



## Diffuse mode sensor ML100-8-W-200-RT/95/102



- 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

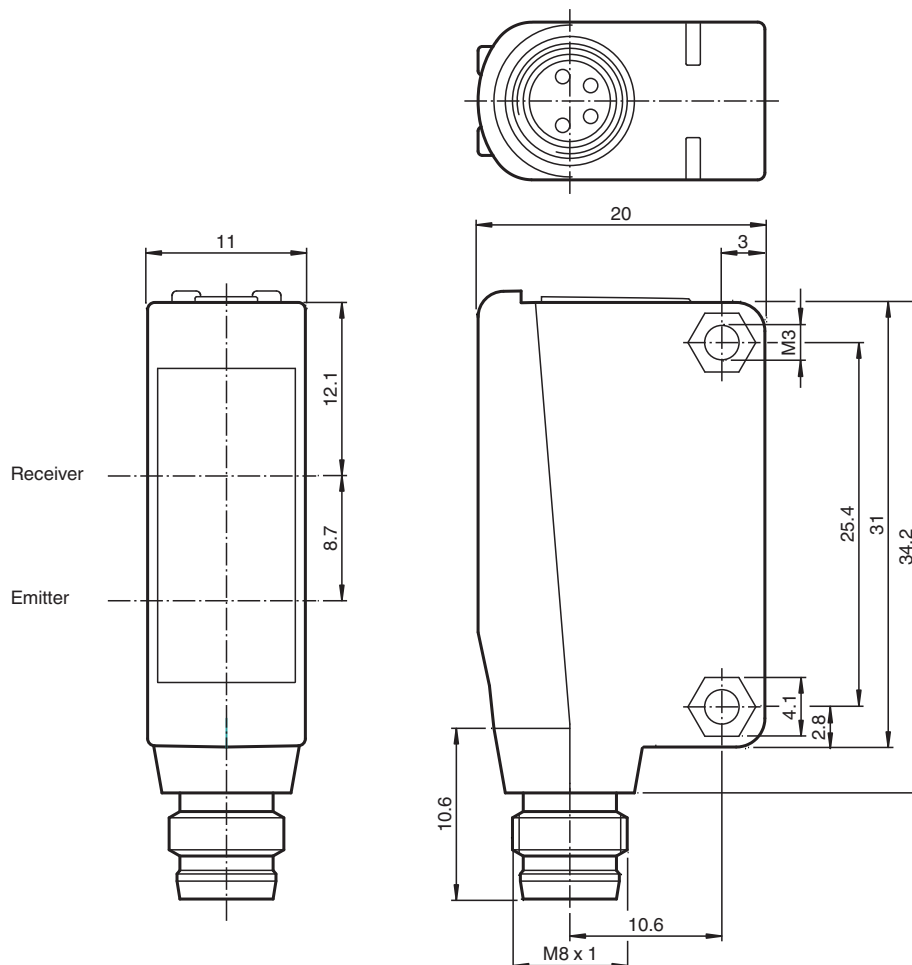
Diffuse mode sensor with rectangular light spot for clear object detection, 200 mm detection range, red light, light/dark on, sensitivity adjuster, DC version, NPN output, M8 plug



### 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

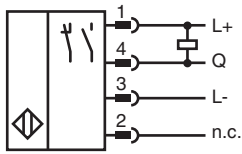
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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## Technical Data

General specifications		
Detection range		0 ... 200 mm
Adjustment range		15 ... 200 mm
Reference target		standard white , 200 mm x 200 mm
Light source		LED
Light type		modulated visible red light
Polarization filter		no
Diameter of the light spot		approx. 170 mm at a distance of 200 mm
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 up with receiver lit
Control elements		sensitivity adjustment
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 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		
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		plug M8 x 1 , 4-pin
Material		
Housing		PC (Polycarbonate)
Optical face		PMMA
Mass		approx. 10 g
Tightening torque, fastening screws		0.6 Nm

**Connection**



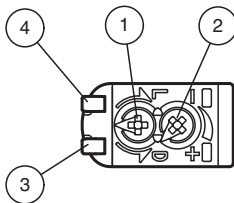
**Connection Assignment**



Wire colors in accordance with EN 60947-5-2

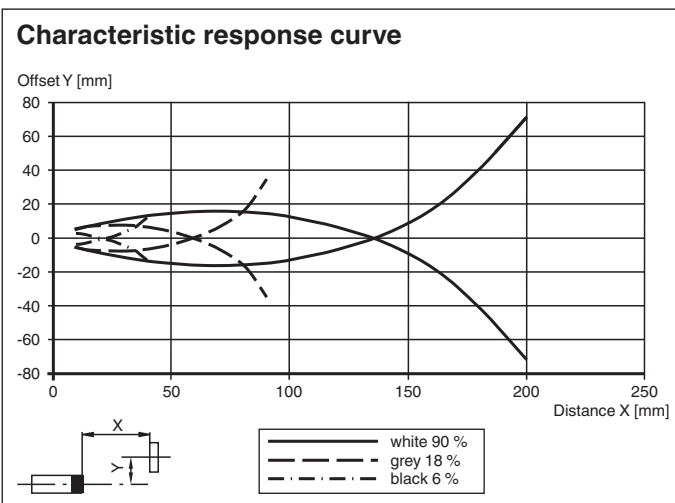
- 1 | BN (brown)
- 2 | WH (white)
- 3 | BU (blue)
- 4 | BK (black)

**Assembly**



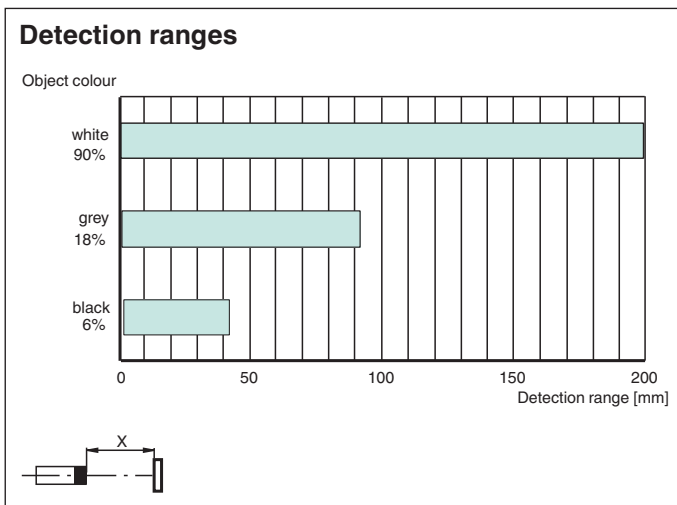
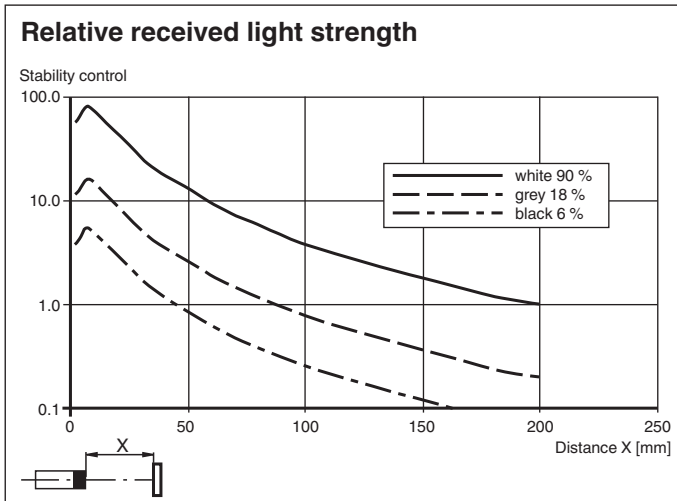
1	Light-Dark-switching	
2	Sensitivity adjuster	
3	Signal display	yellow
4	Operating display	green

**Characteristic Curve**



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## 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-ML100-03</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
	<b>OMH-ML100-S1</b>	Mounting bracket
	<b>V31-GM-2M-PUR</b>	Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey

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## Accessories



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

Female cordset single-ended M8 angled A-coded, 4-pin, PUR cable grey

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