



## Photoelectric sensors GR18S, Through-beam photoelectric sensor

GRSE18S-E1336



**Model Name** > GRSE18S-E1336  
**Part No.** > 1059543



Illustration may differ

#### At a glance

- Low-cost cylindrical M18 sensor with extra short housing
- Five different housing styles
- Variety of plastic and metal housing styles, with straight or right angle optics
- Bright and highly visible PinPoint-LED
- Special flush type, one-piece metal housing
- Highly visible signal indicator LED
- IP 67 rating

#### Your benefits

- Space-saving solution due to short housing
- Flexible mounting options due to versatile housing styles
- Easy installation and precise detection due to PinPoint LED
- Reduced maintenance costs due to high tightening torque of single piece flush metal housing
- Rugged and reliable with proven SICK technology
- Highly visible signal indicator LED saves maintenance and commissioning time



#### Features

|                                  |                                   |
|----------------------------------|-----------------------------------|
| Sensor/detection principle:      | Through-beam photoelectric sensor |
| Housing design (light emission): | Cylindrical, straight, straight   |
| Optical axis:                    | Axial                             |
| Sensing range max.:              | 0 m ... 15 m                      |
| Sensing range:                   | 0 m ... 10 m                      |
| Type of light:                   | Visible red light                 |
| Light source:                    | PinPoint LED <sup>1)</sup>        |
| Wave length:                     | 650 nm                            |
| Light spot size (distance):      | Ø 250 mm (10 m)                   |

<sup>1)</sup> Average service life of 100,000 h at  $T_A = +25\text{ °C}$

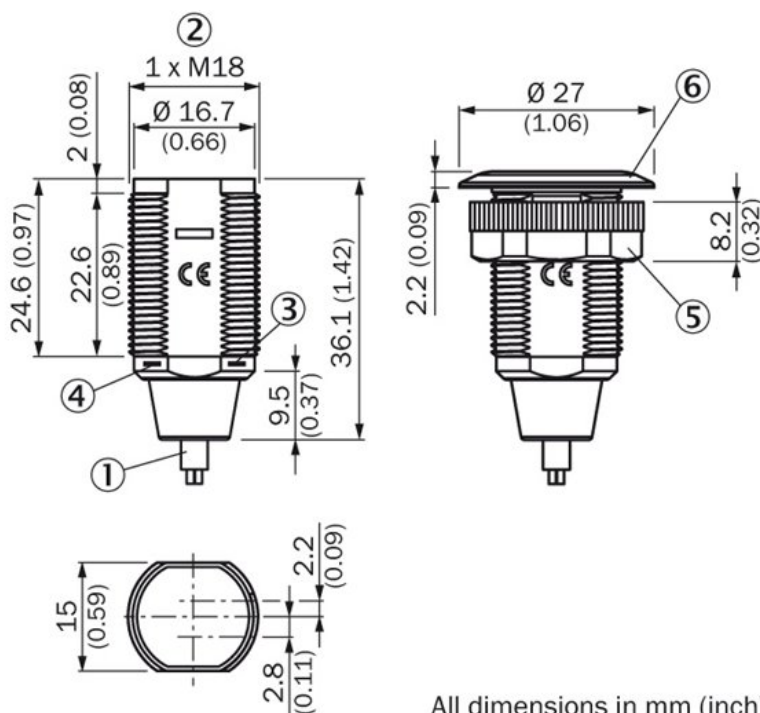
#### Mechanics/electronics

|                    |                                   |
|--------------------|-----------------------------------|
| Supply voltage:    | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:            | $\pm 5\text{ Vpp}$ <sup>2)</sup>  |
| Power consumption: | $\leq 30\text{ mA}$               |
| Output type:       | NPN                               |
| Switching mode:    | Dark-switching                    |

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Output current I <sub>max</sub> : | 100 mA <sup>3)</sup>             |
| Response time:                    | < 500 µs <sup>4)</sup>           |
| Switching frequency:              | 1,000 Hz                         |
| Connection type:                  | Cable, 3-wire, 2 m <sup>5)</sup> |
| Cable material:                   | PVC                              |
| Circuit protection:::             | A, B, D <sup>6)</sup> 7) 8)      |
| Protection class:                 | III                              |
| Housing material:                 | Plastic                          |
| Enclosure rating:                 | IP 67                            |
| Ambient operating temperature:    | -25 °C ... 55 °C <sup>9)</sup>   |
| Ambient storage temperature:      | -40 °C ... 70 °C                 |

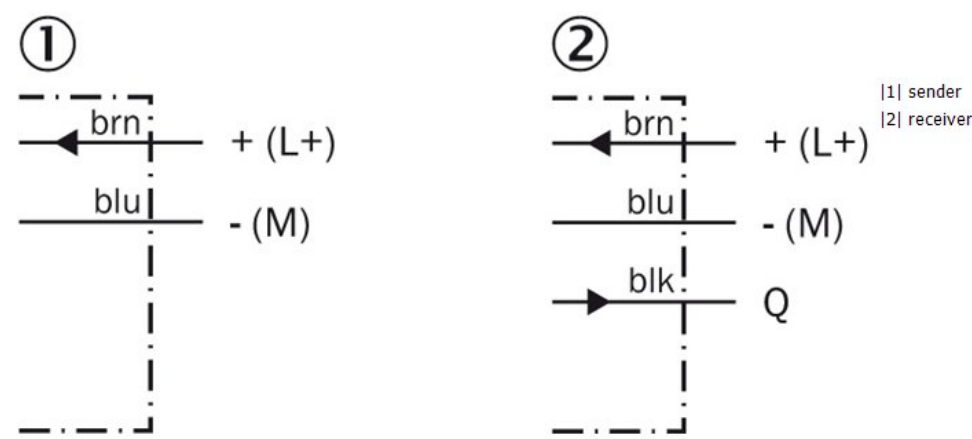
<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances <sup>3)</sup> At V<sub>S</sub> > 24 V or ambient temperature > 49 °C, I<sub>A</sub> max = 50 mA <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> Do not bend below 0 °C <sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>7)</sup> B = inputs and output reverse-polarity protected <sup>8)</sup> D = outputs overcurrent and short-circuit protected <sup>9)</sup> At U<sub>V</sub> ≤ 24V and I<sub>A</sub>

## Dimensional drawing



- [1] Connection cable 2 m
- [2] Threaded mounting hole M18 x 1
- [3] LED indicator yellow
- [4] LED indicator green
- [5] fastening nut; 22 mm hex, plastic
- [6] Mounting ring

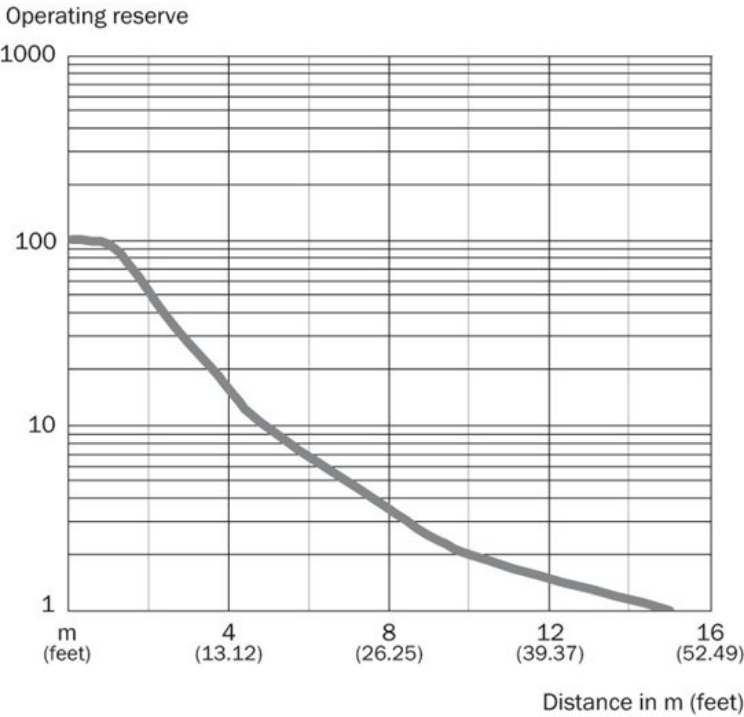
Connection diagram



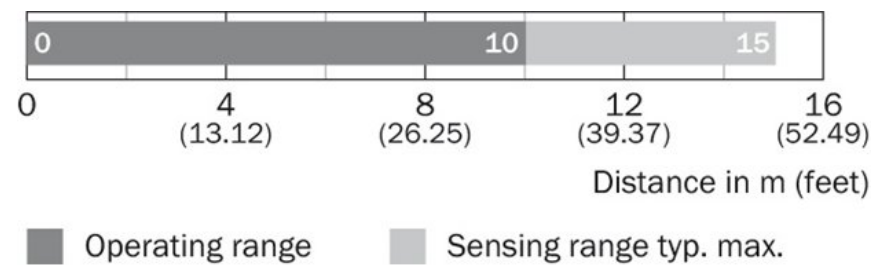
|1| sender

|2| receiver

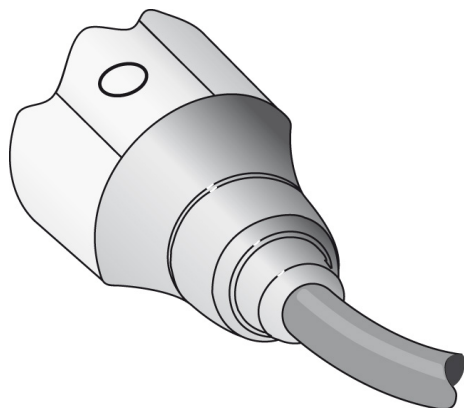
Characteristic curve



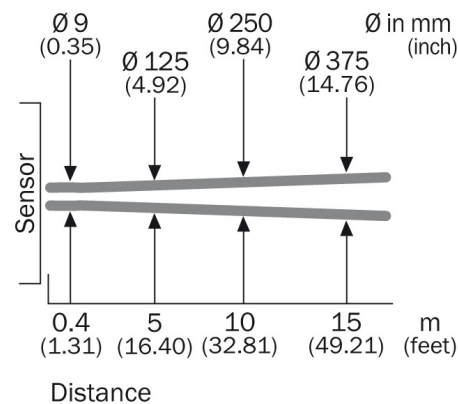
Sensing range diagram



Connection type



Light spot size



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