



Photoelectric sensors
GR18S, Photoelectric proximity sensor, energetic

GRTE18S-N1317



Model Name > GRTE18S-N1317
Part No. > 1058194



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: | Photoelectric proximity sensor, energetic |
| Housing design (light emission): | Cylindrical, straight, straight |
| Optical axis: | Axial |
| Sensing range max.: | 3 mm ... 115 mm ¹⁾ |
| Sensing range: | 5 mm ... 100 mm ²⁾ |
| Type of light: | Visible red light |
| Light source: | PinPoint LED ³⁾ |
| Wave length: | 650 nm |
| Adjustment: | Potentiometer, Potentiometer, 270° |
| Light spot size (distance): | Ø 8 mm (100 mm) |

^{1) 2)} Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C

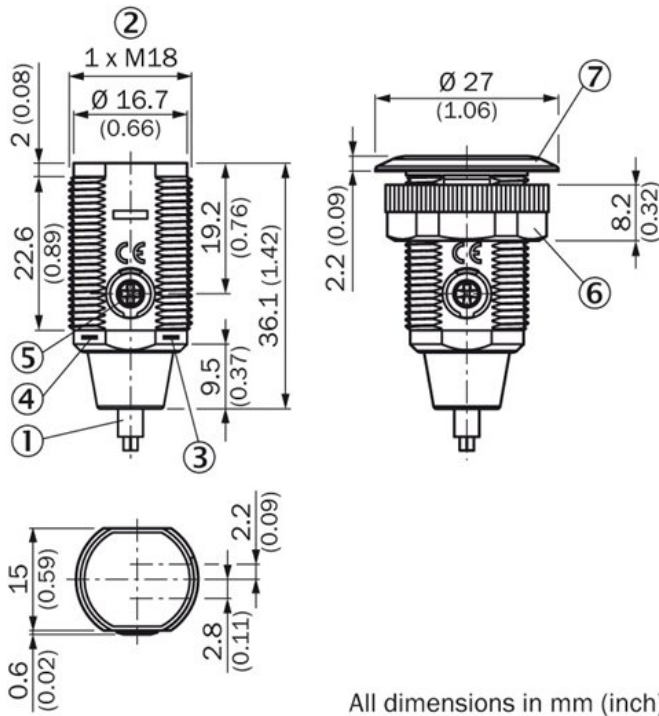
Mechanics/electronics

| | |
|--------------------|-----------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Ripple: | ± 5 Vpp ²⁾ |
| Power consumption: | ≤ 30 mA |
| Output type: | NPN |

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

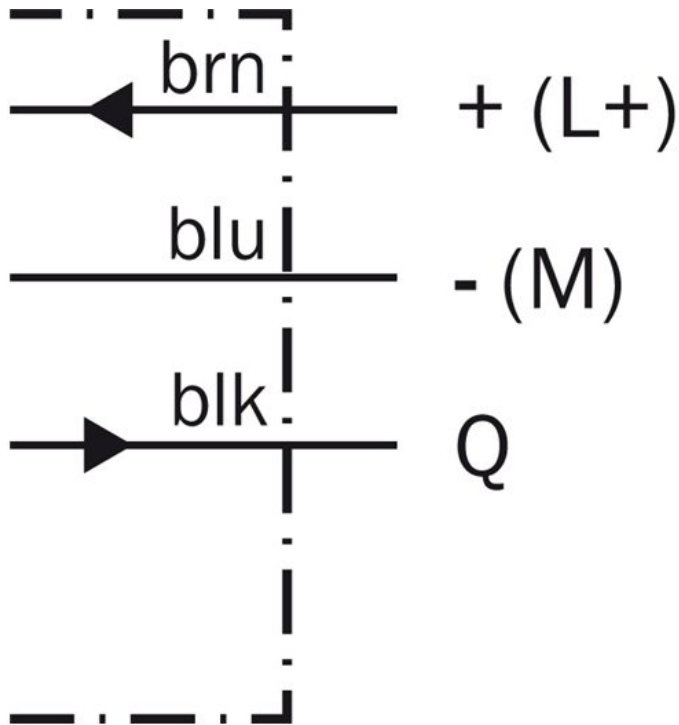
1) Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ At V_S > 24 V or ambient temperature > 49 °C, I_A max = 50 mA ⁴⁾ Signal transit time with resistive load ⁵⁾ Do not bend below 0 °C ⁶⁾ A = V_S connections reverse-polarity protected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

Dimensional drawing



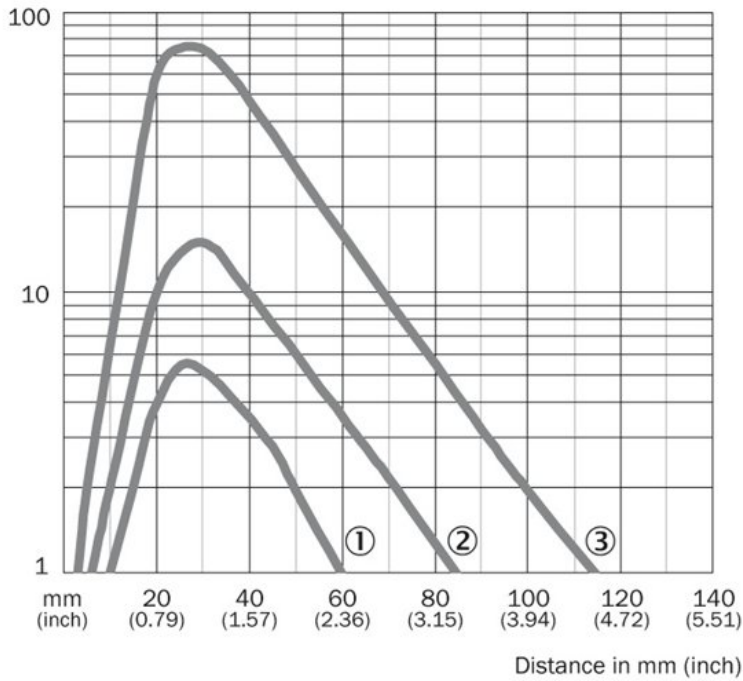
- [1] Connection cable 2 m
- [2] Threaded mounting hole M18 x 1
- [3] LED indicator yellow
- [4] LED indicator green
- [5] Sensitivity control; Potentiometer 270°
- [6] fastening nut; 22 mm hex, plastic
- [7] Mounting ring

Connection diagram



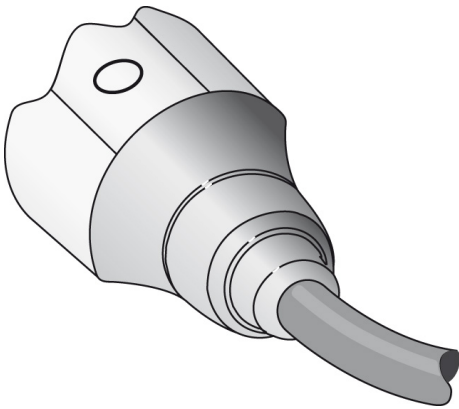
Characteristic curve

Operating reserve

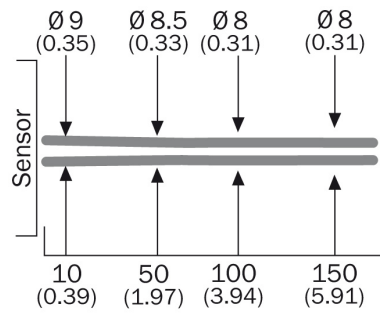


- [1] Sensing range on black, 6 % remission
- [2] Sensing range on gray, 20 % remission
- [3] Sensing range on white, 90 % remission

Connection type



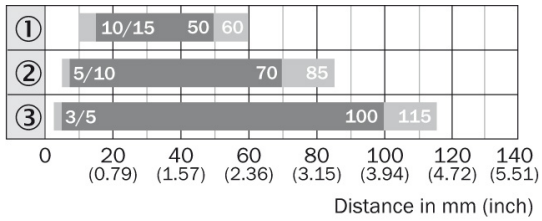
Light spot size



Distance

All dimensions in mm (inch)

Sensing range diagram



■ Operating distance ■ Sensing distance typ. max.

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