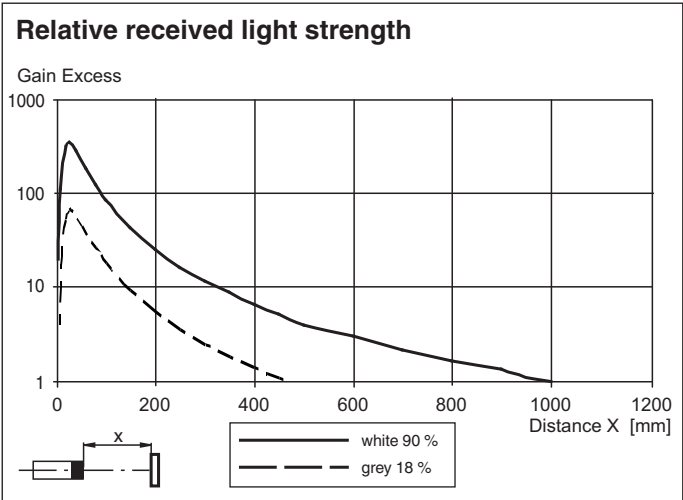
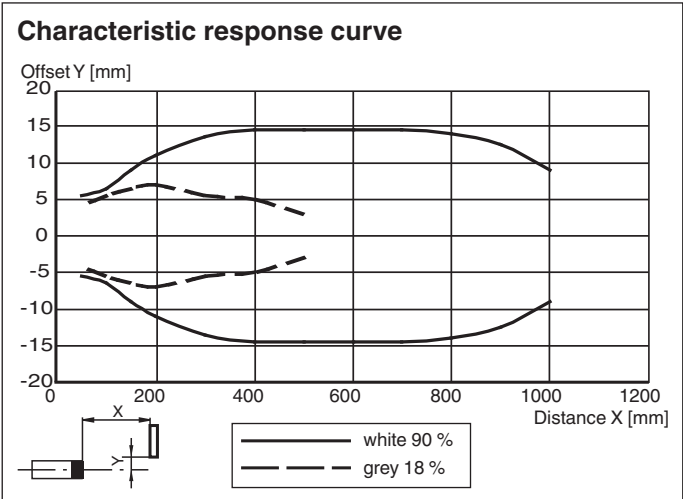


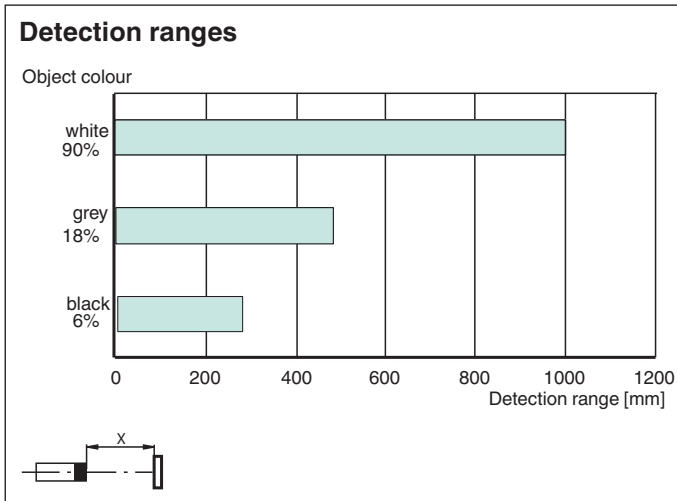
Assembly



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

Characteristic Curve





Accessories

| | | |
|--|----------------------|---|
| | OMH-ML100-09 | Mounting aid for round steel \varnothing 12 mm or sheet 1.5 mm ... 3 mm |
| | 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 \varnothing 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 |