



**Model Number**

**ML100-8-H-100-RT/95/103**

Background suppression sensor with 4-pin, M8 x 1 connector

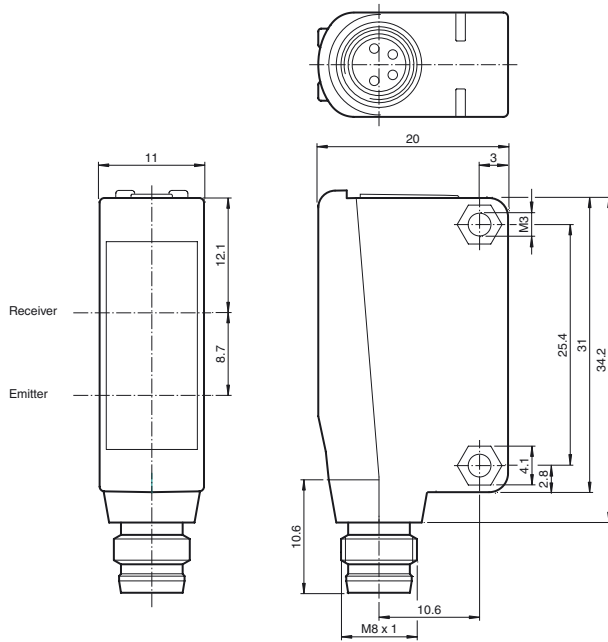
**Features**

- 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

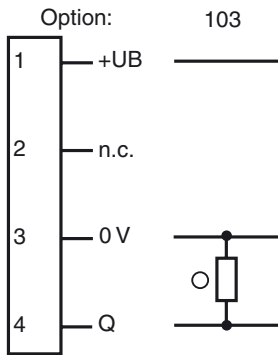
**Product information**

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**

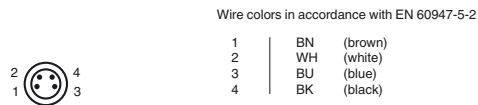


**Electrical connection**

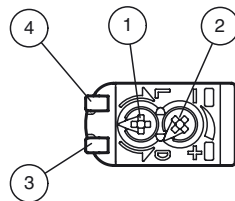


○ = Light on  
● = Dark on

**Pinout**



**Indicators/operating means**



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

Release date: 2016-08-22 10:05 Date of issue: 2016-08-22 814648\_eng.xml

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

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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 60947-5-2:2007+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>	< 15 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		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	connector M8 x 1, 4-pin
Material	
Housing	PC (Polycarbonate)
Optical face	PMMA
Mass	approx. 10 g
Tightening torque, fastening screws	0.6 Nm

**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-ML100-03**

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

**V31-GM-2M-PUR**

Female cordset, M8, 4-pin, PUR cable

**V31-WM-2M-PUR**

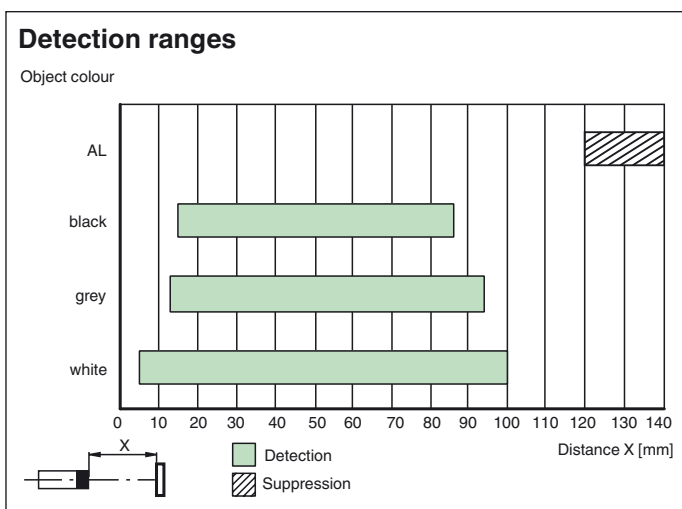
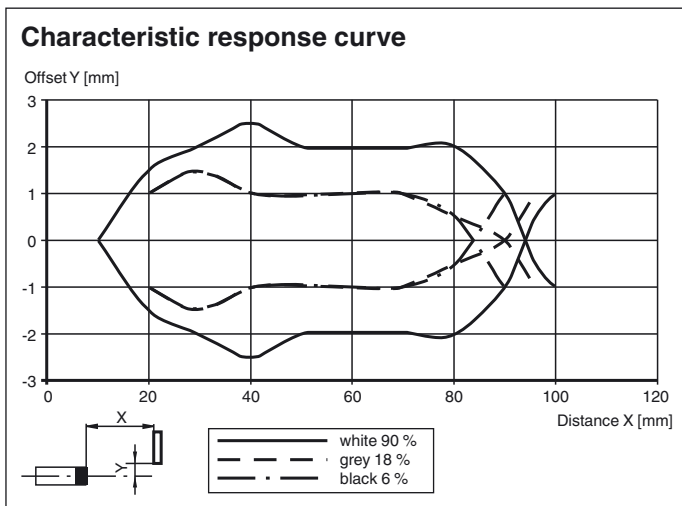
Female cordset, M8, 4-pin, PUR cable

**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**



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