



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, 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 $T_A = +25\text{ °C}$

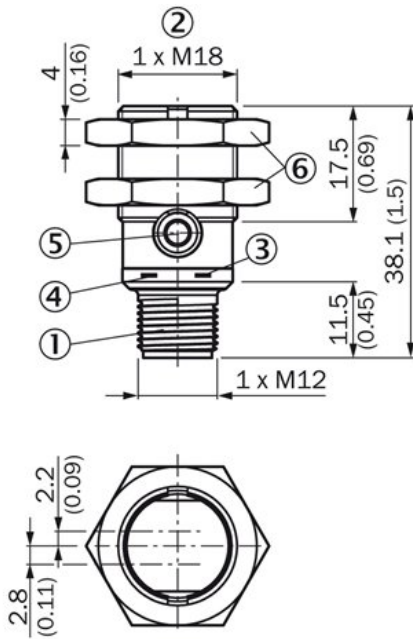
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\pm 5\text{ Vpp}$ ²⁾
Power consumption:	$\leq 30\text{ mA}$
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
Housing material:	Metal
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 55 °C ⁸⁾
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⁾ 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 $U_V \leq 24$ V and I_A

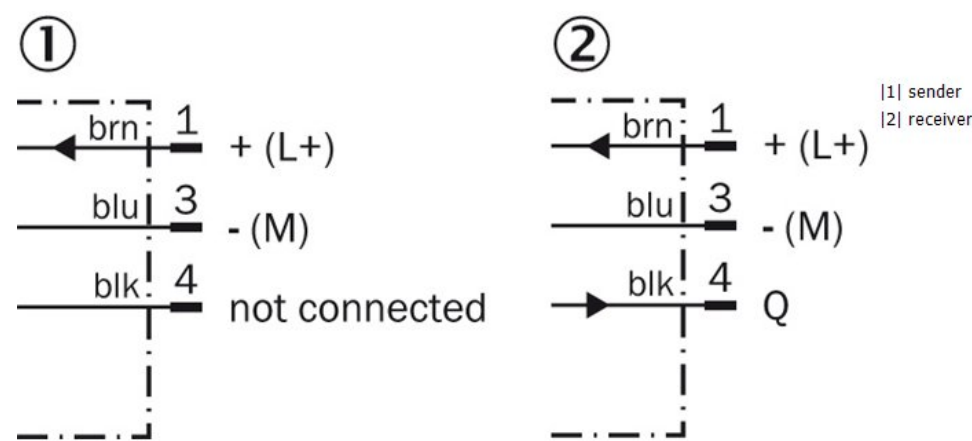
Dimensional drawing



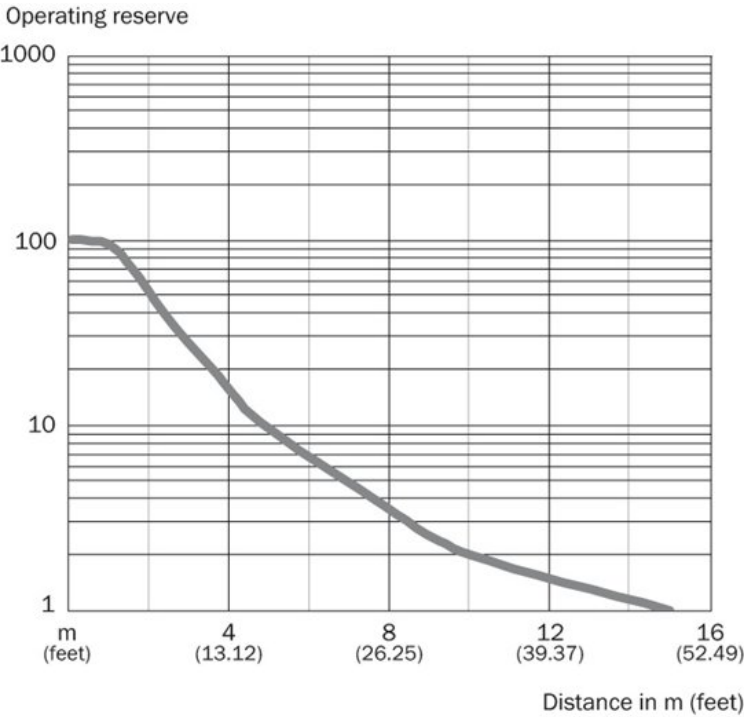
- [1] Connector M12, 3-pin
- [2] Threaded mounting hole M18 x 1
- [3] LED indicator yellow
- [4] LED indicator green
- [5] Dummy plug
- [6] fastening nuts (2 x); 24 mm hex, metal

All dimensions in mm (inch)

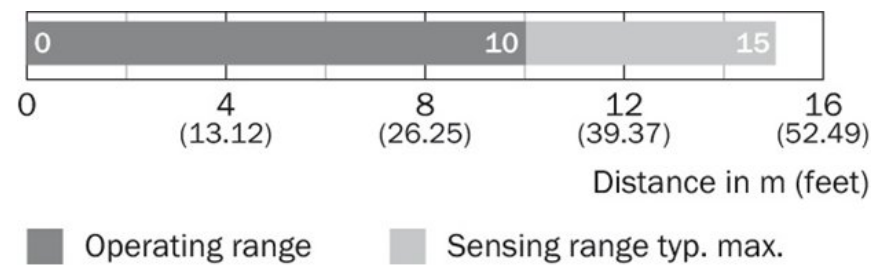
Connection diagram



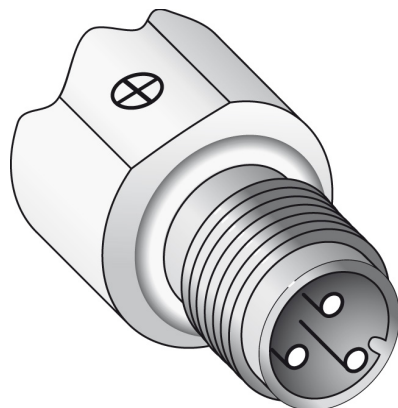
Characteristic curve



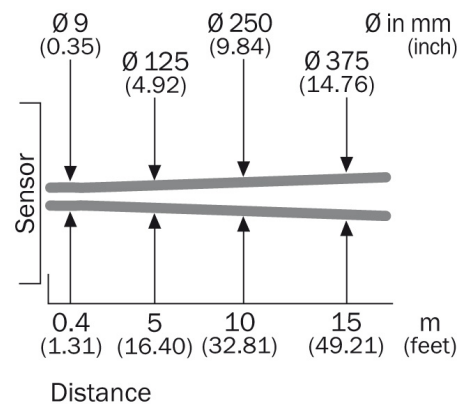
Sensing range diagram



Connection type



Light spot size



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