



### Model Number

**ML100-8-H-250-RT/103/115**

Background suppression sensor  
with 2 m fixed cable

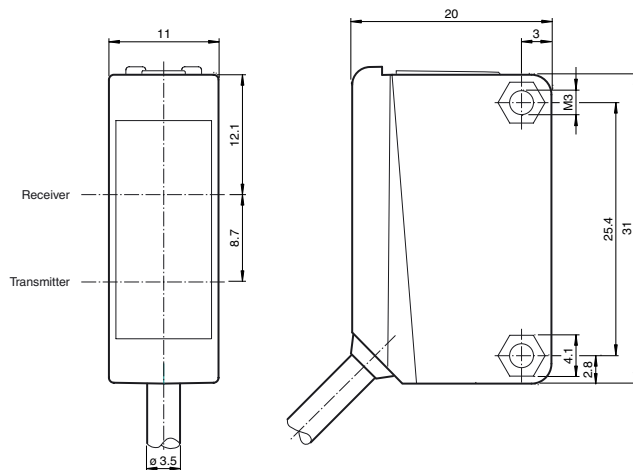
### Features

- 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

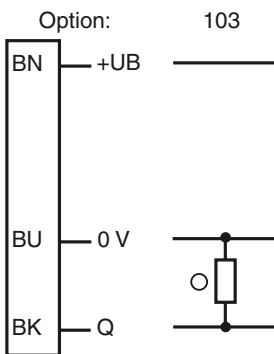
### Product information

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

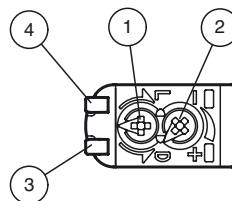


### Electrical connection



○ = Light on  
● = Dark on

### Indicators/operating means



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

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

Detection range	5 ... 250 mm
Detection range min.	5 ... 30 mm
Detection range max.	5 ... 250 mm
Adjustment range	30 ... 250 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 %)	< 15 % at 250 mm
Diameter of the light spot	approx. 15 mm at a distance of 250 mm
Angle of divergence	approx. 4 °
Optical face	frontal
Ambient light limit	EN 60947-5-2:2007+A1:2012

**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	Sensing range adjuster
Control elements	Light-on/dark-on changeover switch

**Electrical specifications**

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	< 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 <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	1000 Hz
Response time		500 μs

**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

**Compliance with standards and directives**

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007+A1:2012
Standard conformity	
Standards	UL 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

**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

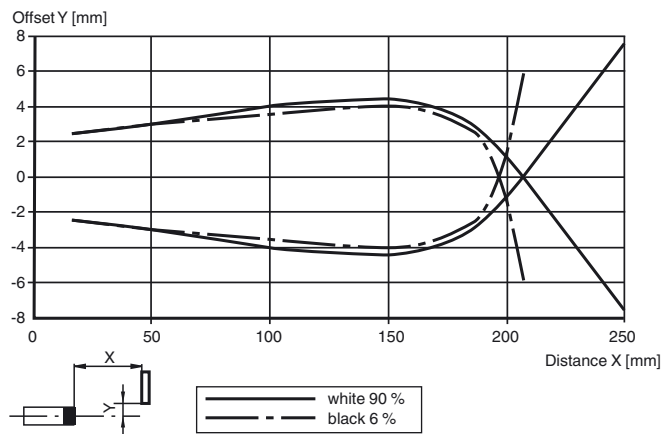
**OMH-ML100-08**

Mounting aid for ML100 series, Snap-in

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

## Curves/Diagrams

### Characteristic response curve



### Difference in detection distance

