

Diffuse mode sensor

ML100-8-W-200-RT/102/115



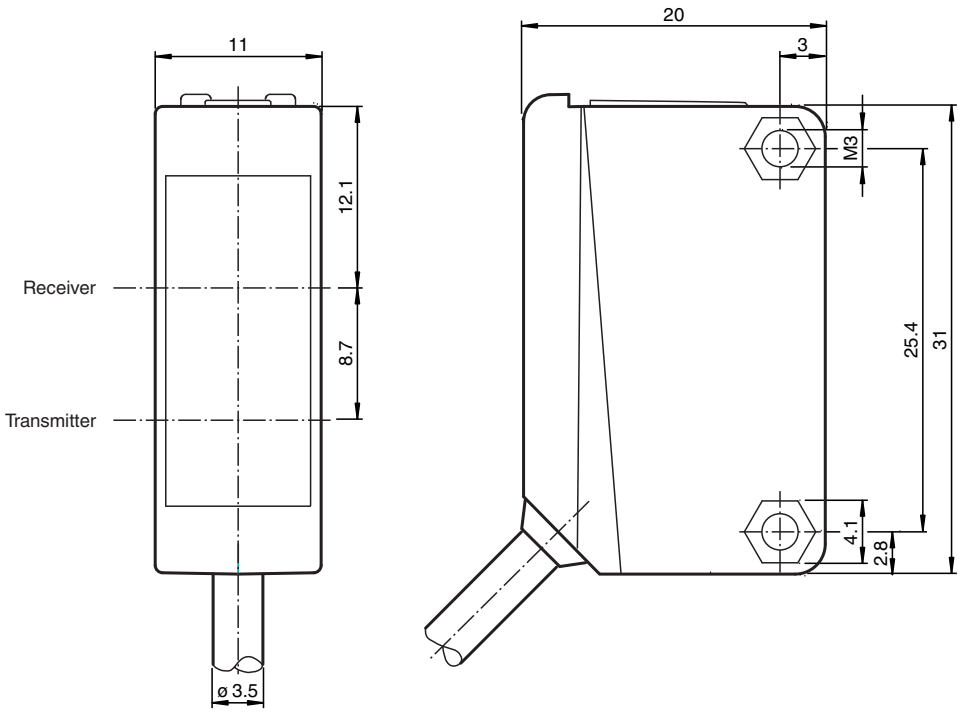
- Miniature design
- Detects transparent materials
- Full metal thread mounting
- Not sensitive to ambient light
- The extra-large light spot makes the device insensitive to vibrations and skewing of the object

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, fixed cable

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



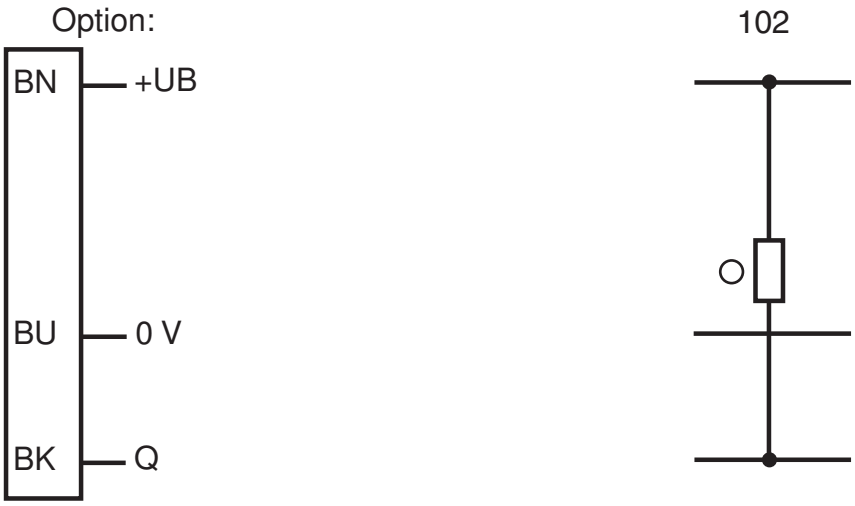
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Technical Data

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		
$MTTF_d$		860 a
Mission Time (T_M)		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_B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I_0	< 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_d	≤ 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		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

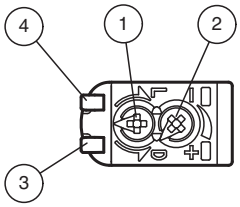
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Connection Assignment



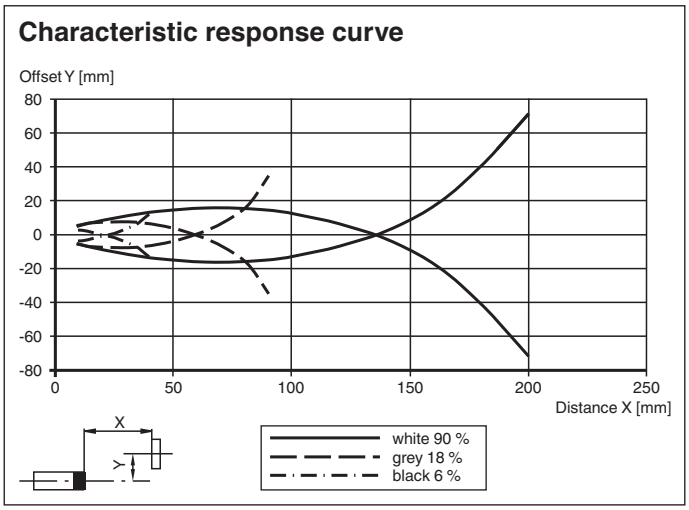
○ = Light on
● = Dark on

Assembly



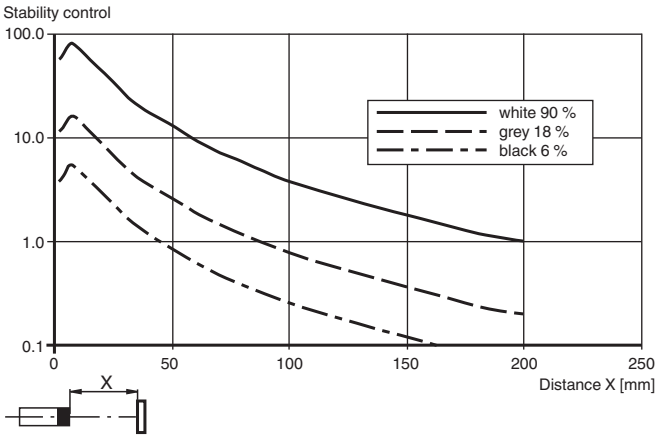
1	Light-Dark-switching	
2	Sensitivity adjuster	
3	Signal display	yellow
4	Operating display	green

Characteristic Curve

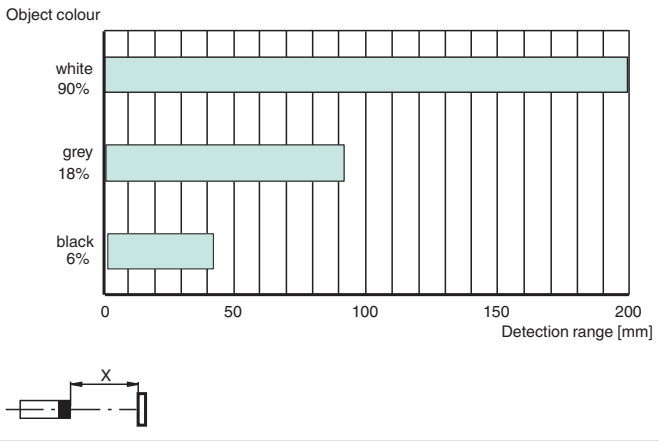


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Relative received light strength



Detection ranges



Accessories

	**OMH-ML100-09**	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
	**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

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Accessories

Additional accessories can be found in the Internet.

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