



## Background suppression sensor

ML100-8-H-100-RT/95/102



- 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

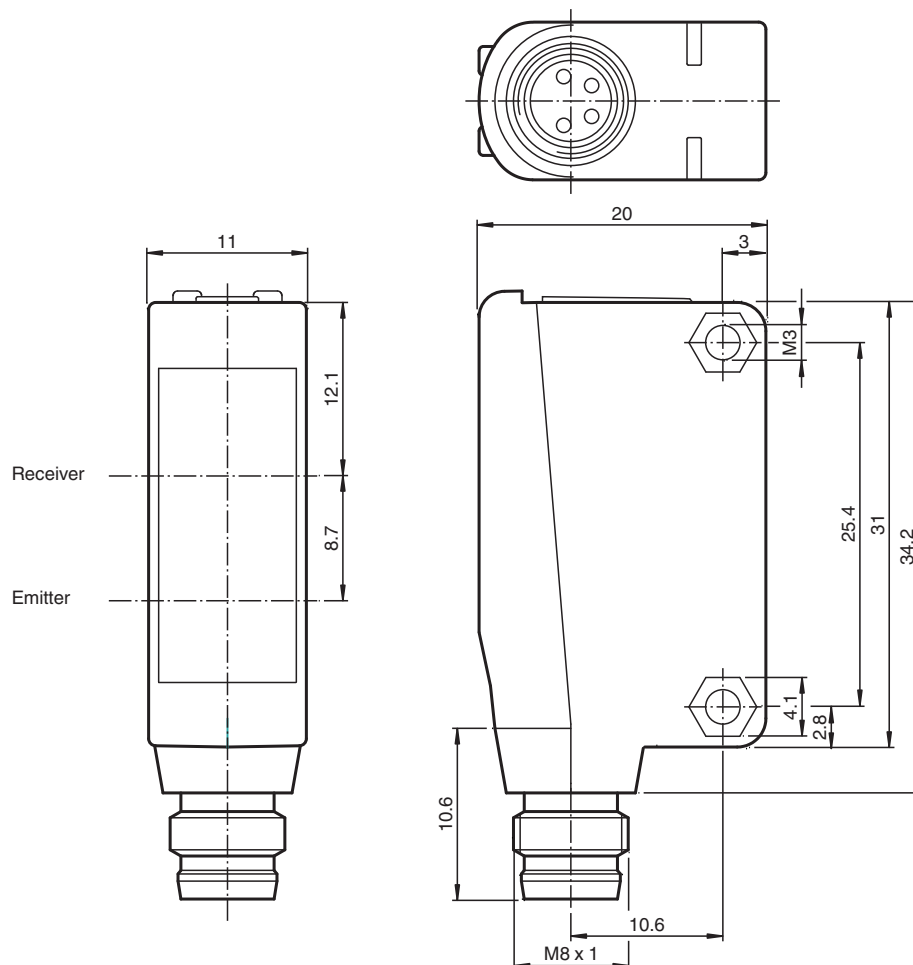
Triangulation sensor with background suppression, 100 mm adjustable detection range, red light, light on, npn output, M8 plug 4-pin



### 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".

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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
Opening angle			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 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		1000 Hz
Response time			0.5 ms
Conformity			
Product standard			EN 60947-5-2
Approvals and certificates			
EAC conformity			TR CU 020/2011
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
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			Connector M8 x 1 , 4-pin
Material			
Housing			PC (Polycarbonate)

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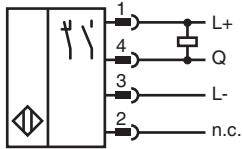
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## Technical Data

Optical face	PMMA
Mass	approx. 10 g
Tightening torque, fastening screws	0.6 Nm

## Connection



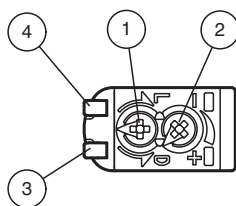
## Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

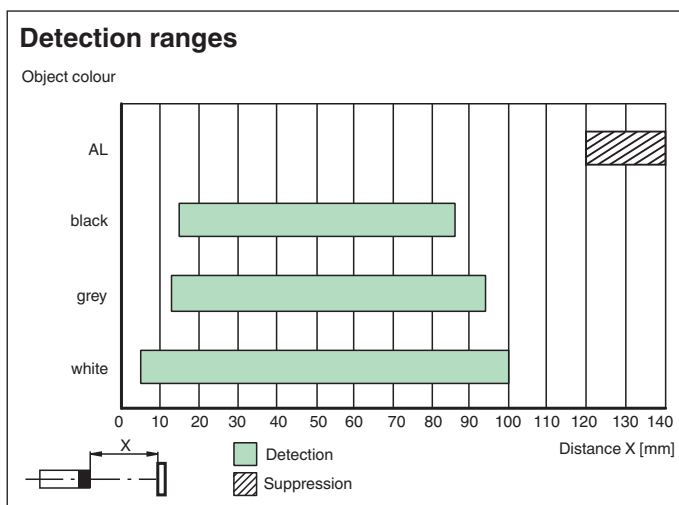
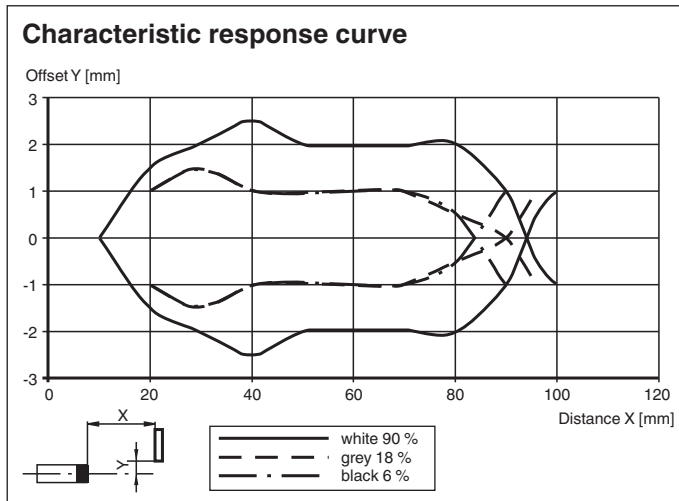
## Assembly



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

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## Characteristic Curve



## Application








## 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

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## Accessories

	<b>OMH-ML100-03</b>	Mounting aid for round steel ø 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>V31-GM-2M-PUR</b>	Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey
	<b>V31-WM-2M-PUR</b>	Female cordset single-ended M8 angled A-coded, 4-pin, PUR cable grey