



Photoelectric sensors
GR18S, Through-beam photoelectric sensor

GRSE18S-F2331



Model Name > GRSE18S-F2331
Part No. > 1059549



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
Light spot size (distance):	Ø 250 mm (10 m)

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

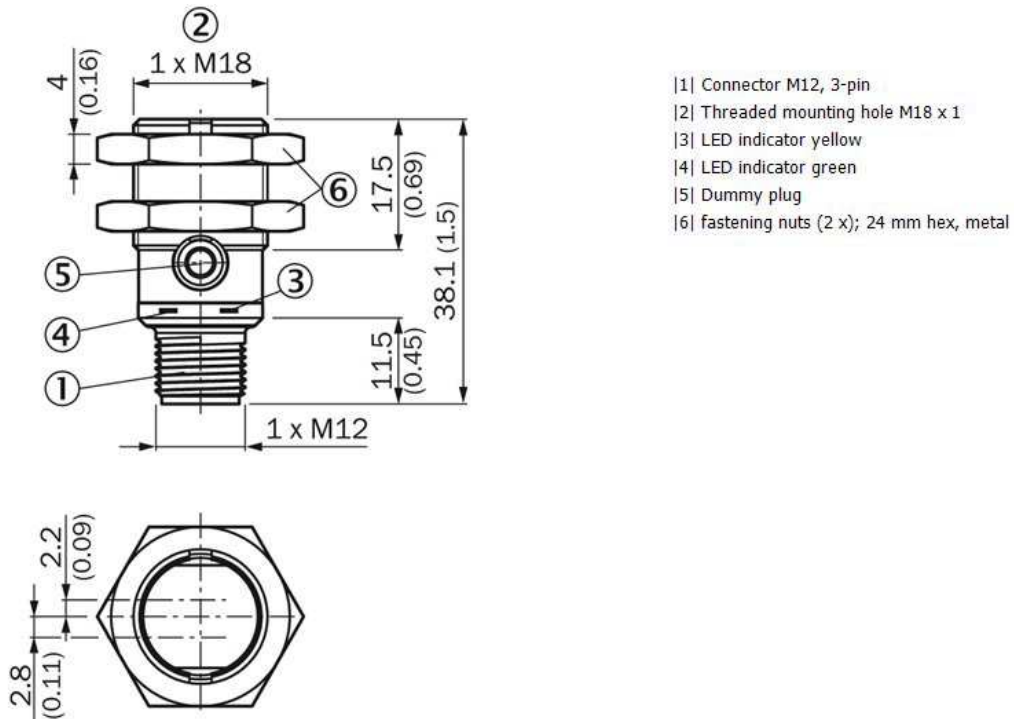
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 5 Vpp ²⁾
Power consumption:	≤ 30 mA
Output type:	PNP
Switching mode:	Dark switching

Output current I _{max} .:	100 mA ³⁾
Response time:	< 500 μs ⁴⁾
Switching frequency:	1,000 Hz
Connection type:	Connector M12, 3-pin
Circuit protection:::	A, B, D ^{5) 6) 7)}
Protection class:	III
Enclosure rating:	IP 67
Items supplied:	Fastening nuts (4 x)
Ambient operating temperature:	-25 °C ... +55 °C ⁸⁾
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Signal voltage PNP HIGH/LOW:	VS - (≤ 3 V)/approx. 0 V
Housing material:	Metal

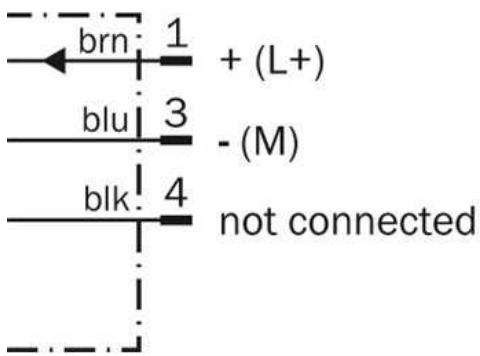
1) Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ At V_s > 24 V or ambient temperature > 49 °C, I_A max = 50 mA ⁴⁾ Signal transit time with resistive load ⁵⁾ A = V_S connections reverse-polarity protected ⁶⁾ B = inputs and output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

Dimensional drawing

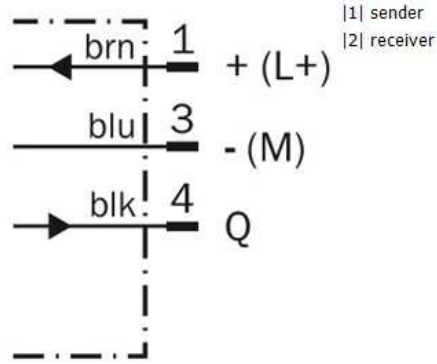


Connection diagram

①

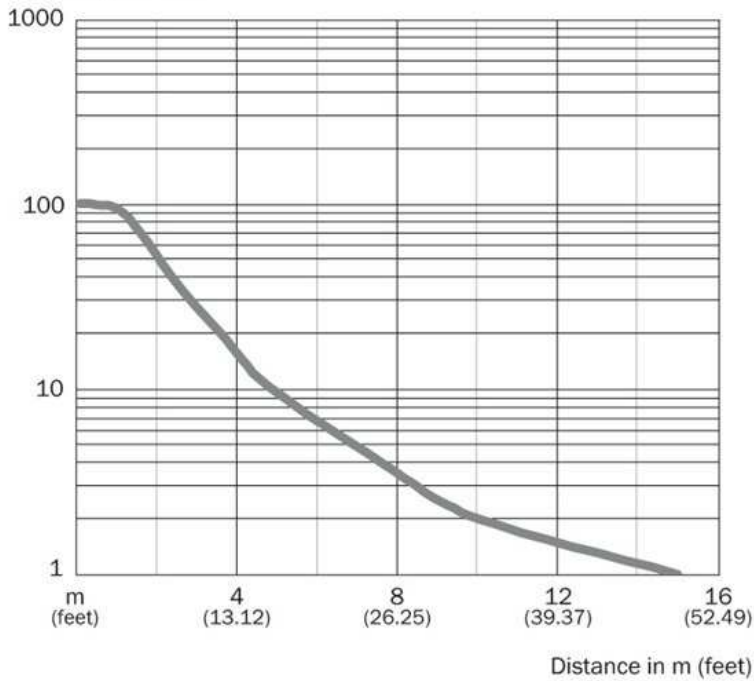


②

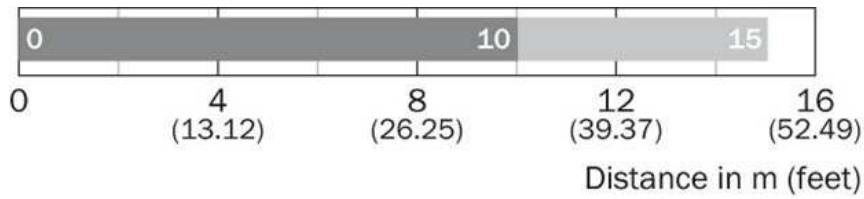


Characteristic curve

Operating reserve

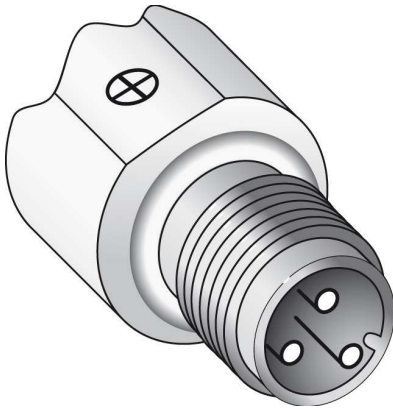


Sensing range diagram

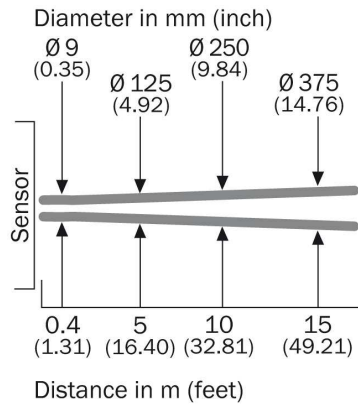


■ Operating range ■ Sensing range typ. max.

Connection type



Light spot size



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