



**Model Number**

**ML100-8-H-100-RT/102/115**

Background suppression sensor  
with 2 m fixed cable

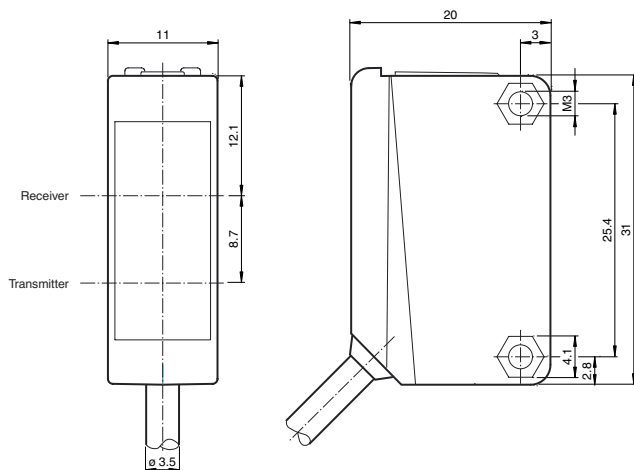
**Features**

- Miniature design
- Small, sharp light spot
- Can be adapted to the application in question thanks to the adjustable detection range
- Precision object detection, almost irrespective of the color
- Full metal thread mounting

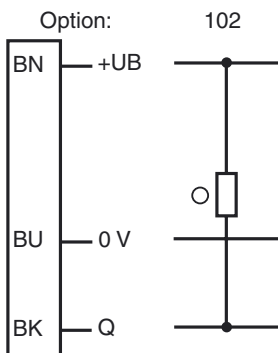
**Product information**

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**

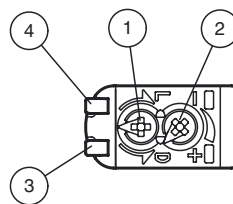


**Electrical connection**



○ = Light on  
● = Dark on

**Indicators/operating means**



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

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**Technical data****General specifications**

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Detection range                 | 5 ... 100 mm                         |
| Detection range min.            | 5 ... 25 mm                          |
| Detection range max.            | 5 ... 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          |
| Polarization filter             | no                                   |
| Black/White difference (6%/90%) | < 20 %                               |
| Diameter of the light spot      | approx. 4 mm at a distance of 100 mm |
| Angle of divergence             | approx. 2.5 °                        |
| Optical face                    | frontal                              |
| Ambient light limit             | EN 60947-5-2                         |

**Functional safety related parameters**

|                                |       |
|--------------------------------|-------|
| MTTF <sub>d</sub>              | 860 a |
| Mission Time (T <sub>M</sub> ) | 20 a  |
| Diagnostic Coverage (DC)       | 0 %   |

**Indicators/operating means**

|                     |  |
|---------------------|--|
| Operation indicator | LED green: power on                        |
| Function indicator  | LED yellow: lights when object is detected |
| Control elements    | Detection range adjuster                   |
| Control elements    | Light/Dark switch                          |

**Electrical specifications**

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

**Output**

|                     |   |            |
|---------------------|---|------------|
| Switching type      | light/dark on, switchable   |            |
| Signal output       | 1 NPN 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 <sub>d</sub>  | ≤ 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**

|                      |                    |
|----------------------|--------------------|
| Degree of protection | IP67               |
| Connection           | 2 m fixed cable    |
| Material             |                    |
| Housing              | PC (Polycarbonate) |
| Optical face         | PMMA               |
| Mass                 | approx. 50 g       |
| Cable length         | 2 m                |

**Compliance with standards and directives**

|                           |              |
|---------------------------|--------------|
| Directive conformity      |              |
| EMC Directive 2004/108/EC | EN 60947-5-2 |
| Standard conformity       |              |
| Standards                 | 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                               |
| Approvals    | CE, cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure) |

**Accessories**

**OMH-ML100-01**  
Mounting bracket

**OMH-ML100-02**  
Mounting bracket

**OMH-ML100-03**  
Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

**OMH-ML100-04**  
Mounting bracket

**OMH-ML100-05**  
Mounting bracket

**OMH-F10-ML100**  
Mounting aid for ML100 series

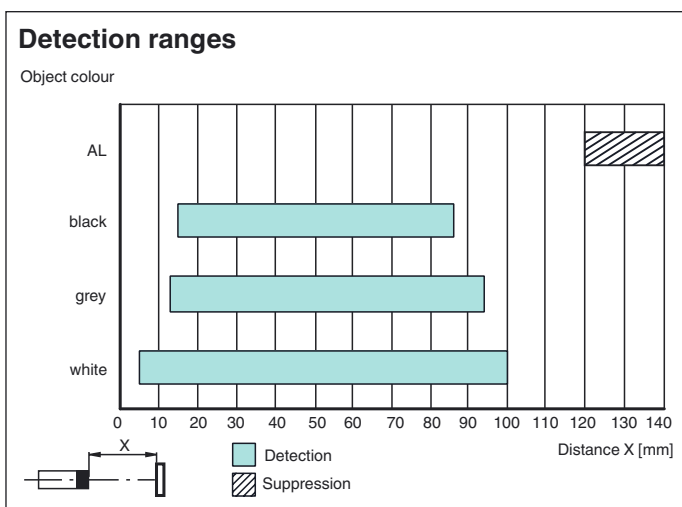
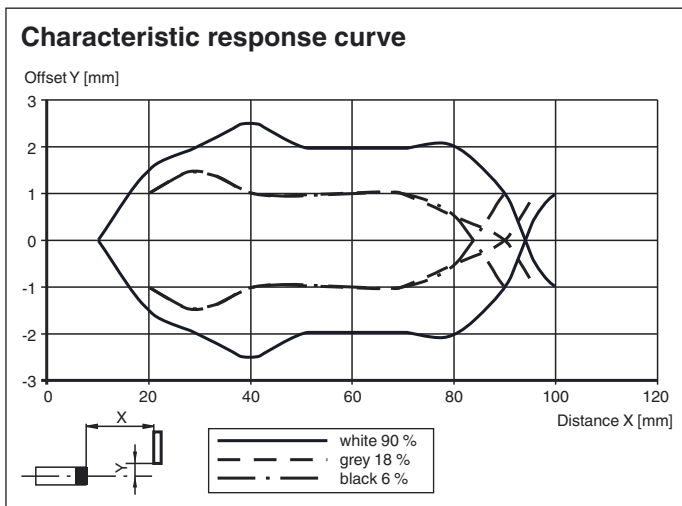
**OMH-10**  
Mounting aid

**OMH-ML100-S1**  
Mounting bracket

**OMH-ML100-08**  
Mounting aid

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Curves/Diagrams**



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