Online data sheet



GRTE18S-N1162V

GR18 Inox

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
GRTE18S-N1162V	1085862

Other models and accessories → www.sick.com/GR18_Inox

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, energetic
Housing design (light emission)	Cylindrical, straight
Housing length	55.9 mm
Thread length	31.7 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	5 mm ... 1,000 mm [1]
Sensing range	10 mm ... 800 mm [1]
Type of light	Visible red light
Light source	LED [2]
Light spot size (distance)	Ø 45 mm (800 mm)
Wave length	650 nm
Adjustment	Potentiometer, 270°

[1] Object with 90 % reflectance (referred to standard white, DIN 5033).
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	± 5 V_{pp} [2]
Power consumption	≤ 30 mA
Switching output	NPN
Output function	Complementary
Switching mode	Light/dark switching [3]
Signal voltage NPN HIGH/LOW	Approx. V_S / ≤ 3 V
Output current $I_{max.}$	100 mA [4]
Response time	< 1,000 µs [5]
Switching frequency	± 500 Hz [6]
Connection type	Cable, 4-wire, 2 m [7]
Cable material	PVC
Conductor cross-section	0.14 mm²
Cable diameter	4.8 mm
Circuit protection	A [8] B [9] D [10]
Protection class	III
Weight	100 g
Housing material	Stainless steel, Stainless steel V4A (1.4404, 316L)
Optics material	Plastic, PMMA
Tightening torque, max.	90 Nm
Enclosure rating	IP67 IP68 [11] IP69K [12]
Items supplied	Fastening nuts (2 x)
EMC	EN 60947-5-2
Ambient operating temperature	–25 °C ... +55 °C [13]
Ambient storage temperature	–30 °C ... +75 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

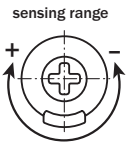
[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below U_V tolerances.
[3] Q = light switching; $\bar{Q}$ = dark switching.
[4] At Uv > 24 V or ambient temperature > 49 °C, IA max. = 50 mA.
[5] Signal transit time with resistive load.
[6] With light/dark ratio 1:1.
[7] Do not bend below 0 °C.
[8] A = V_S connections reverse-polarity protected.
[9] B = inputs and output reverse-polarity protected.
[10] D = outputs overcurrent and short-circuit protected.
[11] According to EN 60529 (10 m water depth / 24 h).
[12] According to ISO 20653:2013-03.
[13] At U_V <=24V and I_A<50mA.

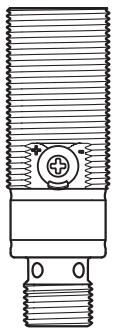
Classifications

ECl@ss 5.0	27270903
ECl@ss 5.1.4	27270903
ECl@ss 6.0	27270903
ECl@ss 6.2	27270903
ECl@ss 7.0	27270903
ECl@ss 8.0	27270903
ECl@ss 8.1	27270903
ECl@ss 9.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
UNSPSC 16.0901	39121528

Adjustments possible

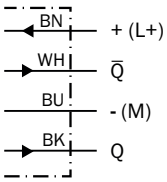
GRTB18(S) Inox, GRTE18(S) Inox, Sensing range setting: Potentiometer, 270°





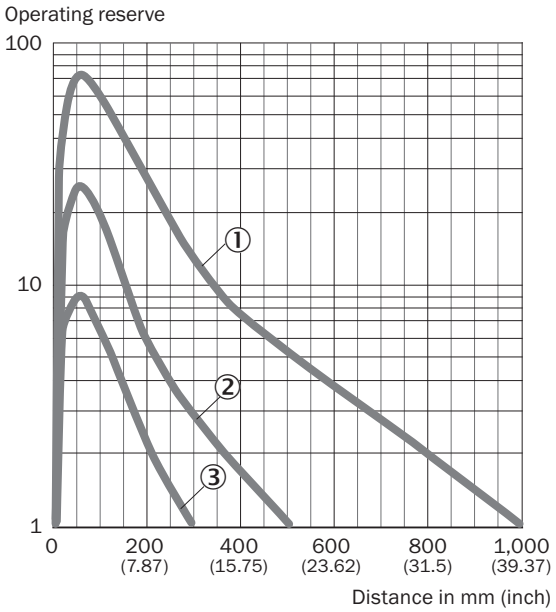
Connection diagram

Cd-094



Characteristic curve

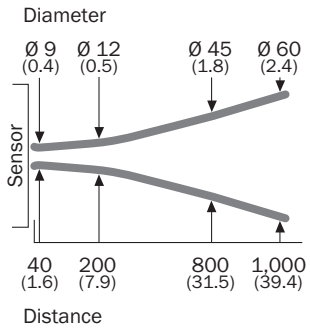
GRTE18, 800 mm



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

Light spot size

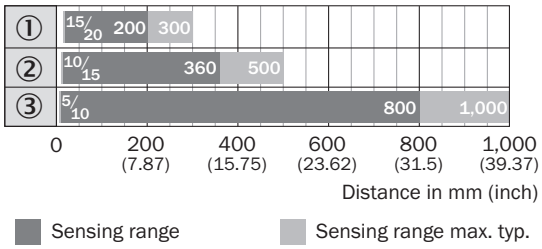
GRTE18, 800 mm



Dimensions in mm (inch)

Sensing range diagram

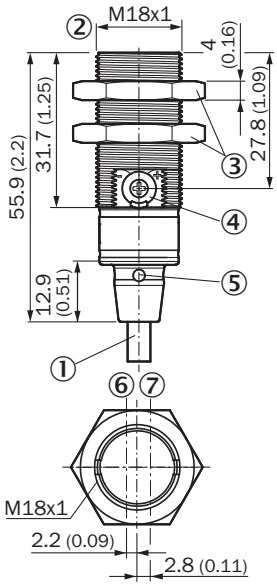
GRTE18, 800 mm



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

Dimensional drawing (Dimensions in mm (inch))

GR18S Inox, cable, straight



① Connection
② Threaded mounting hole M18 x 1
③ Fastening nuts (2 x); width across 24, stainless steel
④ Potentiometer, 270°
⑤ LED indicator (4 x)
⑥ Optical axis receiver
⑦ Optical axis sender

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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For us, that is “Sensor Intelligence.”

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