

Triangulation sensor (BGS)

OBT30-R2F-E0

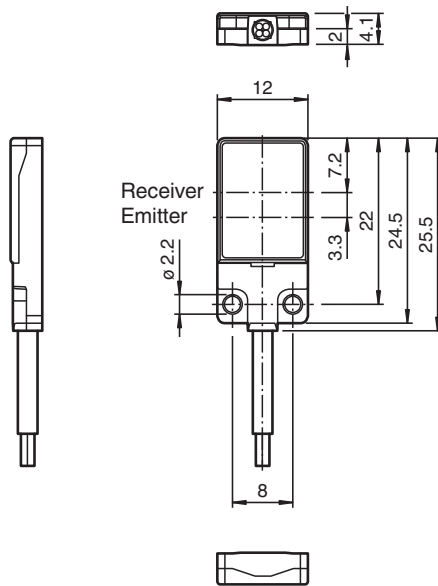


- Very flat design for direct mounting without mounting bracket
- Precision object detection, almost irrespective of the color
- Small parts detection from 0.1 mm
- Highly visible light spot, even on dark materials
- High degree of immunity to extraneous light

Triangulation sensor with background suppression for standard applications, flat design, space-saving M2 mounting, 30 mm sensing range, red light, light on, NPN output, fixed cable



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 |
| LED risk group labelling | exempt group |
| Black-white difference (6 %/90 %) | < 20 % at 30 mm |
| Angle deviation | approx. 2 ° |
| Object size | typ. starts from 0.1 mm @ 16 mm |

Release date: 2023-04-05 Date of issue: 2023-04-05 Filename: 253569_eng.pdf

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

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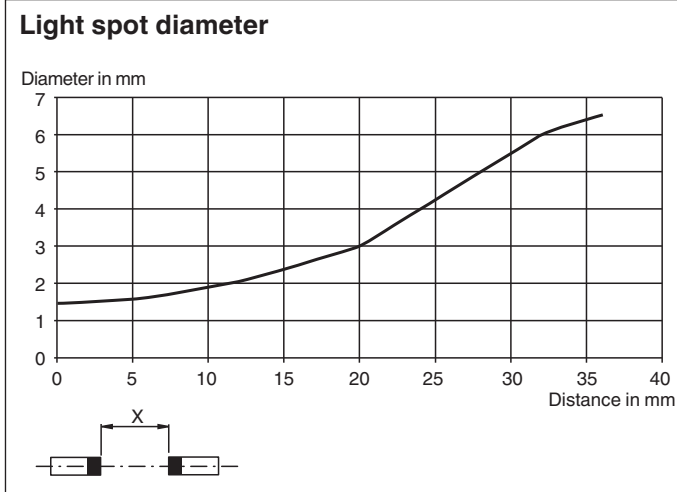
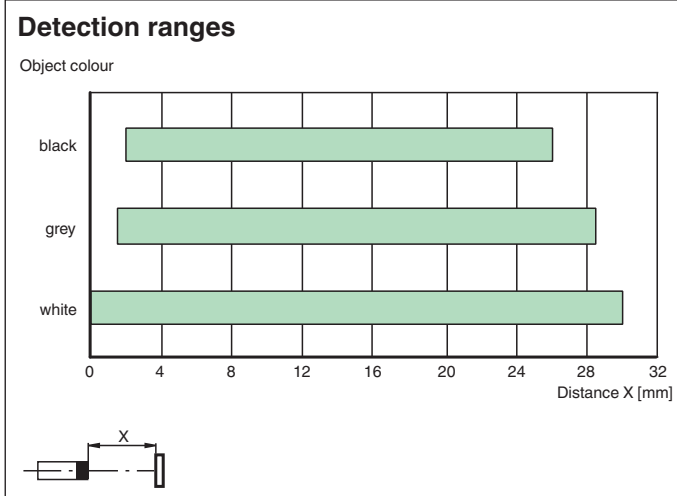
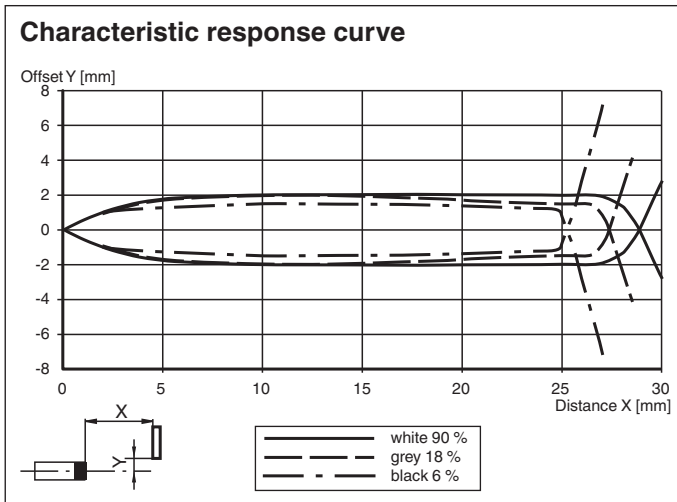
Technical Data

| | | |
|---|--|----------------|
| Diameter of the light spot | approx. 5.5 mm at a distance of 30 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 | | |
| 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 | 12 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 | 0.25 Nm | |
| Cable length | 2 m | |

Connection



Characteristic Curve



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