



Photoelectric sensors
GR18, Through-beam photoelectric sensor

GRSE18-P1142



Model Name > GRSE18-P1142
Part No. > 1067984



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:	Visible red light
Light source:	PinPoint LED ¹⁾
Wave length:	650 nm
Light spot size (distance):	Ø 250 mm (10 m)

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

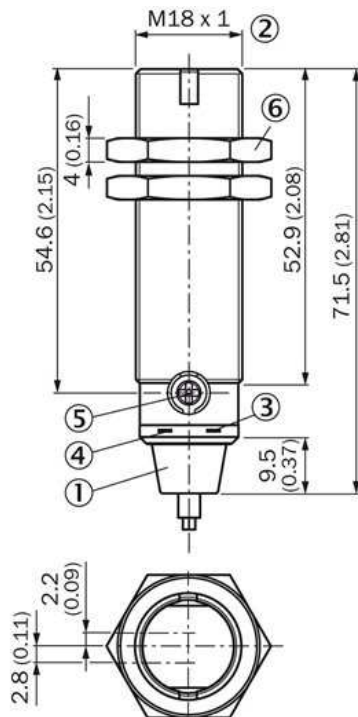
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	± 5 Vpp ²⁾
Power consumption:	≤ 30 mA
Output type:	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⁾
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 PNP HIGH/LOW:	VS - (≤ 3 V)/approx. 0 V
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⁾ 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

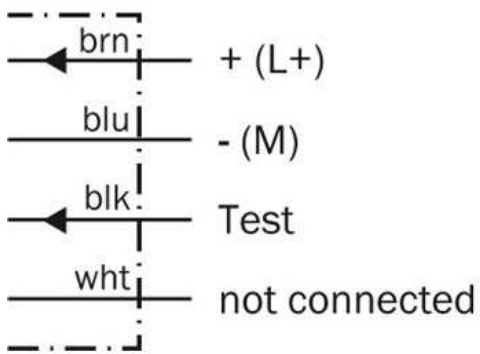
Dimensional drawing



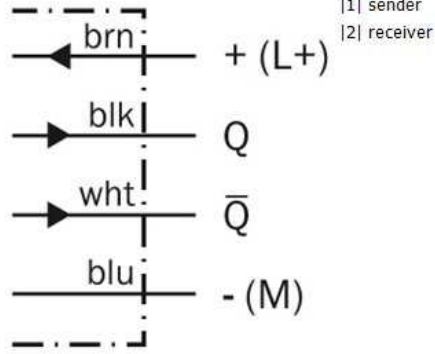
- |1| Connection cable 2 m
- |2| Threaded mounting hole M18 x 1
- |3| LED indicator yellow
- |4| LED indicator green
- |5| Sensitivity control; Potentiometer 270°
- |6| fastening nuts (2 x); 24 mm hex, metal

Connection diagram

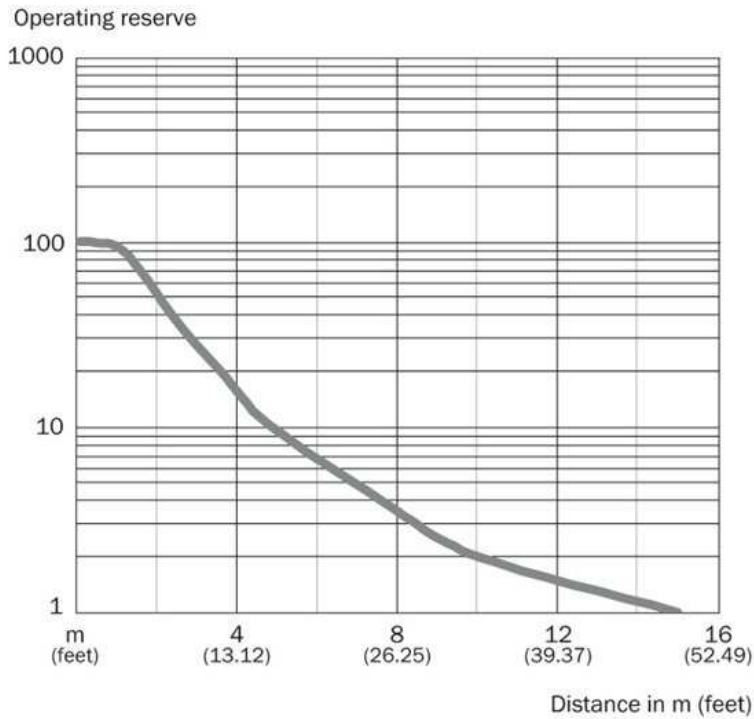
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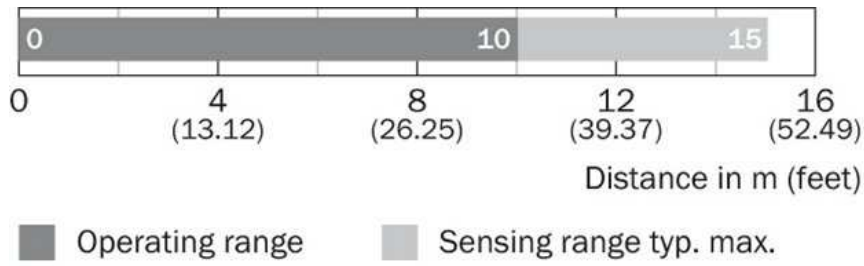
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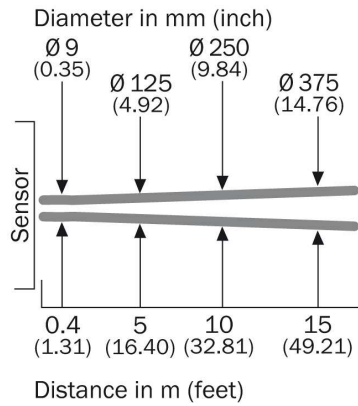
Characteristic curve



Sensing range diagram



Light spot size



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