



**Model Number**

**ML100-8-HW-350-RT/102/115**

Background evaluation sensor with fixed cable

**Features**

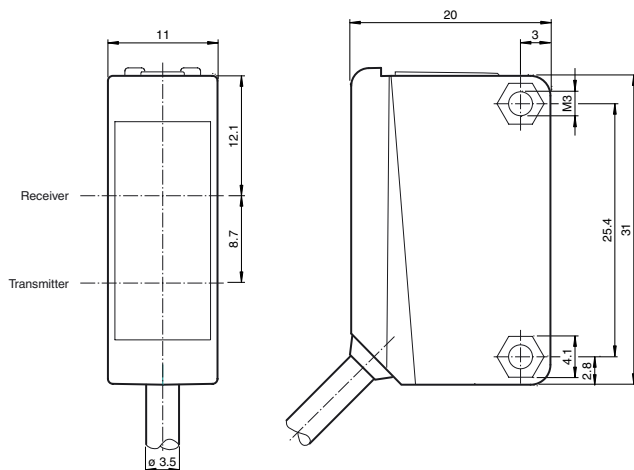
- User-friendliest photoelectric sensor series for standard applications
- Miniature design
- Background evaluation uses background as reference for detection of difficult targets
- Simplest alignment and commissioning thanks to ultrabright transmitter LED
- Clear and functional display concept for the operating modes
- Full metal thread mounting

**Product information**

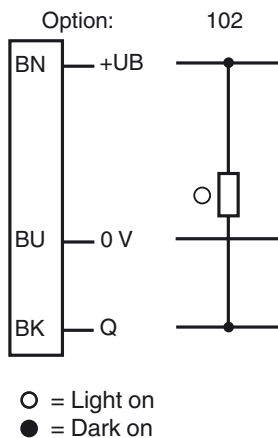
The ML100 series is characterized by its miniature housing with integral, all-metal threaded bushings. All versions are equipped with a visible red transmitter LED. This greatly simplifies installation and commissioning. The switching states are easily visible from all directions thanks to the highly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

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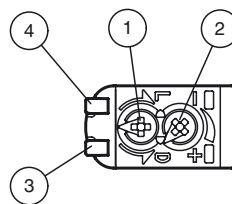
**Dimensions**



**Electrical connection**



**Indicators/operating means**



1	Light-Dark-switching	
2	Detection range adjuster	
3	Signal display	yellow
4	Operating display	green

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

Detection range	5 ... 350 mm
Adjustment range	30 ... 350 mm
Light source	LED
Light type	modulated visible red light
Approvals	CE, cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure)
Diameter of the light spot	approx. 20 mm at a distance of 350 mm
Angle of divergence	approx. 4 °
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**

Operating display	LED green: power on
Function display	LED yellow ON: sensor detects background
Controls	Detection range adjuster
Controls	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>	< 20 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	500 Hz
Response time		1 ms

**Ambient conditions**

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

**Mechanical specifications**

Protection degree	IP67
Connection	2 m fixed cable
Material	
Housing	PC (Polycarbonate)
Optical face	PMMA
Mass	approx. 50 g

**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	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

**Accessories****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**

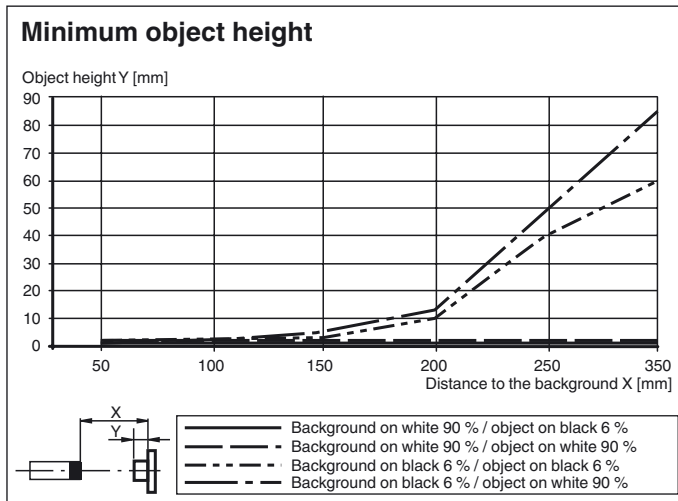
Mounting aid for ML100 series

**OMH-10**

Mounting aid

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

## Curves/Diagrams



## Notes

1. Set up the sensor to the background object.
2. Rotate the detection range adjuster clockwise until the yellow LED turns ON.
3. Continue to rotate the detection range adjuster clockwise until the yellow LED turns OFF.
4. Now counter-clockwise rotate the detection range adjuster just until the yellow LED turns ON again.

Preferably the background should be light or white.

Object should move transversely to the sensor.

The background should not vary in height.