



Photoelectric sensors
GR18S, Through-beam photoelectric sensor

GRSE18S-N1142



Model Name > GRSE18S-N1142
Part No. > 1069630



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 |
| 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 ¹⁾ |
| Wave length: | 650 nm |
| Adjustment: | Potentiometer, 270 ° |
| Light spot size (distance): | Ø 250 mm (10 m) |

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

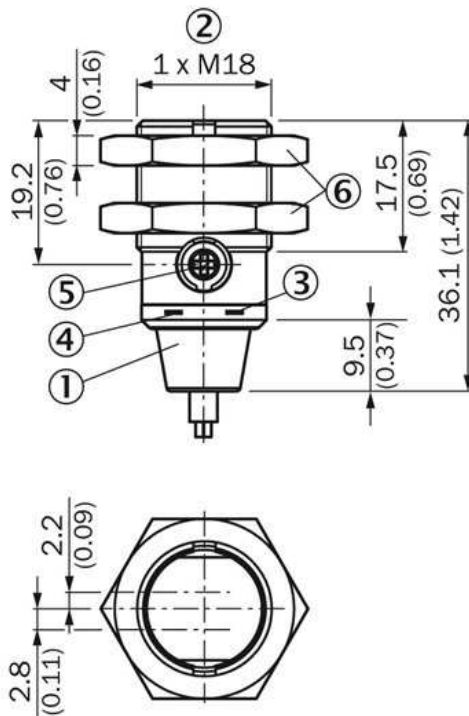
Mechanics/electronics

| | |
|--------------------|-----------------------------------|
| 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 |
| Enclosure rating: | IP 67 |
| Items supplied: | Fastening nuts (4 x) |
| Test input: | - |
| Ambient operating temperature: | -25 °C ... +55 °C ¹⁰⁾ |
| Ambient storage temperature: | -40 °C ... +70 °C |
| UL File No.: | NRKH.E348498 & NRKH7.E348498 |
| Housing material: | Metal |

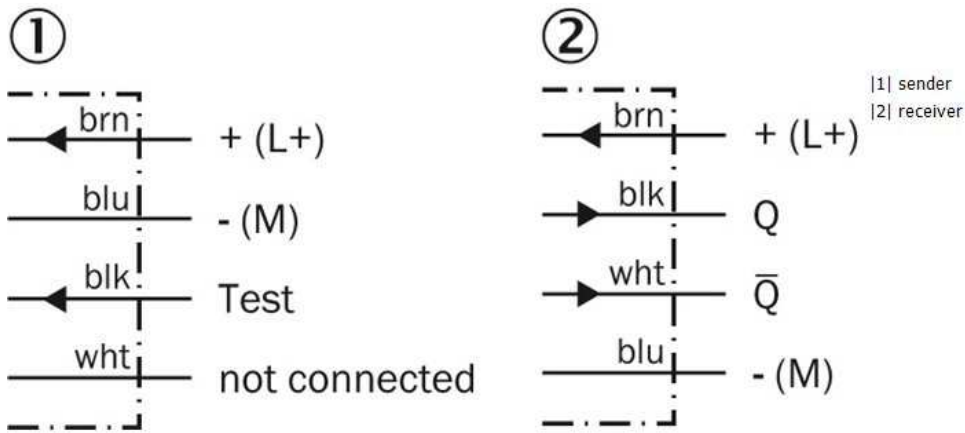
1) Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ At $V_S > 24 V$ or ambient temperature $> 49 °C$, I_A max = 50 mA ⁴⁾ Signal transit time with resistive load ⁵⁾ ⁶⁾ Do not bend below 0 °C ⁷⁾ A = V_S connections reverse-polarity 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

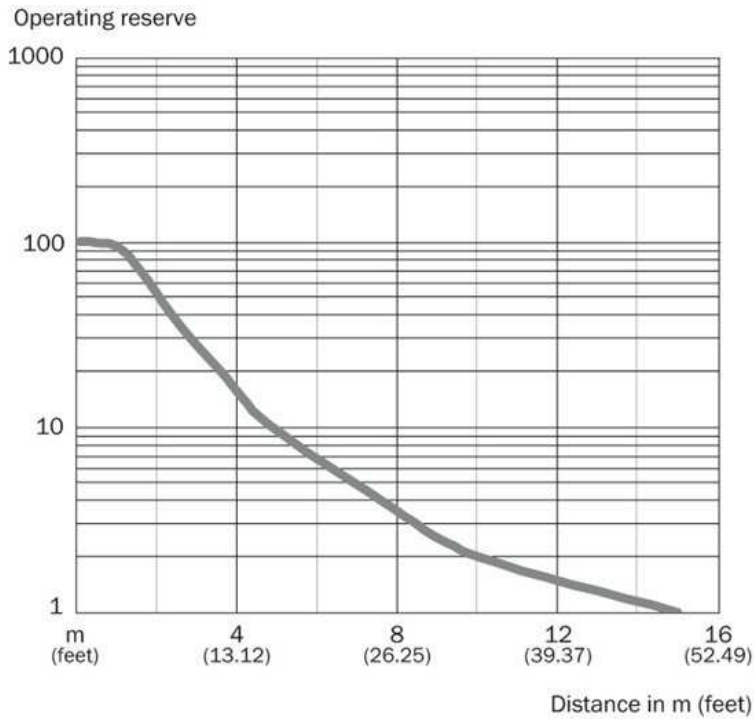


- [1] Connection cable 2 m
- [2] Threaded mounting hole M18 x 1
- [3] LED indicator yellow
- [4] LED indicator green
- [5] Sensitivity control; Potentiometer 270°
- [6] fastening nuts (2 x); 24 mm hex, metal

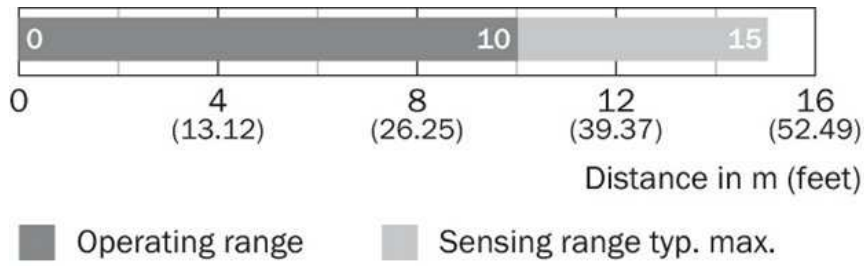
Connection diagram



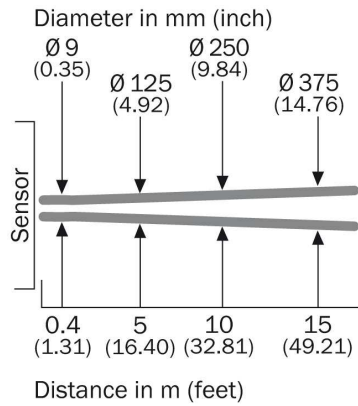
Characteristic curve



Sensing range diagram



Light spot size



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