



## Photoelectric sensors W4-3 Glass, Photoelectric retro-reflective sensor

WLG4-3F3132



**Model Name** > [WLG4-3F3132](#)  
**Part No.** > [1028128](#)



*Illustration may differ*

#### At a glance

- Fast and reliable setup via teach-in pushbutton
- Continuous threshold adjustment technology to detect objects in changing conditions such as temperature, contamination and reflector wear
- Versions without polarizing filters to better detect depolarizing objects such as PET bottles, CD sleeves and shrink-wrapped, glossy objects

#### Your benefits

- Reliable and quick setting via the push of a button
- Flat housing design eliminates alignment or mounting brackets, which saves time and money
- Low-cost machine integration due to small dimensions that enable mounting in areas with space restrictions
- Quick and easy setup due to highly visible intensive light spot
- The PinPoint LED's well-defined, intense light spot simplifies alignment
- Nearly all transparent objects can be reliably detected



#### Features

|                                  |                                       |
|----------------------------------|---------------------------------------|
| Sensor/detection principle:      | Photoelectric retro-reflective sensor |
| Dimensions (W x H x D):          | 16 mm x 39.5 mm x 12 mm               |
| Housing design (light emission): | Rectangular, Flat                     |
| Sensing range max.:              | 0.01 m ... 4.5 m <sup>1)</sup>        |
| Sensing range:                   | 0.02 m ... 3.5 m <sup>2)</sup>        |
| Type of light:                   | Visible red light                     |
| Light source:                    | PinPoint LED <sup>3)</sup>            |
| Wave length:                     | 650 nm                                |
| Teach-in:                        | Single teach-in button                |
| Adjustment:                      | Teach-in                              |
| Light spot size (distance):      | Ø 75 mm (1.5 m)                       |

1) 2) PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

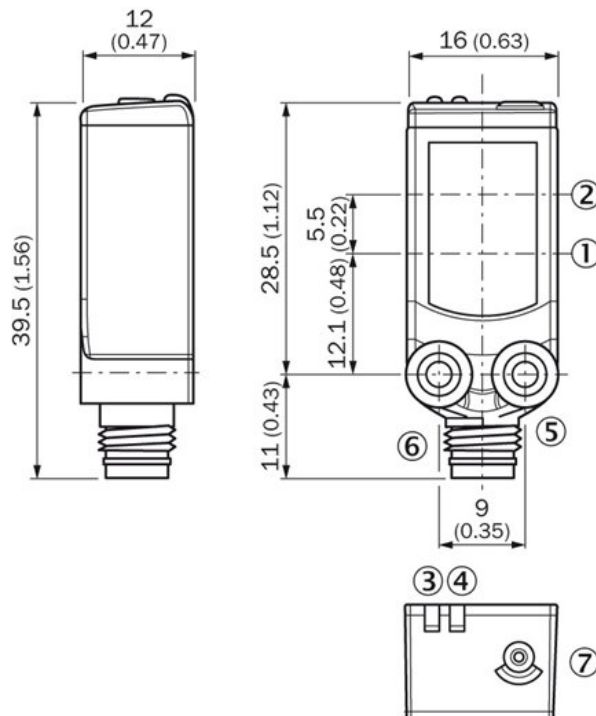
#### Mechanics/electronics

|                    |                                   |
|--------------------|-----------------------------------|
| Supply voltage:    | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:            | < 5 Vpp <sup>2)</sup>             |
| Power consumption: | ≤ 20 mA <sup>3)</sup>             |
| Output type:       | PNP                               |
| Switching mode:    | Dark-switching                    |

|                                     |                                                      |
|-------------------------------------|------------------------------------------------------|
| Output current I <sub>max</sub> ..: | ≤ 100 mA                                             |
| Response time:                      | < 0.5 ms <sup>4)</sup>                               |
| Switching frequency:                | 1,000 Hz <sup>5)</sup>                               |
| Angle of reception:                 | Ca. 30 °                                             |
| Attenuation along light beam:       | > 8 %                                                |
| Connection type:                    | Cable with connector M8, 3-pin, 100 mm <sup>6)</sup> |
| Cable material:                     | PVC                                                  |
| Conductor cross-section:            | 0.14 mm <sup>2</sup>                                 |
| Cable diameter:                     | Ø 3.4 mm                                             |
| Circuit protection:::               | A, C, D <sup>7)</sup> <sup>8)</sup> <sup>9)</sup>    |
| Protection class:                   | III                                                  |
| Weight:                             | 30 g                                                 |
| Polarisation filter:                | ✓                                                    |
| Housing material:                   | ABS, Plastic                                         |
| Optics material:                    | PMMA                                                 |
| Enclosure rating:                   | IP 67<br>IP 66                                       |
| Special feature:                    | For transparent objects                              |
| Ambient operating temperature:      | -40 °C ... 60 °C                                     |
| Ambient storage temperature:        | -40 °C ... 75 °C                                     |

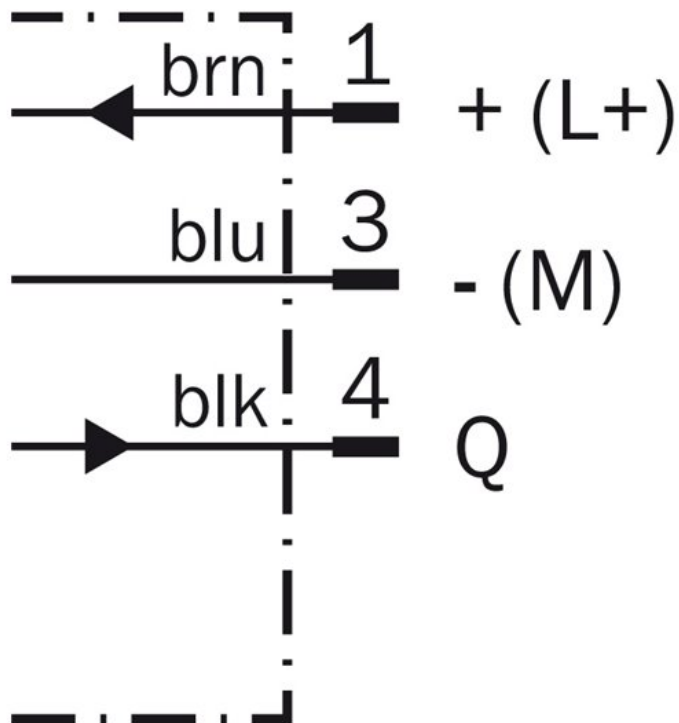
<sup>1)</sup> Limit values   <sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances   <sup>3)</sup> Without load   <sup>4)</sup> Signal transit time with resistive load   <sup>5)</sup> With light/dark ratio 1:1   <sup>6)</sup> Do not bend below 0 °C   <sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected   <sup>8)</sup> C = interference suppression   <sup>9)</sup> D = outputs overcurrent and short-circuit protected

## Dimensional drawing

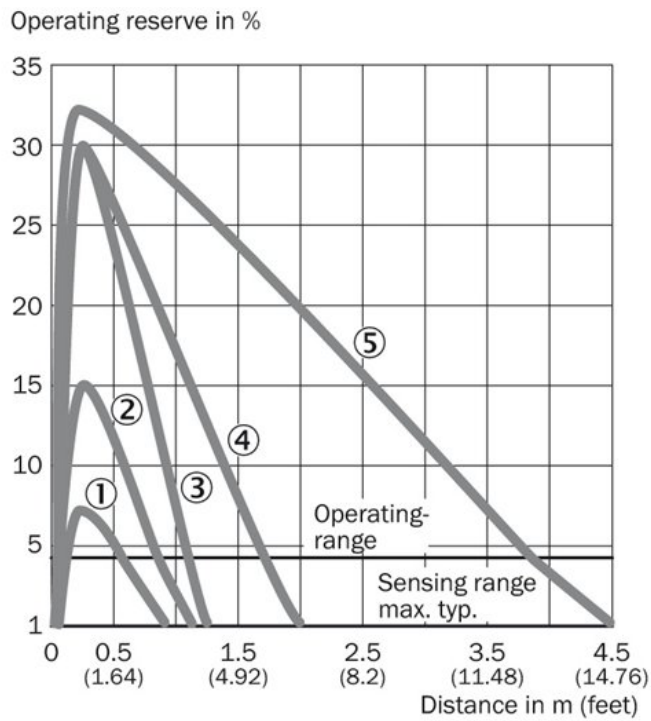


- [1] Center of optical axis, sender
- [2] Center of optical axis, receiver
- [3] LED indicator orange: status of received light beam
- [4] Status indicator LED green: power on
- [5] Threaded mounting hole M3
- [6] Connection
- [7] Teach-in button

Connection diagram

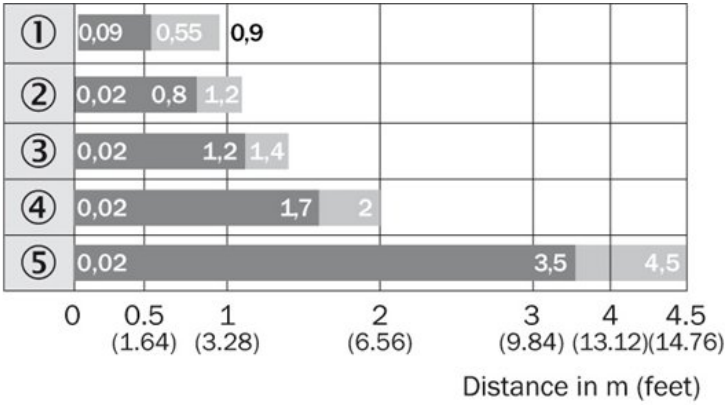


Characteristic curve



- |1| REF-IRF-56
- |2| PL10F
- |3| PL20A
- |4| PL40A
- |5| PL80A

Sensing range diagram

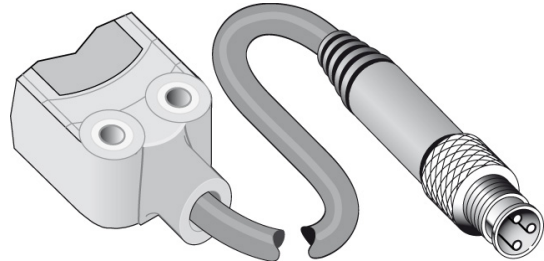


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■ Sensing range      ■ Sensing range typ. max.

- ① REF-IRF-56
- ② PL10F
- ③ PL20A
- ④ PL40A
- ⑤ PL80A

Connection type



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