

ONLINE DATA SHEET
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Photoelectric sensors
GR18S, Photoelectric proximity sensor, energetic

GRTE18S-P234X



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Model Name > GRTE18S-P234X
Part No. > 1059489





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, angled, fully flush
Optical axis:	Fully flush, radial
Sensing range max.:	5 mm ... 550 mm [1]
Sensing range:	10 mm ... 400 mm [2]
Type of light:	Visible red light
Light source:	PinPoint LED [3]
Wave length:	650 nm
Adjustment:	Potentiometer, 270 °
Light spot size (distance):	Ø 9 mm (400 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

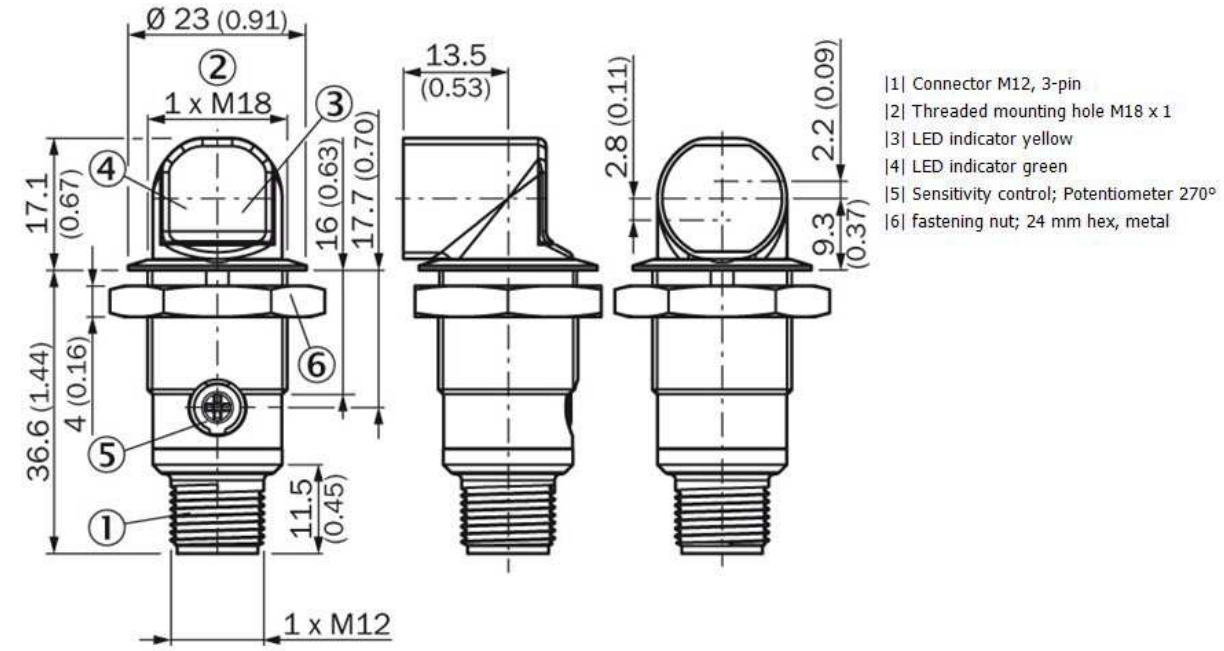
Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	± 5 Vpp [2]
Power consumption:	≤ 30 mA
Output type:	PNP

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Switching mode:	Light switching
Output current Imax.:	100 mA [3]
Response time:	< 1,000 µs [4]
Switching frequency:	500 Hz [5]
Connection type:	Connector M12, 3-pin
Circuit protection:::	A, B, D [6] [7] [8]
Protection class:	III
Enclosure rating:	IP 67
Items supplied:	Fastening nuts (2 x)
Ambient operating temperature:	-25 °C ... +55 °C [9]
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

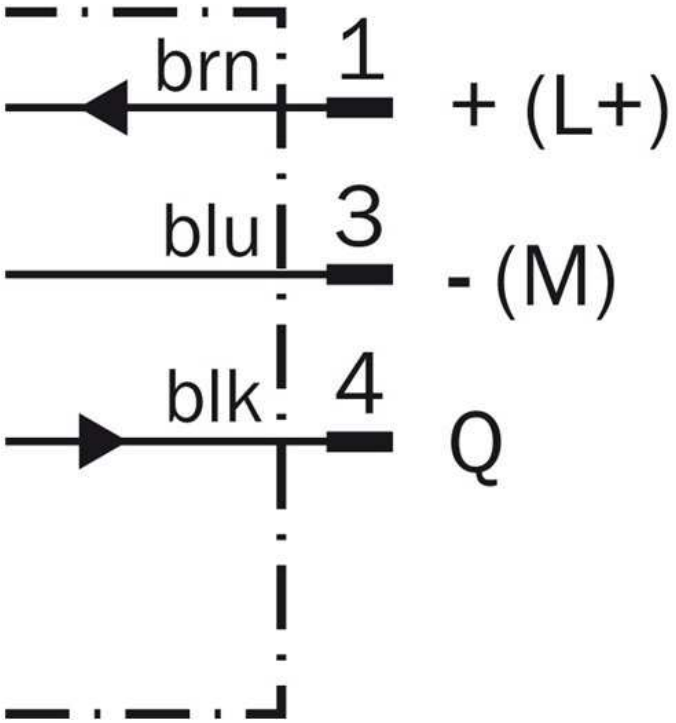
[1] Limit values, operation in short-circuit protected network max. 8 A [2] May not exceed or fall short of V_S tolerances [3] At Vs > 24 V or ambient temperature > 49 °C, I_A max = 50 mA [4] Signal transit time with resistive load [5] [6] A = V_S connections reverse-polarity protected [7] B = inputs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

Dimensional drawing

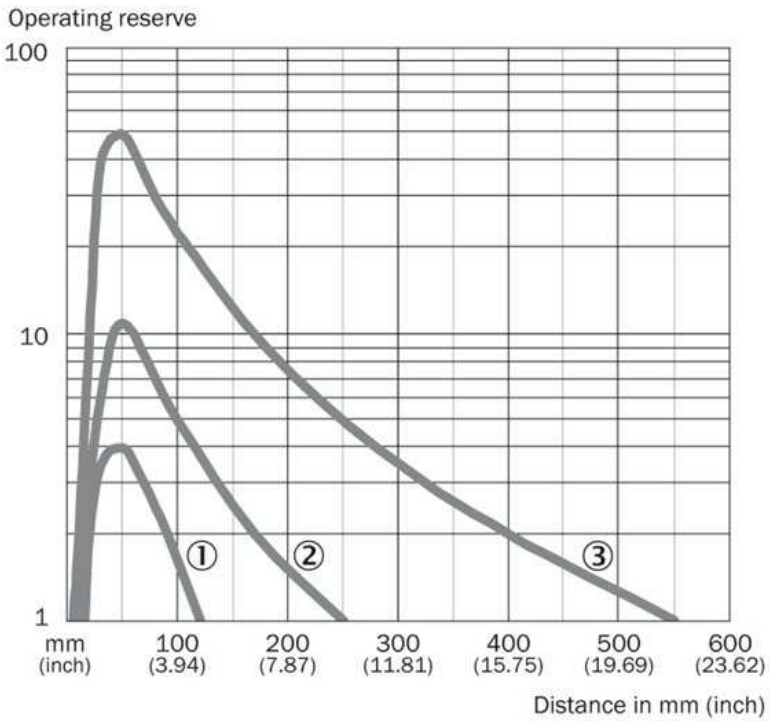


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Connection diagram



Characteristic curve



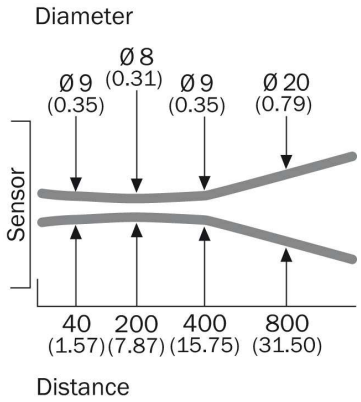
|1| Sensing range on black, 6 % remission
|2| Sensing range on gray, 20 % remission
|3| Sensing range on white, 90 % remission

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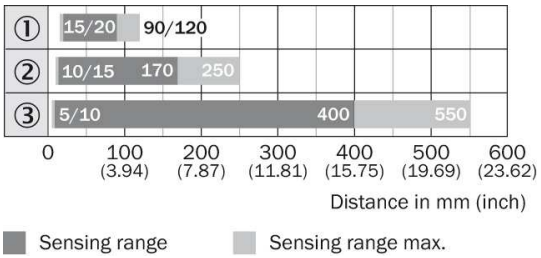
Connection type



Light spot size



Sensing range diagram



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