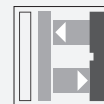




## Triangulation sensor (BGS)

### OBT30-R3-E1



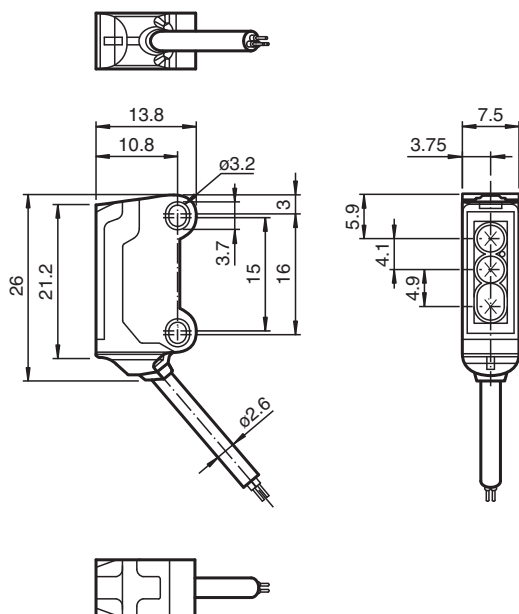
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Improvement in machine availability with abrasion-resistant, antistatic glass front
- Highly visible light spot, even on dark materials
- Precision object detection, almost irrespective of the color

Triangulation sensor with background suppression for standard applications, ultra-small design, 30 mm sensing range, red light, dark on, NPN output, fixed cable



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	1 ... 30 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light , 630 nm
Black-white difference (6 %/90 %)	< 7 % at 30 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

Release date: 2022-06-03 Date of issue: 2022-06-03 Filename: 319554\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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**PEPPERL+FUCHS**

## Technical Data

### Functional safety related parameters

MTTF <sub>d</sub>		800 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %

### Indicators/operating means

Operation indicator		LED green: Power on flashing: Short circuit/overload indication
Function indicator		LED yellow ON: lights when object is detected

### Electrical specifications

Operating voltage	U <sub>B</sub>	10 ... 30 V DC , class 2
No-load supply current	I <sub>0</sub>	< 10 mA
Protection class		III

### Output

Switching type		NC contact
Signal output		1 NPN 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

### Conformity

Product standard		EN 60947-5-2
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### Approvals and certificates

EAC conformity		TR CU 020/2011
UL approval		E87056 , cULus Recognized, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated ≤36 V

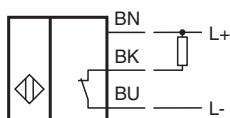
### Ambient conditions

Ambient temperature		-25 ... 60 °C (-13 ... 140 °F)
Storage temperature		-30 ... 70 °C (-22 ... 158 °F)

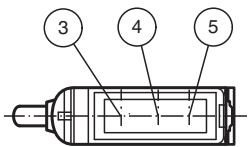
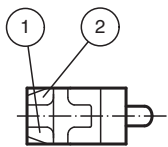
### Mechanical specifications

Housing width		7.5 mm
Housing height		26 mm
Housing depth		13.8 mm
Degree of protection		IP67
Connection		2 m fixed cable
Material		
Housing		PC/ABS and TPU
Optical face		glass
Cable		PUR
Mass		approx. 20 g
Cable length		2 m

## Connection

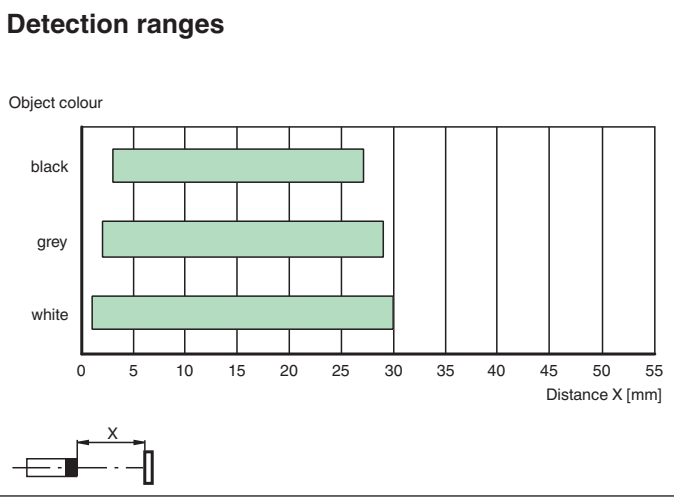
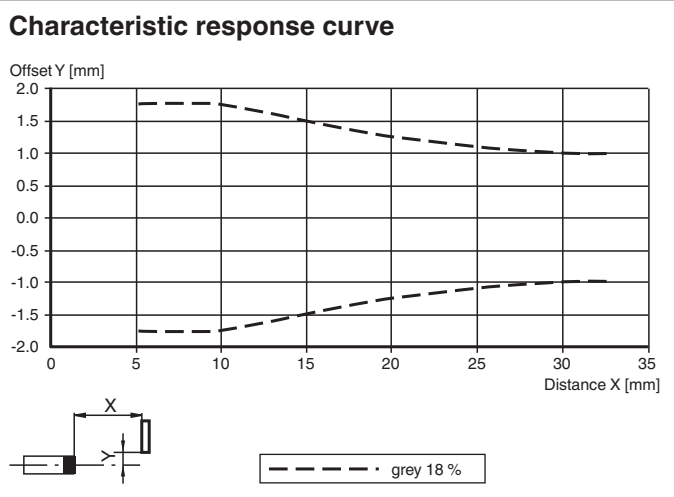


Assembly



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

Characteristic Curve



Accessories

	<b>MH-R3-01</b>	Mounting aid for sensors from the R3 series, mounting bracket
	<b>MH-R3-02</b>	Mounting aid for sensors from the R3 series, mounting bracket
	<b>MH-R3-03</b>	Mounting aid for sensors from the R3 series, mounting bracket
	<b>MH-R3-04</b>	Mounting aid for sensors from the R3 series, mounting bracket