

Retroreflective sensor (glass) OBG3500-18GM60-E4



- Strong metallic housing in cylindrical shape M18 x 1
- Sensitivity adjuster for optimal adaptation to the application
- Not sensitive to ambient light
- Degree of protection IP67
- Very high detection range

Retroreflective sensor (glass)









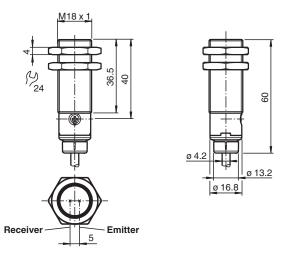
Function

The optical sensors of this series have an M18 threaded housing that is optionally available in plastic or metal.

The sensors are robust and versatile.

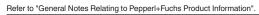
Focusing on the essential requirements simplifies selection and commissioning, saving time and costs.

Dimensions



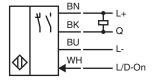
Technical Data

| General specifications | |
|----------------------------|---------------------------------------|
| Effective detection range | 0 3.5 m in glass mode; |
| Reflector distance | 0 3.5 m in glass mode; |
| Threshold detection range | 3.5 m |
| Reference target | reflector C110-2 |
| Light source | LED |
| Light type | modulated visible red light |
| Polarization filter | yes |
| Diameter of the light spot | approx. 190 mm at a distance of 3.5 m |
| Angle of divergence | approx. 2.6 ° |
| | |

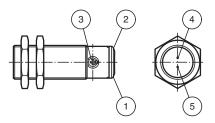


| MTTG 666 a Mission Time (T _{nk}) 20 a Diagnostic Coverage (DC) 0 % Indicators/operating means LED green: operation indicator Operation indicator LED green: operating (4 Hz) - short circuit Function indicator Yallow LED: Permanently in! light path clear Permanently off - object detected Flashing (4 Hz) - insufficion operating reserve Control elements potentiometer for Teach-In Control elements light/dark on electrically switchable Control elements light/dark on electrically switchable Control elements 18 % - clear glass bottles Control elements light/dark on electrically switchable Control elements 2 1 % - calcored glass bottles Control elements light/dark on electrically switchable Control elements 1 8 % - clear glass bottles 40 % - colored glass bottles 40 % - colored glass bottles 40 % - colored glass bottles 40 % - colored glass bottles Mobility max. 30 V DC Ripple max. 10 % No-load supply current by extenting type of the sensor is adjustable. The default setting is: Q - Pin4: NPN output. fdark-on LD-On - Wht. Lon-active input | Technical Data | | |
|--|--------------------------------------|-------|---|
| Functional select yelated parameters MITTF | Optical face | | frontal |
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| Mission Time (T _N) 20 a 20 a Diagnostic Coverage (DC) 0 % Mindicator Soverage (DC) 0 % Punction indicator EED green: on power on flashing (4 Hz): short circuit Function indicator Yellow LED: Permanently lift - biject detected Flashing (4 Hz): insufficient operating reserve Function indicator Yellow LED: Permanently lift - biject detected Flashing (4 Hz): insufficient operating reserve Function lements potentineter for Teach-In Control elements potentineter for Teach-In Control elements light/dark on electrically switchable Control elements light/dark on electrically switchab | Functional safety related parameters | | |
| Diagnostic Coverage (DC) | MTTF _d | | 666 a |
| Indicators/operating means Operation indicator Operation indicator Operation indicator Control elements Operation indicator O | Mission Time (T _M) | | 20 a |
| Departion indicator Control of the control of t | Diagnostic Coverage (DC) | | 0 % |
| Description | Indicators/operating means | | |
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| Control elements light/dark on electrically switchable Contrast detection levels 18 % - clear glass bottles 40 % - colored glass or opaque materials Electrical specifications Us 1030 V DC Ripple max. 10 % No-load supply current Ig < 25 mA Protection class Ill Output The switching type of the sensor is adjustable. The default setting is: Q - Pin/4: NPN output / dark-on L/D-On - WH: Low-active input Signal output 1 NPN output, short-circuit protected, reverse polarity protected, open collector Switching voltage max. 30 V DC Switching current max. 100 mA , resistive load Voltage drop Ug ≤ 2 V DC Switching frequency f 500 Hz Response time ≤ 1 ms EN 60947-5-2 Approvals and certificates EN 60947-5-2 UL approval E 87056 , cULus Listed , class 2 power supply , type rating 1 Ambient conditions EN 60°C (-40 140 °F) Storage temperature -40 60 °C (-40 140 °F) Storage temperature -40 70 °C (-40 158 °F) Mechanical specifications Pip67 | Function indicator | | Permanently lit - light path clear Permanently off - object detected |
| Second a contrast detection levels 18 % - clear glass bottles | Control elements | | potentiometer for Teach-In |
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| Switching current $max. 100 mA$, resistive load Voltage drop $U_d \le 2 V DC$ Switching frequency $f 500 Hz$ Response time $\le 1 ms$ Conformity Product standard $E N 60947-5-2$ Approvals and certificates UL approval $E N 60947-5-2$ Ambient conditions Ambient conditions Ambient temperature $4060 °C (-40140 °F)$ Storage temperature $4070 °C (-40158 °F)$ Mechanical specifications Degree of protection $P N 600 °C (-40160 °C$ | Signal output | | 1 NPN output, short-circuit protected, reverse polarity protected, open collector |
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| MaterialHousingbrass, nickel-platedOptical facePMMACablePVC | | | |
| Housing brass, nickel-plated Optical face PMMA Cable PVC | | | |
| Optical face PMMA Cable PVC | | | brass, nickel-plated |
| Cable PVC | - | | |
| | | | |
| | Mass | | approx. 70 g |

Connection

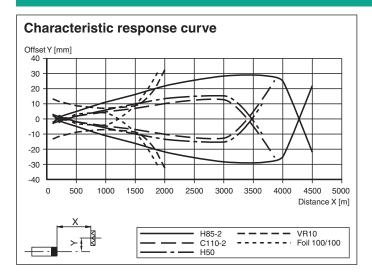


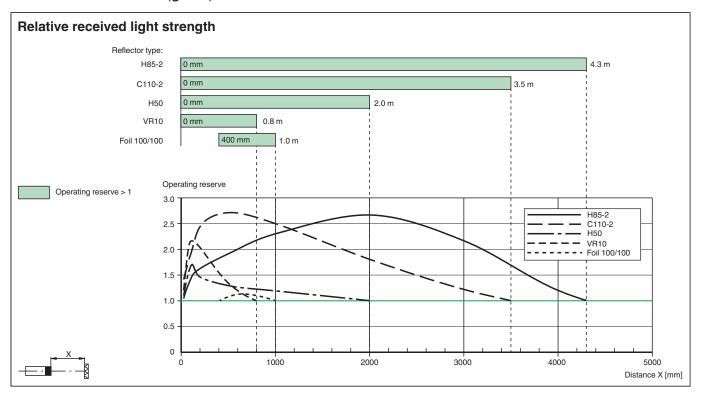
Indication



| 1 | Operating display | green |
|---|-----------------------------|--------|
| 2 | Signal display | yellow |
| 3 | Teach-In and Mode selection | |
| 4 | Emitter | |
| 5 | Receiver | |

Characteristic Curve





Teach-In

Apply the operating voltage to the sensor. The operating indicator lights up green. The sensor is automatically set to the last teach-in setting. Mount a suitable reflector opposite the sensor. The reflector can be taught-in in teach-in mode.

| Switch position | Description |
|-----------------|---------------|
| T | Teach-in mode |
| CI | Contrast 1 |
| CII | Contrast 2 |

Teach-in mode:

- To start the teach-in mode, set the switch to the "T" position when light beam is free (no target).
- · Wait approx. 3 seconds until the yellow and green signal indicators flash slowly and simultaneously (2.5 Hz).
- Turn the switch to contrast I or contrast II.

- To indicate the end of the teach-in mode, the yellow and green signal indicators flash alternately for approx. 5 seconds.

 Teach-in successful: The green and yellow signal indicators flash slowly and alternately (2.5 Hz) for approximately 5 seconds. The contrast selected will be activated. The yellow signal indicator lights up permanently. The sensor is ready for operation.
- Teach-in unsuccessful: The green and yellow signal indicators flash quickly and alternately (8 Hz) for approx. 5 seconds. The contrast selected will be activated. The sensor is set to the previous valid teach-in setting.