



# GRF18S-F234LV

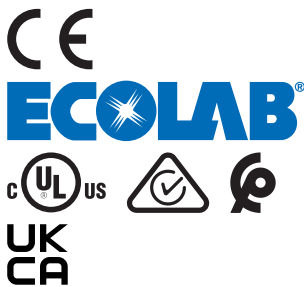
GRF18S

LEVEL SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	part no.
GRF18S-F234LV	1092958

Other models and accessories → [www.sick.com/GRF18S](http://www.sick.com/GRF18S)

## Detailed technical data

### Features

<b>Medium</b>	Fluids
<b>Measurement</b>	Switch
<b>Light source</b>	LED
<b>Type of light</b>	Visible red light
<b>Wave length</b>	650 nm
<b>Process pressure</b>	-0.5 bar ... 20 bar
<b>Process temperature</b>	-10 °C ... +55 °C

### Safety-related parameters

<b>MTTF<sub>D</sub> (mean time to dangerous failure)</b>	2,304 years
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### Performance

<b>Response time</b>	10 ms
<b>MTBF</b>	1,178 years
<b>MTTFd</b>	2,304 years

### Electronics

<b>Communication interface</b>	-
<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Residual ripple</b>	≤ 5 V <sub>pp</sub> <sup>2)</sup>

<sup>1)</sup> U<sub>V</sub> connections, reverse polarity protected.

<sup>2)</sup> May not fall below or exceed U<sub>V</sub> tolerances.

<sup>3)</sup> Output overcurrent and short-circuit protected.

<sup>4)</sup> With light/dark ratio 1:1.

<b>Power consumption</b>	≤ 30 mA at 24 V DC without output load
<b>Protection class</b>	III
<b>Connection type</b>	M12 round connector x 1, 4-pin
<b>Output signal</b>	1 x PNP <sup>3)</sup>
<b>Switching mode</b>	NO
<b>Output current</b>	≤ 100 mA Output overcurrent and short-circuit protected
<b>Switching frequency</b>	250 Hz <sup>4)</sup>
<b>Enclosure rating</b>	IP67 IP69

<sup>1)</sup> U<sub>V</sub> connections, reverse polarity protected.

<sup>2)</sup> May not fall below or exceed U<sub>V</sub> tolerances.

<sup>3)</sup> Output overcurrent and short-circuit protected.

<sup>4)</sup> With light/dark ratio 1:1.

## Mechanics

<b>Wetted parts</b>	Stainless steel 1.4404 / 316L Polysulfon FPM
<b>Process connection</b>	G ½
<b>Housing material</b>	Stainless steel 1.4404 / 316L

## Ambient data

<b>Ambient operating temperature</b>	-10 °C ... +55 °C
<b>Ambient temperature, storage</b>	-25 °C ... +70 °C

## Certificates

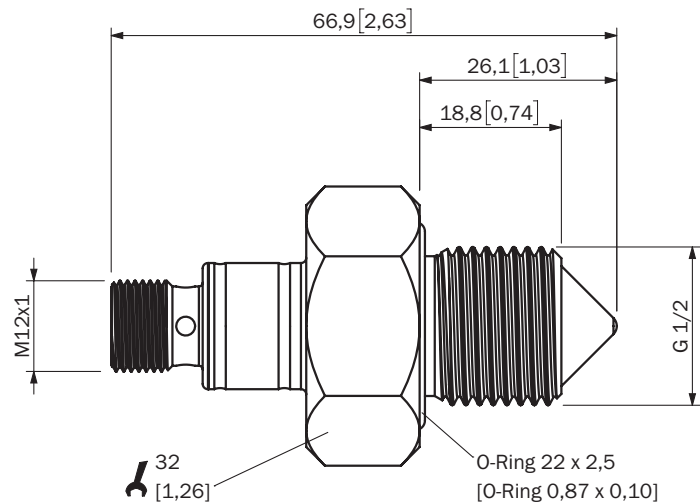
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>ECOLAB certificate</b>	✓
<b>FDA certificate</b>	✓
<b>cULus certificate</b>	✓
<b>Photobiological safety (DIN EN 62471)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

## Classifications

<b>ECLASS 5.0</b>	27273204
<b>ECLASS 5.1.4</b>	27273204
<b>ECLASS 6.0</b>	27273204
<b>ECLASS 6.2</b>	27273204
<b>ECLASS 7.0</b>	27273204
<b>ECLASS 8.0</b>	27273204
<b>ECLASS 8.1</b>	27273204

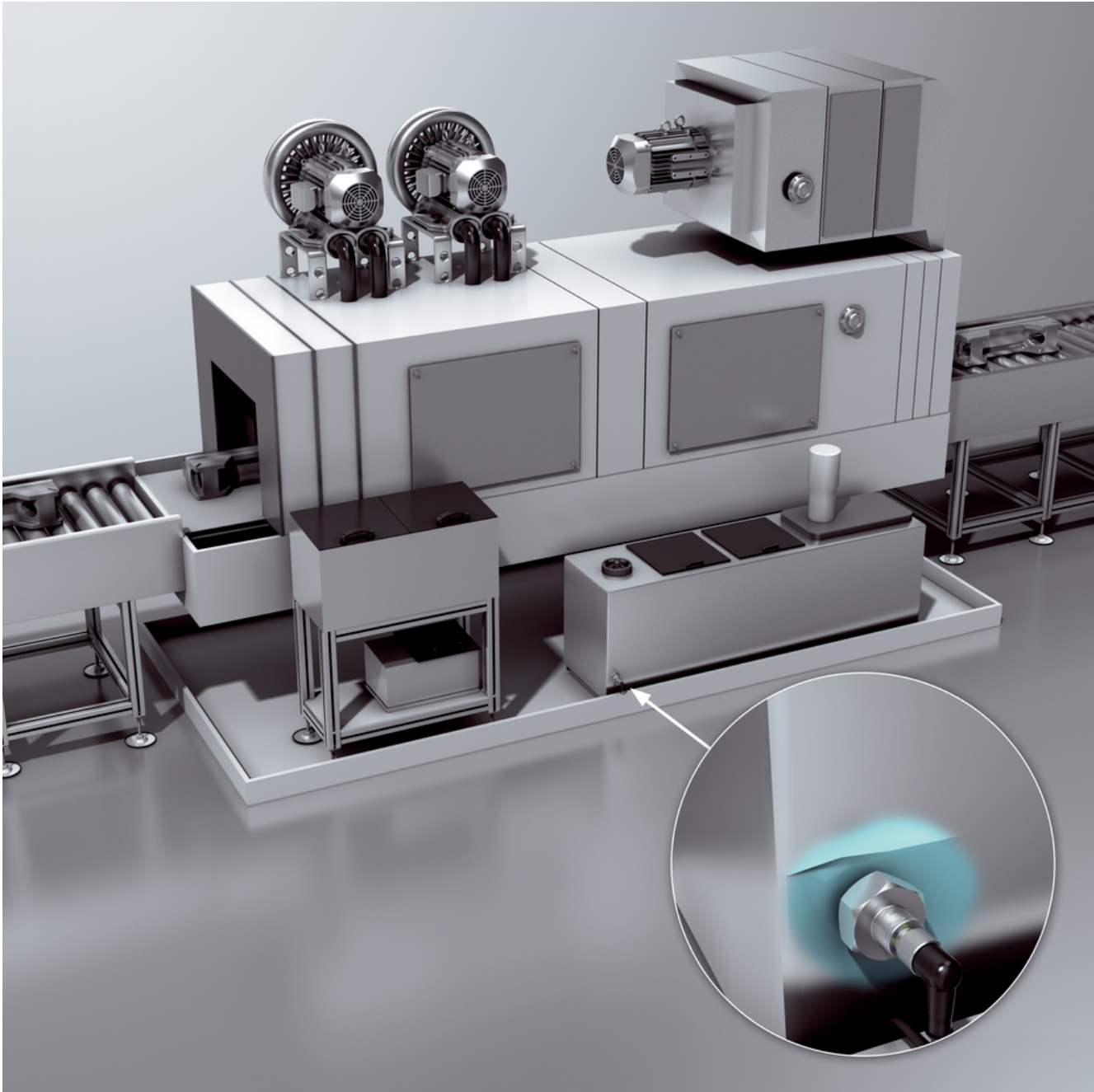
ECLASS 9.0	27273204
ECLASS 10.0	27273204
ECLASS 11.0	27273204
ECLASS 12.0	27270919
ETIM 5.0	EC002654
ETIM 6.0	EC002654
ETIM 7.0	EC002654
ETIM 8.0	EC002654
UNSPSC 16.0901	41111950

Dimensional drawing

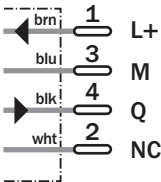


Dimensions in mm (inch)

Application



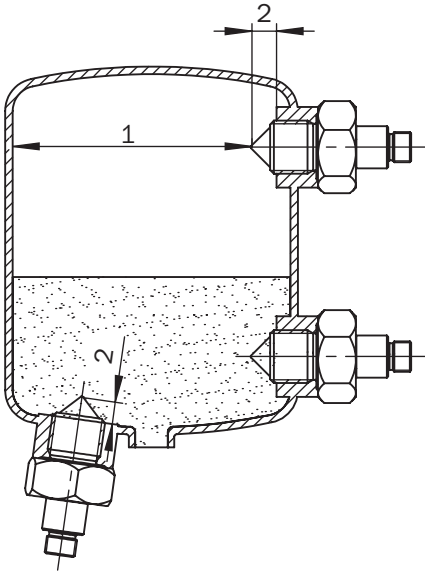
Connection diagram



### Connection type



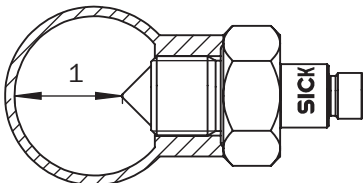
### Instruction for installation Installation in containers



The apex should protrude into the container

- ① Distance  $\geq 40$  mm
- ② Filler tip = 8 mm

### Instruction for installation Installation in pipelines for pump dry-run protection



- ① Distance  $\geq 40$  mm

## 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.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)