



# Triangulation sensor (BGS)

## OBT15-R2-E2-P



- High-performance miniature photoelectric sensors
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Extremely small light spot for very high switching point accuracy
- Highly visible light spot, even on dark materials
- Precision object detection, almost irrespective of the color

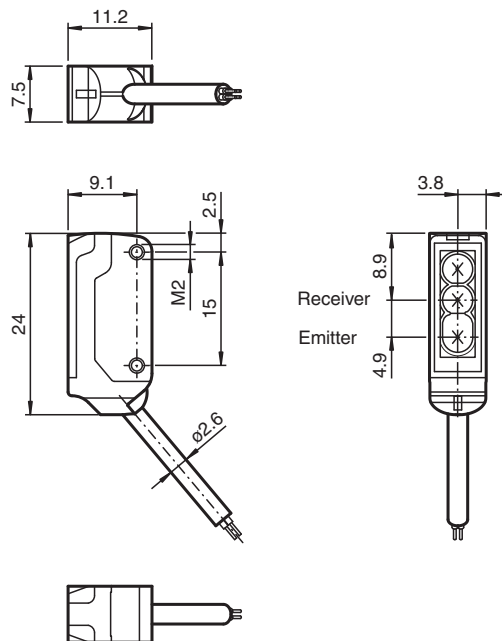
Triangulation sensor with background suppression for standard applications, miniature design, 15 mm detection range, red light, light on, PNP output, 2 m fixed cable



### Function

The nano sensor has been developed for a broad range of applications. It offers excellent durability and is exceptionally easy to install. The housing is compact and, with its 45° cable outlet, can be installed in the smallest spaces. New functional principles and functionality open up a range of new options.

### Dimensions



### Technical Data

General specifications	
Detection range	2 ... 15 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light , 630 nm

Release date: 2023-04-05 Date of issue: 2023-04-05 Filename: 70141850\_eng.pdf

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

Black-white difference (6 %/90 %)		< 5 % at 15 mm
Angle deviation		approx. 2 °
Diameter of the light spot		approx. 2 mm at a distance of 15 mm
Opening angle		approx. 2 °
Optical face		frontal
Ambient light limit		EN 60947-5-2 : 30000 Lux
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		800 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
Operation indicator		LED green: Power on flashing: Short circuit/overload indication
Function indicator		LED yellow ON: lights when object is detected
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC , class 2
No-load supply current	I <sub>0</sub>	< 10 mA
<b>Output</b>		
Switching type		NO contact / light on
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 50 mA , resistive load
Voltage drop	U <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	approx. 800 Hz
Response time		600 μs
<b>Conformity</b>		
Product standard		EN 60947-5-2
<b>Approvals and certificates</b>		
UL approval		cULus Recognized, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated ≤36 V
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 60 °C (-13 ... 140 °F)
Storage temperature		-30 ... 70 °C (-22 ... 158 °F)
<b>Mechanical specifications</b>		
Housing width		7.5 mm
Housing height		24 mm
Housing depth		11.2 mm
Degree of protection		IP67
Connection		2 m fixed cable
<b>Material</b>		
Housing		PC/ABS and TPU
Optical face		PC
Cable		PUR
Installation		Fixing screws , 2 x M2 allen head screws included with delivery
Mass		approx. 20 g
Cable length		2 m

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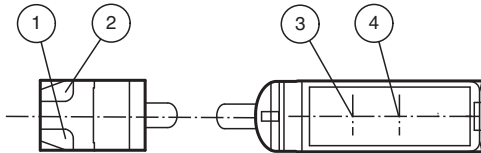
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**Connection**

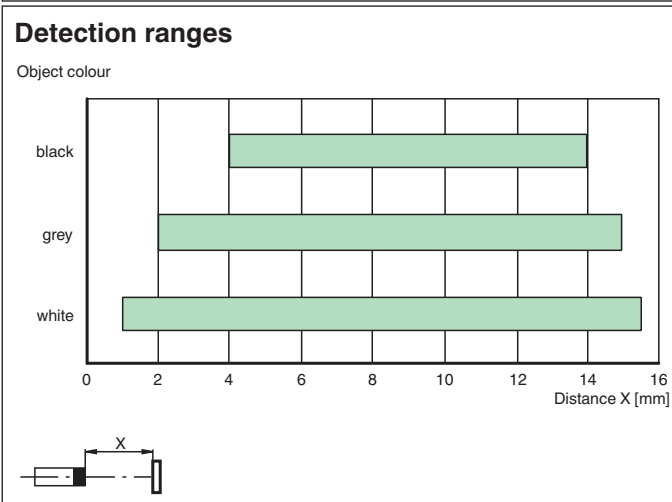
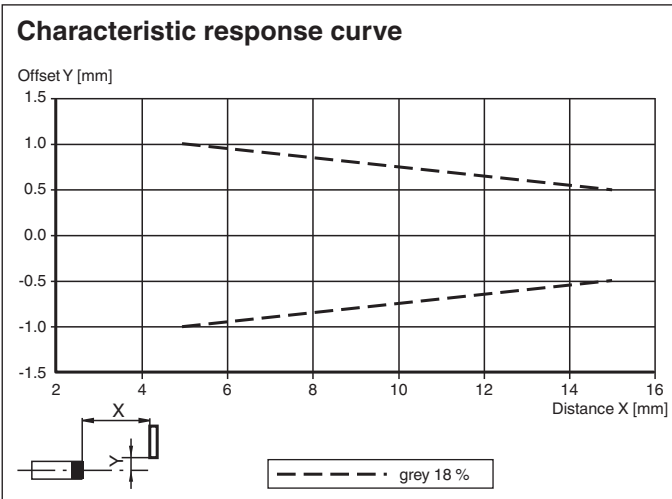


**Assembly**







1	Operating display	green
2	Signal display	yellow
3	Emitter	
4	Receiver	

**Characteristic Curve**



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**Accessories**

	<b>MH-R2-01</b>	Mounting aid for R2 series, Mounting bracket
	<b>MH-R2-02</b>	Mounting aid for R2 series, Mounting bracket
	<b>MH-R2-03</b>	Mounting aid for R2 series, Mounting bracket
	<b>MH-R2-04</b>	Mounting aid for R2 series, Mounting bracket

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