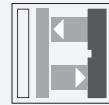




Triangulation sensor (BGS)

OBT80-R3-E2



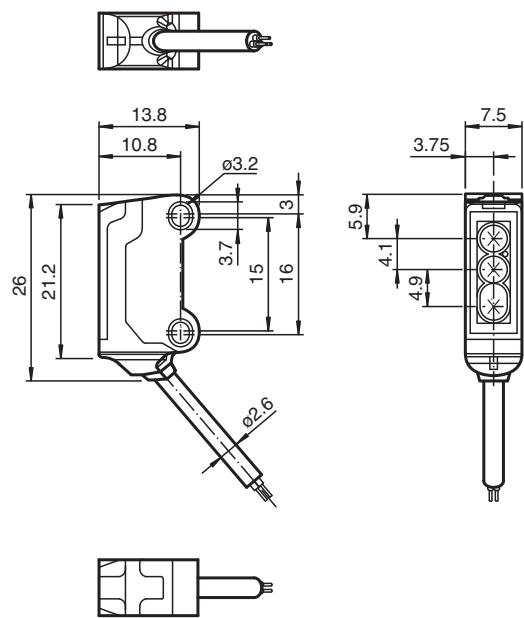
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Improvement in machine availability with abrasion-resistant, antistatic glass front
- Highly visible light spot, even on dark materials
- Precision object detection, almost irrespective of the color
- Extremely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

Triangulation sensor with background suppression for standard applications, miniature design, 80 mm sensing range, red light, light on, PNP 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

Release date: 2022-06-03 Date of issue: 2022-06-03 Filename: 289714_eng.pdf

General specifications

Detection range	15 ... 80 mm
Reference target	standard black, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light , 630 nm
Black-white difference (6 %/90 %)	< 20 %
Angle deviation	approx. 2 °
Diameter of the light spot	approx. 5 mm at a distance of 80 mm
Opening angle	approx. 2 °
Optical face	frontal
Ambient light limit	EN 60947-5-2 : 30000 Lux

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

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 PEPPERL+FUCHS

Technical Data

Functional safety related parameters

MTTF _d	800 a
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Mission Time (T _M)	20 a
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Diagnostic Coverage (DC)	0 %
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Indicators/operating means

Operation indicator	LED green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz)
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Function indicator	LED yellow ON: lights when object is detected
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Electrical specifications

Operating voltage	U _B	10 ... 30 V DC , class 2
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No-load supply current	I ₀	< 10 mA
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Protection class	III
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Output

Switching type	NO contact
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Signal output	1 PNP output, short-circuit protected, reverse polarity protected, open collector
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Switching voltage	max. 30 V DC
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Switching current	max. 50 mA , resistive load
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Voltage drop	U _d	≤ 1.5 V DC
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Switching frequency	f	approx. 800 Hz
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Response time	600 µs
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Conformity

Product standard	EN 60947-5-2
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Approvals and certificates

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

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

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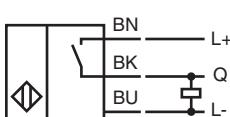
Optical face	glass
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Cable	PUR
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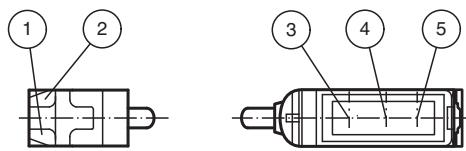
Mass	approx. 20 g
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Cable length	2 m
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Connection



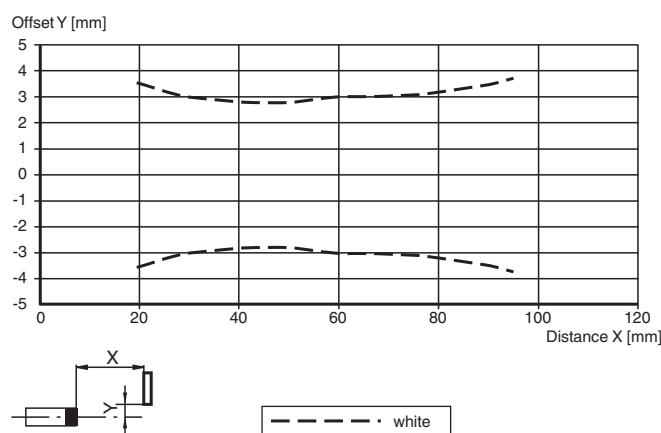
Assembly



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

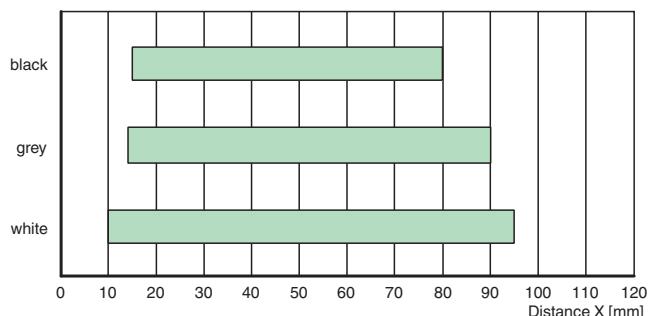
Characteristic Curve

Characteristic response curve



Detection ranges

Object colour



Accessories



MH-R3-01

Mounting aid for sensors from the R3 series, mounting bracket



MH-R3-02

Mounting aid for sensors from the R3 series, mounting bracket



MH-R3-03

Mounting aid for sensors from the R3 series, mounting bracket



MH-R3-04

Mounting aid for sensors from the R3 series, mounting bracket