



**Model Number**

**ML8-8-H-350-IR/25/65a/103/115b**

Background suppression sensor with fixed cable and M12 connector, 4-pin

**Features**

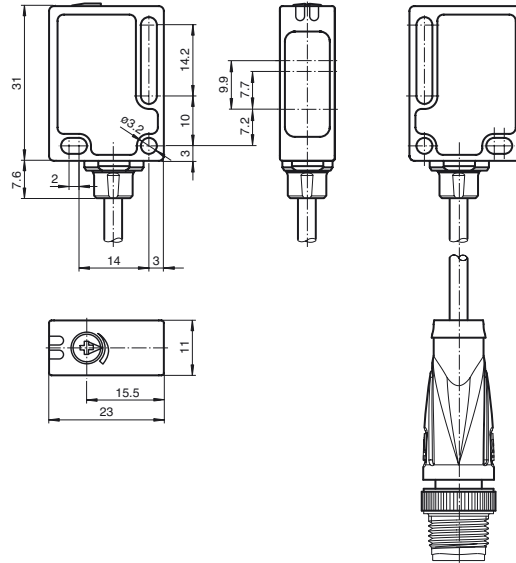
- Miniature design
- Minimal black-white difference
- Flexible mounting possibilities due to slotted hole
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

**Product information**

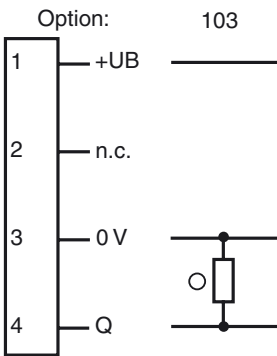
Small, robust and reliable, the ML8 series of miniature sensors is particularly suitable for non-contact detection of objects in confined spaces. The LED indicator is located behind the lens and provides reliable information on the sensor's operating status. The LED is always visible, even if the sensor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

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**Dimensions**

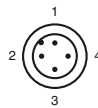


**Electrical connection**



○ = Light on  
● = Dark on

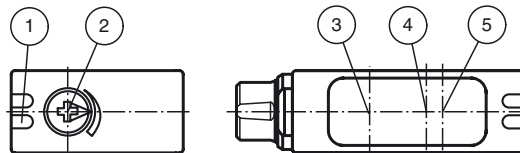
**Pinout**



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 | Functional display         | yellow |
| 2 | Detection range adjuster   |        |
| 3 | Optical axis Emitter       |        |
| 4 | Optical axis Receiver min. |        |
| 5 | Optical axis Receiver max. |        |

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

|                                 |   |
|---------------------------------|---|
| Detection range                 | 4 ... 350 mm                            |
| Detection range min.            | 4 ... 25 mm                             |
| Detection range max.            | 10 ... 350 mm                           |
| Adjustment range                | 25 ... 350 mm                           |
| Reference target                | standard white, 100 mm x 100 mm         |
| Light source                    | IREDD                                   |
| Light type                      | modulated infrared light                |
| Black/White difference (6%/90%) | < 25 %                                  |
| Diameter of the light spot      | approx. 15 mm at detection range 350 mm |
| Ambient light limit             | 30000 Lux                               |

**Functional safety related parameters**

|                                |        |
|--------------------------------|--------|
| MTTF <sub>d</sub>              | 2090 a |
| Mission Time (T <sub>M</sub> ) | 20 a   |
| Diagnostic Coverage (DC)       | 0 %    |

**Indicators/operating means**

|                    |  |
|--------------------|--|
| Function indicator | LED yellow: lights when object is detected |
| Control elements   | Sensing range adjuster                     |

**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> | < 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   |        |
| Switching frequency | f   | 200 Hz |
| Response time       |   | 2.5 ms |

**Conformity**

|                  |              |
|------------------|--------------|
| Product standard | EN 60947-5-2 |
|------------------|--------------|

**Ambient conditions**

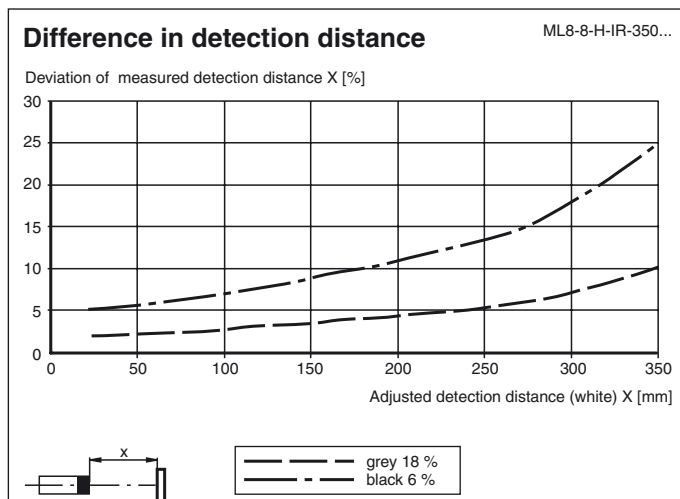
|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -20 ... 60 °C (-4 ... 140 °F)  |
| Storage temperature | -40 ... 75 °C (-40 ... 167 °F) |

**Mechanical specifications**

|                      |  |
|----------------------|--|
| Housing width        | 11 mm  |
| Housing height       | 31 mm  |
| Housing depth        | 23 mm  |
| Degree of protection | IP65   |
| Connection           | fixed cable 300 mm with M12 connector, 4-pin |
| Material             |  |
| Housing              | PC (glass-fiber-reinforced Makrolon)         |
| Optical face         | PMMA   |
| Mass                 | approx. 50 g                                 |

**Approvals and certificates**

|                  |  |
|------------------|--|
| Protection class | II, rated voltage ≤ 50 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                  |

**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 aid for ML7 and ML8 series, Mounting bracket

**OMH-ML7-02**

Mounting aid for ML7 and ML8 series, Mounting bracket

**OMH-ML7-03**

Mounting aid for ML7 and ML8 series, Fixing plate

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