

Triangulation sensor (BGS)

OBT15-R3F-E0

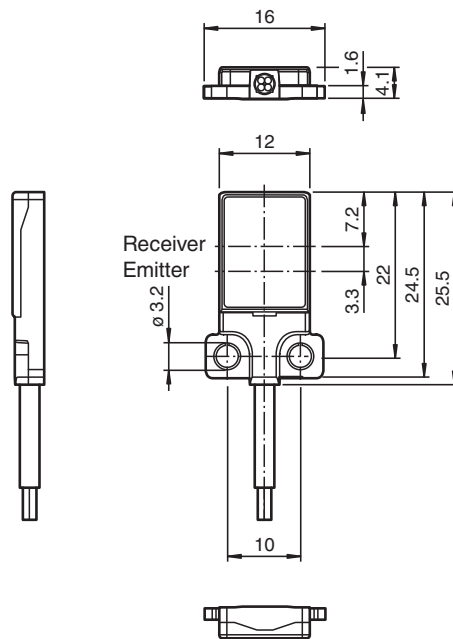


- Very flat design for direct mounting without mounting bracket
- Precision object detection, almost irrespective of the color
- Small parts detection from 0.1 mm
- Highly visible light spot, even on dark materials
- High degree of immunity to extraneous light

Triangulation sensor with background suppression for standard applications, flat design, M3 mounting, 15 mm sensing range, red light, light on, NPN output, fixed cable



Dimensions



Technical Data

General specifications

Detection range	1 ... 15 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light , 630 nm
LED risk group labelling	exempt group
Black-white difference (6 %/90 %)	< 15 % at 15 mm
Angle deviation	approx. 2 °
Object size	typ. starts from 0.1 mm @ 14 mm

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

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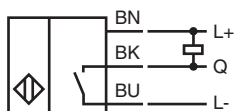
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Technical Data

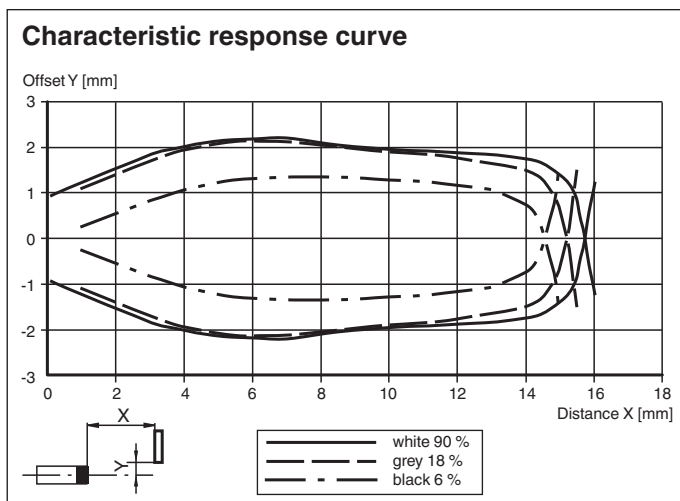
Diameter of the light spot		approx. 2.5 mm at a distance of 15 mm
Opening angle		approx. 5 °
Optical face		frontal
Ambient light limit		EN 60947-5-2 : 25000 Lux
Functional safety related parameters		
MTTF _d		800 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz)
Function indicator		LED yellow ON: lights when object is detected
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC
No-load supply current	I ₀	< 15 mA
Protection class		III
Output		
Switching type		NO contact / light-on
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 _d	≤ 1.5 V DC
Switching frequency	f	approx. 1 kHz
Response time		500 µs
Conformity		
Product standard		EN 60947-5-2
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		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-20 ... 70 °C (-4 ... 158 °F)
Mechanical specifications		
Housing width		16 mm
Housing height		25.5 mm
Housing depth		4.1 mm
Degree of protection		IP67
Connection		2 m fixed cable
Material		
Housing		PC (Polycarbonate) and Stainless steel
Optical face		PMMA
Cable		PUR
Mass		approx. 20 g
Tightening torque, fastening screws		1 Nm
Cable length		2 m

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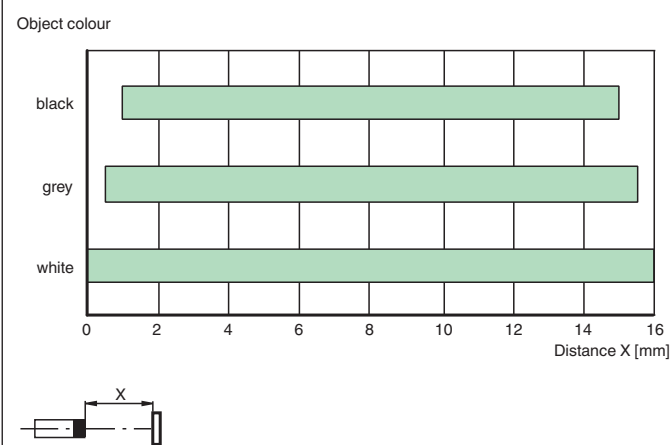
Connection



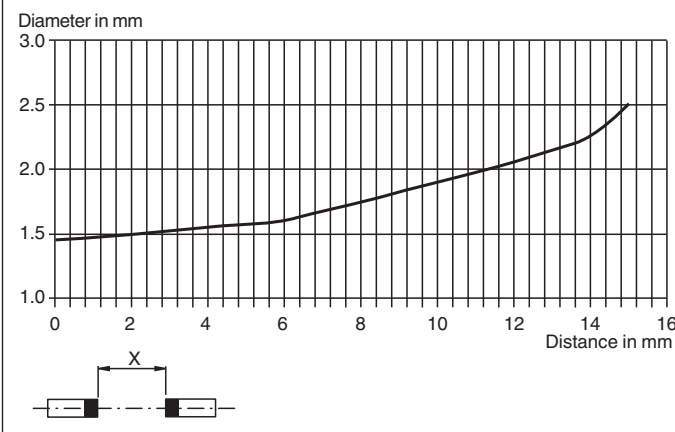
Characteristic Curve



Detection ranges



Light spot diameter



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