

ONLINE DATA SHEET
www.mysick.com

Photoelectric sensors
GR18, Photoelectric proximity sensor, energetic

GRTE18-N2462



SICK
Sensor Intelligence.

SICK
Sensor Intelligence.

Photoelectric sensors
GR18, Photoelectric proximity sensor, energetic

Model Name > GRTE18-N2462
Part No. > 1067978





Illustration may differ

At a glance

- Economical M18 cylindrical sensor with standard housing design
- Three different versions provide sensing ranges from 100 mm to 1000 mm (energetic)
- 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:	Photoelectric proximity sensor, energetic
Housing design (light emission):	Cylindrical, straight
Optical axis:	axial
Sensing range max.:	5 mm ... 1,000 mm [1)]
Sensing range:	10 mm ... 800 mm [2)]
Type of light:	Visible red light
Light source:	LED [3)]
Wave length:	650 nm
Light spot size (distance):	Ø 45 mm (800 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

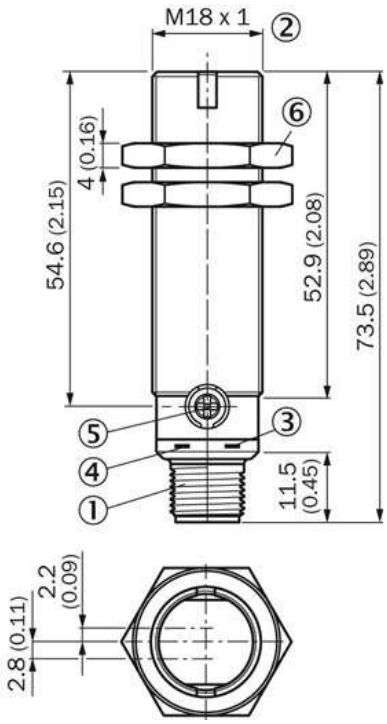
Supply voltage:	10 V DC ... 30 V DC [1)]
Residual ripple:	± 5 Vpp [2)]
Power consumption:	≤ 30 mA
Output type:	NPN
Output function:	Complementary
Switching mode:	Light/dark switching

© SICK AG. Subject to change without notice.

Output current Imax.:	100 mA [3]
Response time:	< 1,000 µs [4]
Switching frequency:	500 Hz [5]
Electrical connection:	Connector M12, 4-pin
Circuit protection:::	A, B, D [6] [7] [8]
Protection class:	III
Special device:	-
Enclosure rating:	IP 67
Items supplied:	Fastening nuts (2 x)
EMC:	EN 60947-5-2
Ambient operating temperature:	-25 °C ... +55 °C [9]
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	E348498
Signal voltage NPN HIGH/LOW:	Approx. VS／≤ 3 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] With light/dark ratio 1:1 [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

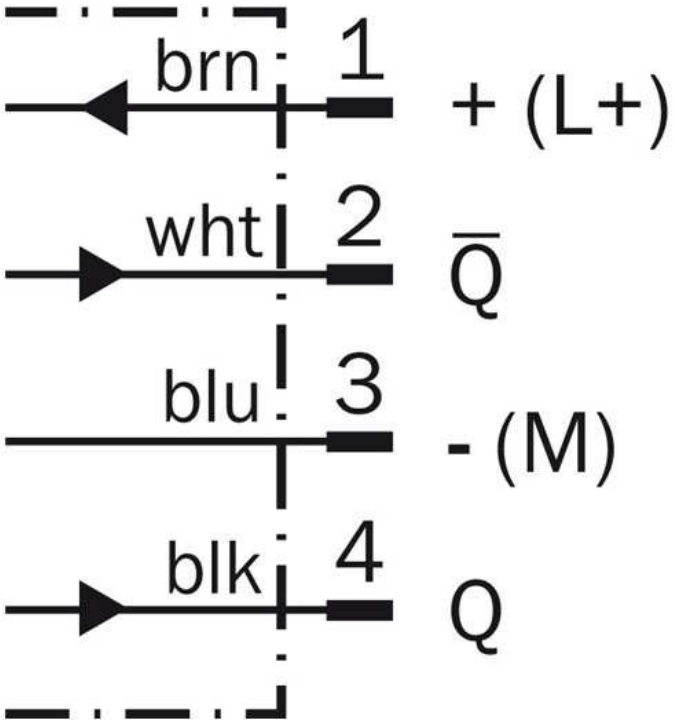
Dimensional drawing



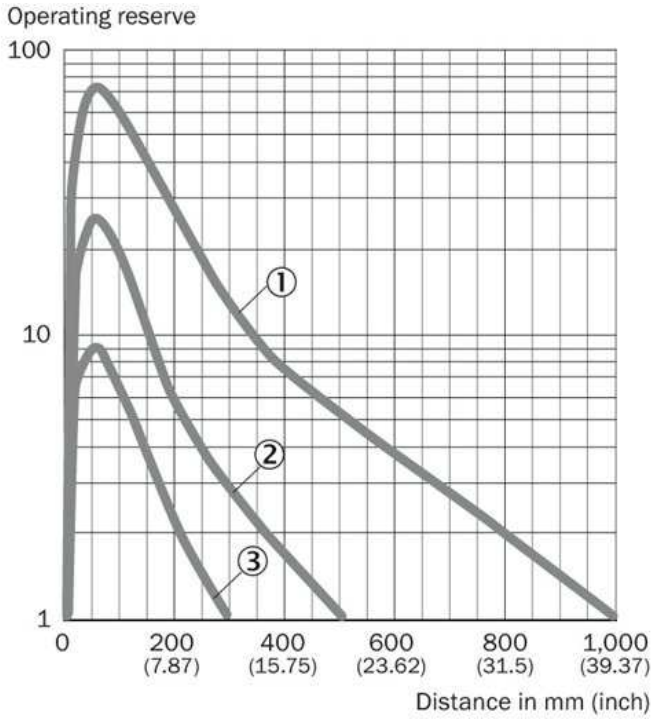
|1| Connector M12, 4-pin
|2| Threaded mounting hole M18 x 1
|3| LED indicator yellow
|4| LED indicator green
|5| Sensitivity control; Potentiometer 270°
|6| fastening nuts (2 x); 24 mm hex, metal

© SICK AG. Subject to change without notice.

Connection diagram



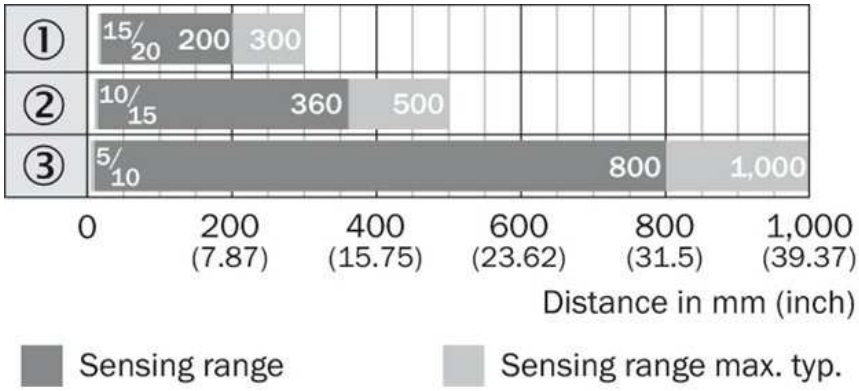
Characteristic curve



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

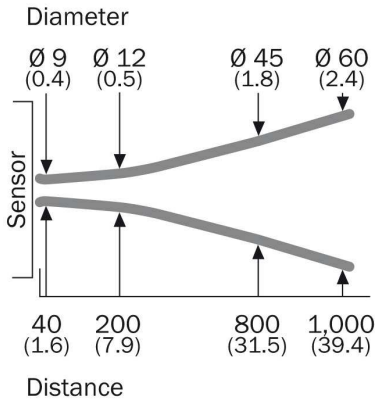
© SICK AG. Subject to change without notice.

Sensing range diagram



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

Light spot size



© SICK AG. Subject to change without notice.

A4 4c int43

Australia
Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg
Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil
Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada
Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika
Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China
Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark
Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland
Phone +49 211 5301-301
E-Mail info@sick.de

España
Phone +34 93 480 31 00
E-Mail info@sick.es

France
Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain
Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India
Phone +91–22–4033 8333
E-Mail info@sick-india.com

Israel
Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia
Phone +39 02 27 43 41
E-Mail info@sick.it

Japan
Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország
Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland
Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge
Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich
Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska
Phone +48 22 837 40 50
E-Mail info@sick.pl

România
Phone +40 356 171 120
E-Mail office@sick.ro

Russia
Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz
Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore
Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija
Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa
Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea
Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi
Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige
Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan
Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye
Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates
Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México
Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at **www.sick.com**

SICK
Sensor Intelligence.