

GRTE18S-F236X

GR18

PHOTOELECTRIC SENSORS





Ordering information

Туре	part no.
GRTE18S-F236X	1069558

Other models and accessories → www.sick.com/GR18

Illustration may differ



Detailed technical data

Features

Functional principle		Photoelectric proximity sensor
Functional principle detail		Energetic
Dimensions (W x H x D)		18 mm x 18 mm x 38.1 mm
Housing design (light emission)		Cylindrical
Thread diameter (housing)		M18 x 1
Optical axis		Radial, fully flush
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°
Display		
	LED green	Operating indicator Static on: power on
	LED yellow	Status of received light beam Static on: object present Static off: object not present

 $^{^{1)}}$ Object with 90% remission (based on standard white, DIN 5033).

²⁾ Average service life: 100,000 h at $T_U = +25$ °C.

Mechanics/electronics

10 V DC 30 V DC ¹⁾
< 5 V _{pp} ²⁾
30 mA
PNP
Dark switching
\leq 100 mA $^{3)}$
< 1,000 µs ⁴⁾
500 Hz ⁵⁾
Connector M12, 3-pin
A ⁶⁾ B ⁷⁾ D ⁸⁾
III
Metal, Nickel-plated brass and ABS
Plastic, PMMA
IP67
Fastening nuts (2 x)
EN 60947-5-2
-25 °C +55 °C ⁹⁾
-40 °C +70 °C
NRKH.E348498 & NRKH7.E348498

 $^{^{1)}}$ Limit values. Operated in short-circuit protected network: max. 8 A.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

ECLASS 5.0	27270903
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 $^{^{2)}\,\}mbox{May}$ not fall below or exceed $\mbox{U}_{\mbox{\scriptsize V}}$ tolerances.

 $^{^{3)}}$ At Uv > 24 V or ambient temperature > 49 °C, IA 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 $\rm U_{V}\,{<}{=}24V$ and $\rm I_{A}{<}50mA.$

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ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

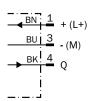
Adjustments GRTB18(S), GRTE18(S), Sensing range setting: Potentiometer, 270°



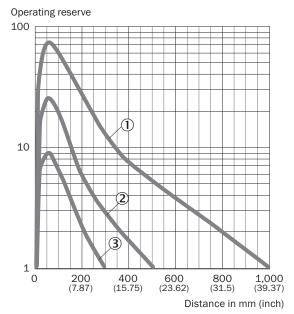




Connection diagram Cd-045

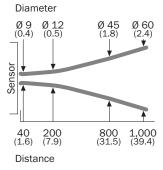


Characteristic curve GRTE18, 800 mm



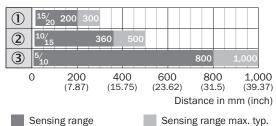
- ① Sensing range on black, 6% remission factor
- 2 sensing range to gray, 20% remission factor
- 3 Sensing range on white, 90% remission factor

Light spot size GRTE18, 800 mm



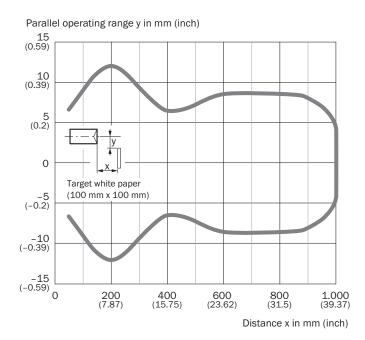
dimensions in mm (inch)

Sensing range diagram GRTE18, 800 mm

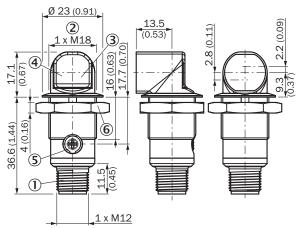


- Sensing range Sensing range ma
- ① Sensing range on black, 6% remission factor ② sensing range to gray, 20% remission factor
- 3 Sensing range on white, 90% remission factor

Response range GRTE18, 800 mm



Dimensional drawing GR18S, metal, connector, angled, fully flush, adjustable



Dimensions in mm (inch)

- ① Connector M12, 3-pin
- ② Threaded mounting hole M18 x 1
- 3 LED indicator yellow
- 4 LED indicator green
- ⑤ sensitivity control: potentiometer 270°
- (6) fastening nut; 24 mm hex, metal

Recommended accessories

Other models and accessories → www.sick.com/GR18

	Brief description	Туре	part no.		
Mounting systems					
40	 Description: Mounting bracket for M18 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: GR18, V180-2, V18, W15, Z1, Z2 	BEF-WN-M18	5308446		
	 Description: Mounting tool for "fully flush" variants Usable for: GR18 Suitable for: GR18S, radial, fully flush 	BEF-TO-GR18S	4072132		
connectors and cables					
	Connection type head A: Female connector, M12, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A13-050UB1XLEAX	2095605		

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

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