



Photoelectric sensors
GR18, Through-beam photoelectric sensor

GRSE18-N1127



Model Name > GRSE18-N1127
Part No. > 1068331



Illustration may differ

At a glance

- Economical M18 cylindrical sensors with standard housing design
- Two different housing types made of plastic and metal with straight optical output
- Very bright and highly visible PinPoint LEDs
- Highly visible status indicator
- IP 67 enclosure rating

Your benefits

- A whole range of mounting options thanks to the different housing types
- Simple alignment and precise detection using PinPoint LEDs
- Easy to mount with simple M18 hole mounting. No special mounting brackets required.
- Rugged and reliable operation due to proven SICK sensing technology
- Clearly visible status display reduces setup time and maintenance time



Features

| | |
|----------------------------------|-----------------------------------|
| Sensor/detection principle: | Through-beam photoelectric sensor |
| Housing design (light emission): | Cylindrical, straight |
| Optical axis: | axial |
| Sensing range max.: | 0 m ... 15 m |
| Sensing range: | 0 m ... 10 m |
| Type of light: | Infrared light |
| Light source: | LED ¹⁾ |
| Wave length: | 850 nm |
| Light spot size (distance): | Ø 420 mm (10 m) |

¹⁾ Average service life of 100,000 h at T_A = +25 °C

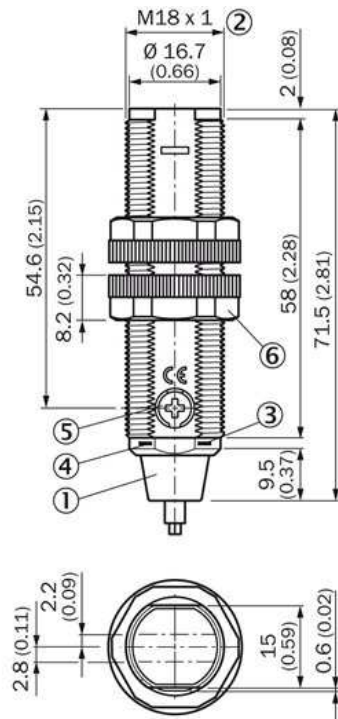
Mechanics/electronics

| | |
|------------------------------------|-----------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Residual ripple: | ± 5 Vpp ²⁾ |
| Power consumption: | ≤ 30 mA |
| Output type: | NPN |
| Output function: | Complementary |
| Switching mode: | Light/dark switching |
| Output current I _{max.} : | 100 mA ³⁾ |
| Response time: | < 500 µs ⁴⁾ |

| | |
|--------------------------------|----------------------------------|
| Switching frequency: | 1,000 Hz ⁵⁾ |
| Electrical connection: | Cable, 4-wire, 2 m ⁶⁾ |
| Cable material: | PVC |
| Circuit protection::: | A, B, D ^{7) 8) 9)} |
| Protection class: | III |
| Special device: | - |
| Enclosure rating: | IP 67 |
| Items supplied: | Fastening nuts (4 x) |
| EMC: | EN 60947-5-2 |
| Test input: | - |
| Ambient operating temperature: | -25 °C ... +55 °C ¹⁰⁾ |
| Ambient storage temperature: | -40 °C ... +70 °C |
| UL File No.: | E348498 |
| Signal voltage NPN HIGH/LOW: | Approx. $V_S / \leq 3 V$ |
| Housing material: | Plastic |

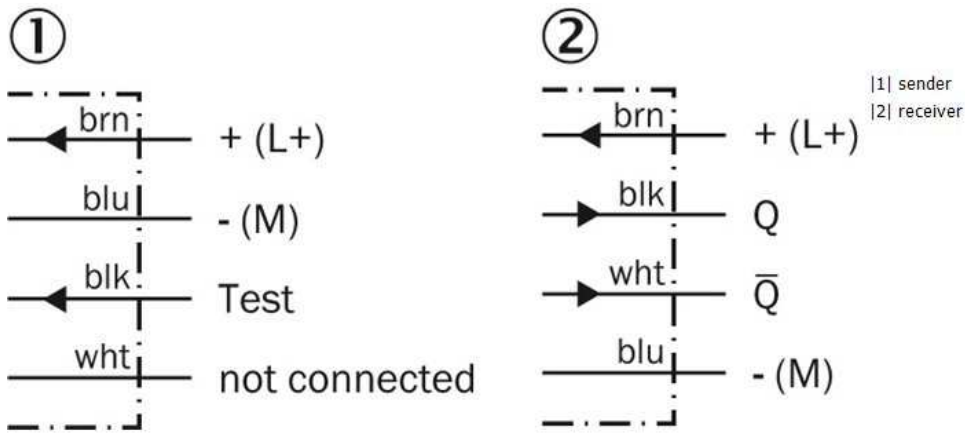
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ At $V_S > 24 V$ or ambient temperature $> 49 °C$, I_A max = 50 mA ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below 0 °C ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ D = outputs overcurrent and short-circuit protected ¹⁰⁾ At $U_V \leq 24V$ and I_A

Dimensional drawing

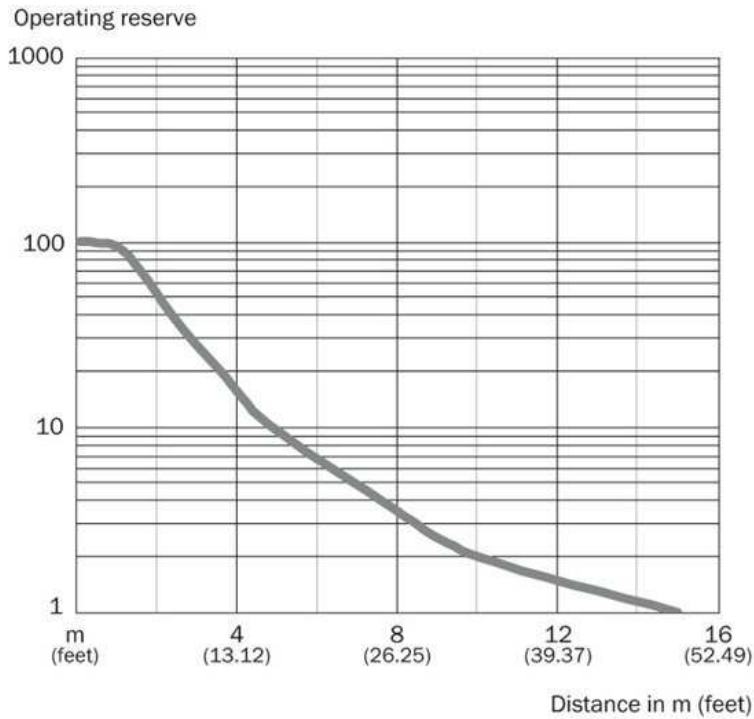


- |1| Connection cable 2 m
- |2| Threaded mounting hole M18 x 1
- |3| LED indicator yellow
- |4| LED indicator green
- |5| Sensitivity control; Potentiometer 270°
- |6| fastening nuts (2 x); width across 22, plastic

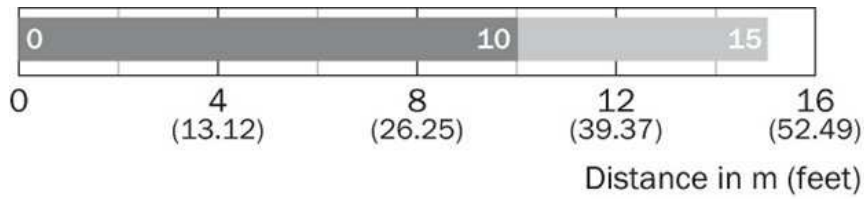
Connection diagram



Characteristic curve

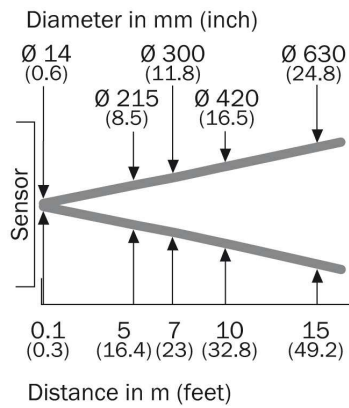


Sensing range diagram



■ Operating range ■ Sensing range typ. max.

Light spot size



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