



Triangulation sensor (BGS)

ML100-8-H-200-IR/102/115e



- Miniature design
- Full metal thread mounting
- Infrared light design

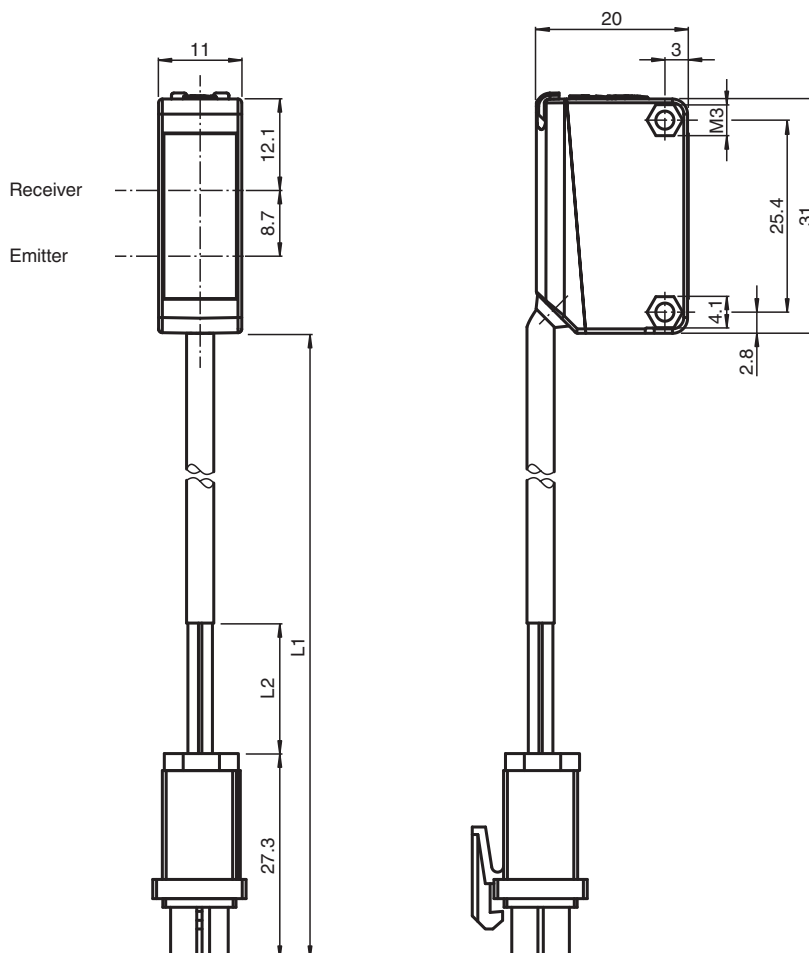
Triangulation sensor with background suppression, 200 mm adjustable detection range, infrared light, light/dark ON, NPN output, fixed cable with connector



Function

The optical sensors of this series are suitable for both standard and demanding applications. The series features a miniature housing design, two M3 metal-threaded mounting holes and a highly visible LED status indicator. Each device is equipped with a sensitivity adjuster and a light-on/dark-on changeover switch for increased flexibility. A wide variety of versions are available in both infrared light and red light with PowerBeam for easy alignment. Special versions with BlueBeam are suitable for challenging applications like those in the solar and battery industries.

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

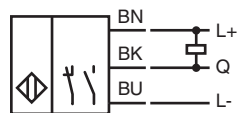
General specifications		
Detection range		5 ... 200 mm
Detection range min.		5 ... 30 mm
Detection range max.		5 ... 200 mm
Adjustment range		30 ... 200 mm
Reference target		standard white, 100 mm x 100 mm
Light source		IREd
Light type		modulated infrared light
Polarization filter		no
Black-white difference (6 %/90 %)		< 20 % at 200 mm
Diameter of the light spot		approx. 12 mm at a distance of 200 mm
Opening angle		approx. 4 °
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 when object is detected
Control elements		Sensing range adjuster
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	500 Hz
Response time		1 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		fixed cable with Tyco connector
Material		
Housing		PC (Polycarbonate)
Optical face		PMMA

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Cable		
Length	L	L1 = 254 mm + 10 mm , L2 = 50.8 mm + 5 mm
Mass		approx. 20 g
Tightening torque, fastening screws		0.6 Nm
Factory settings		
Detection range		140 mm ± 5 mm

Connection

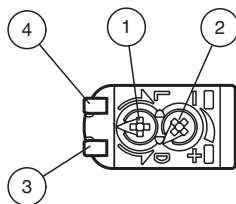


Connection Assignment



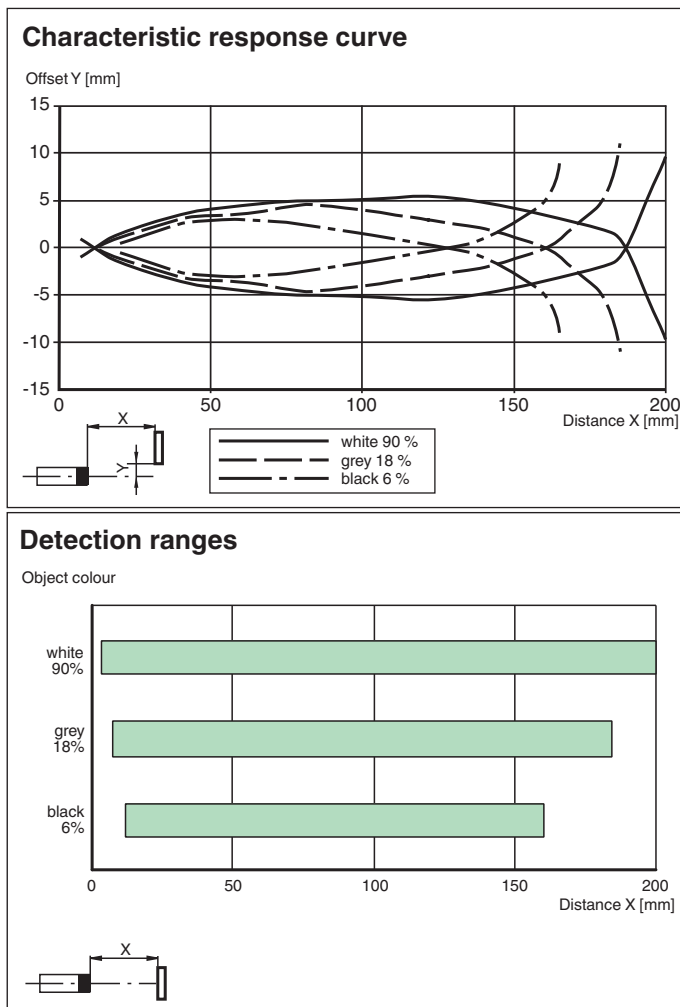
1	BN
2	n.c.
3	BU
4	BK

Assembly



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

Characteristic Curve



Accessories

	OMH-ML100-09	Mounting aid for round steel $\varnothing$ 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 $\varnothing$ 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 for ML100 series

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Accessories

	OMH-ML100-S1	Mounting bracket
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