



## Background suppression sensor ML100-8-H-350-RT/103/115a



- 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

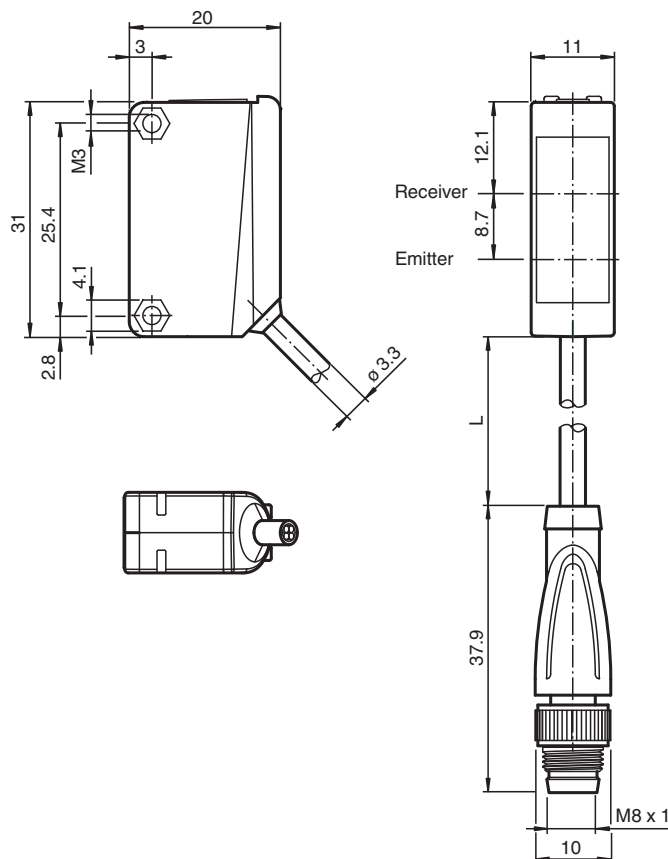
Triangulation sensor with background suppression, 350 mm adjustable detection range, red light, light/dark on, pnp output, fixed cable with M8 plug



### Function

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



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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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## Technical Data

<b>General specifications</b>			
Detection range			5 ... 350 mm
Detection range min.			5 ... 30 mm
Detection range max.			5 ... 350 mm
Adjustment range			30 ... 350 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%)			< 18 % at 350 mm
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 60947-5-2:2007+A1:2012
<b>Functional safety related parameters</b>			
MTTF <sub>d</sub>			860 a
Mission Time (T <sub>M</sub> )			20 a
Diagnostic Coverage (DC)			0 %
<b>Indicators/operating means</b>			
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
<b>Electrical specifications</b>			
Operating voltage	U <sub>B</sub>		10 ... 30 V DC
Ripple			max. 10 %
No-load supply current	I <sub>0</sub>		< 20 mA
<b>Output</b>			
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		500 Hz
Response time			1 ms
<b>Conformity</b>			
Product standard			EN 60947-5-2
<b>Approvals and certificates</b>			
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
<b>Ambient conditions</b>			
Ambient temperature			-30 ... 60 °C (-22 ... 140 °F)
Storage temperature			-40 ... 70 °C (-40 ... 158 °F)
<b>Mechanical specifications</b>			
Housing width			11 mm
Housing height			31 mm
Housing depth			20 mm
Degree of protection			IP67
Connection			300 mm fixed cable with M8 connector, 4-pin
Material			
Housing			PC (Polycarbonate)
Optical face			PMMA

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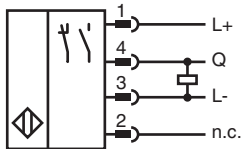
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## Technical Data

Mass	approx. 20 g
Tightening torque, fastening screws	0.6 Nm
Cable length	0.3 m

## Connection



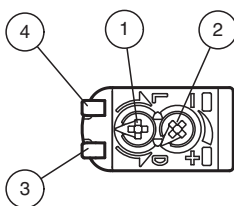
## Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

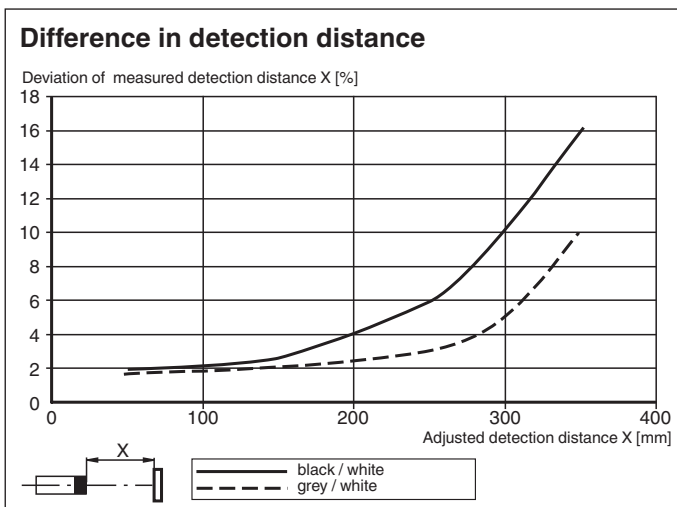
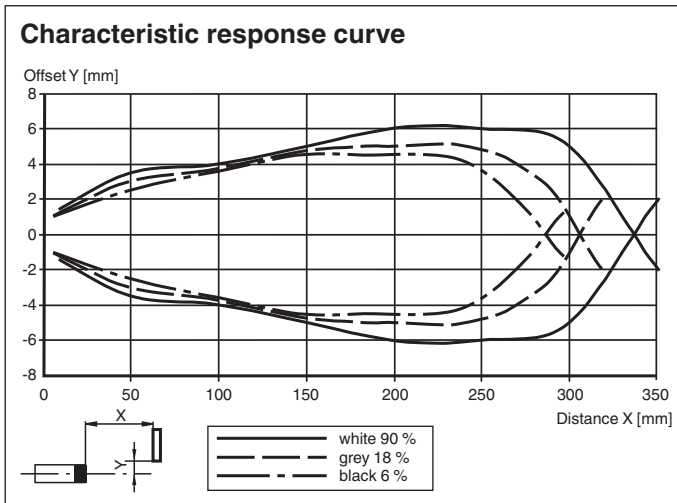
## Assembly



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

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## Characteristic Curve




## Accessories

	<b>OMH-ML100-09</b>	Mounting aid for round steel $\varnothing$ 12 mm or sheet 1.5 mm ... 3 mm
	<b>OMH-ML100-01</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-ML100-02</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-ML100-03</b>	Mounting aid for round steel $\varnothing$ 12 mm or sheet 1.5 mm ... 3 mm
	<b>OMH-ML100-04</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-ML100-05</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-F10-ML100</b>	Mounting aid for ML100 series
	<b>OMH-10</b>	Mounting aid

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## Accessories

	<b>OMH-ML100-S1</b>	Mounting bracket
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