



GRSE18S-P1122

GR18

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|---------------|----------|
| GRSE18S-P1122 | 1069637 |

Other models and accessories → www.sick.com/GR18

Illustration may differ



Detailed technical data

Features

| | |
|--|---|
| Functional principle | Through-beam photoelectric sensor |
| Dimensions (W x H x D) | 18 mm x 18 mm x 38.1 mm |
| Housing design (light emission) | Cylindrical |
| Thread diameter (housing) | M18 x 1 |
| 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⁾ |
| Light spot size (distance) | Ø 420 mm (10 m) |
| Wave length | 850 nm |
| Adjustment | Potentiometer, 270° Potentiometer |
| Display | |
| | LED green Operating indicator Static on: power on |
| | LED yellow Status of received light beam Static on: object not present Static off: object present |

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

| | |
|---|---|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption | 30 mA |
| Switching output | PNP |
| 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⁾ |
| Connection type | Cable, 4-wire, 2 m ⁶⁾ |
| Cable material | Plastic, PVC |
| Circuit protection | A ⁷⁾ B ⁸⁾ D ⁹⁾ |
| Protection class | III |
| Housing material | Metal, Nickel-plated brass and ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Items supplied | Fastening nuts (4 x) |
| Electromagnetic compatibility (EMC) | EN 60947-5-2 |
| Test input | Sender OFF at "Test" 0 V |
| Ambient operating temperature | -25 °C ... +55 °C ¹⁰⁾ |
| Ambient temperature, storage | -40 °C ... +70 °C |
| UL File No. | NRKH.E348498 & NRKH7.E348498 |
| Part number of individual components | 2075625 GRS18S-D1321 2075663 GRE18S-P1112 |

¹⁾ Limit values. Operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ At $U_V > 24$ 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 $U_V \leq 24$ V and $I_A < 50$ mA.

Certificates

| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| ECOLAB certificate | ✓ |

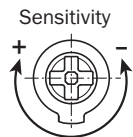
| | |
|--|---|
| cULus certificate | ✓ |
| Photobiological safety (DIN EN 62471) certificate | ✓ |

Classifications

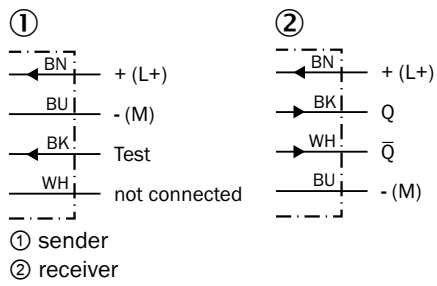
| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270901 |
| ECLASS 5.1.4 | 27270901 |
| ECLASS 6.0 | 27270901 |
| ECLASS 6.2 | 27270901 |
| ECLASS 7.0 | 27270901 |
| ECLASS 8.0 | 27270901 |
| ECLASS 8.1 | 27270901 |
| ECLASS 9.0 | 27270901 |
| ECLASS 10.0 | 27270901 |
| ECLASS 11.0 | 27270901 |
| ECLASS 12.0 | 27270901 |
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| UNSPSC 16.0901 | 39121528 |



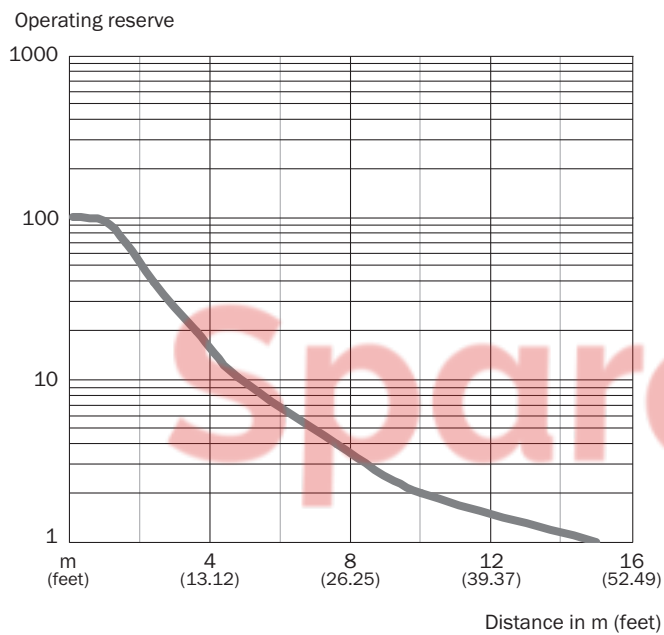
Adjustments GRL18(S), GRSE18(S), Sensitivity setting: Potentiometer, 270°



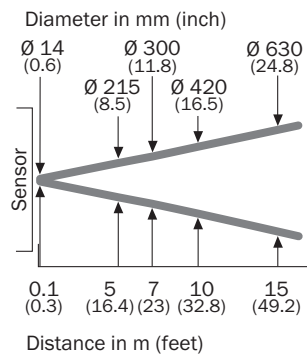
Connection diagram Cd-088



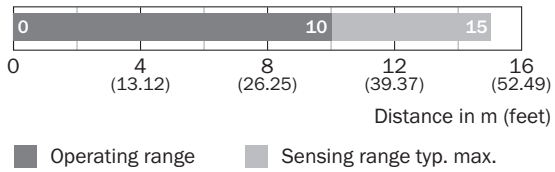
Characteristic curve GRSE18S



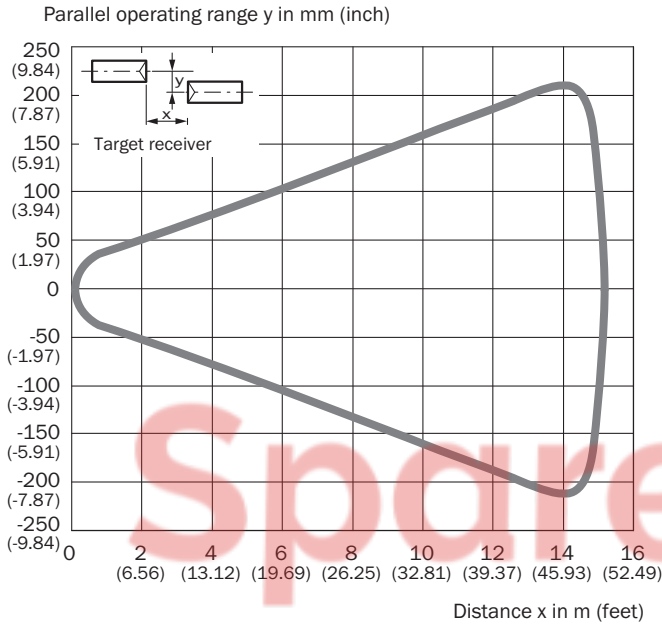
Light spot size GRSE18, infrared light



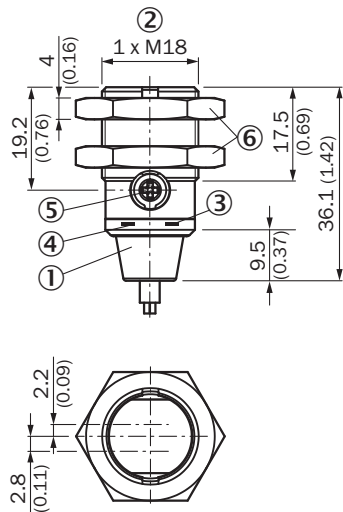
Sensing range diagram GRSE18S



Response range GRSE18S



Dimensional drawing GR18S, metal, cable, straight, adjustable





Dimensions in mm (inch)
 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 (2x); width across 24, metal

Recommended accessories

Other models and accessories → www.sick.com/GR18

| | Brief description | Type | part no. |
|---|---|------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> • Description: Mounting bracket for M18 sensors • Material: Steel • Details: Steel, zinc coated • Items supplied: Without mounting hardware • Suitable for: GR18, V180-2, V18, W15, Z1, Z2 | BEF-WN-M18 | 5308446 |
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² | STE-1204-G | 6009932 |

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