



GRF18S-N234EV

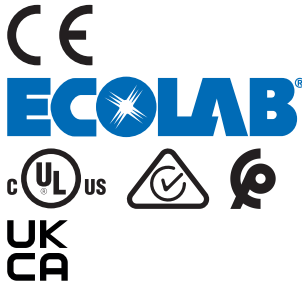
GRF18S

LEVEL SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
GRF18S-N234EV	1148199

Other models and accessories → www.sick.com/GRF18S

Detailed technical data

Features

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

Safety-related parameters

MTTF_D (mean time to dangerous failure)	2,304 years
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Performance

Response time	10 ms
MTBF	1,178 years
MTTF_d	2,304 years

Electronics

Communication interface	-
Supply voltage	10 V DC ... 30 V DC ¹⁾
Residual ripple	≤ 5 V _{pp} ²⁾
Power consumption	≤ 30 mA at 24 V DC without output load

¹⁾ U_V connections, reverse polarity protected.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Output overcurrent and short-circuit protected.

⁴⁾ With light/dark ratio 1:1.

Protection class	III
Connection type	M12 round connector x 1, 4-pin
Output signal	1 x NPN ³⁾
Switching mode	Normally closed
Output current	≤ 100 mA Output overcurrent and short-circuit protected
Switching frequency	250 Hz ⁴⁾
Enclosure rating	IP67 IP69

¹⁾ U_V connections, reverse polarity protected.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Output overcurrent and short-circuit protected.

⁴⁾ With light/dark ratio 1:1.

Mechanics

Wetted parts	EPDM ¹⁾ Stainless steel 1.4404 / 316L Polysulfon
Process connection	G ½
Housing material	Stainless steel 1.4404 / 316L

¹⁾ Peroxide cured.

Ambient data

Ambient operating temperature	-10 °C ... +55 °C
Ambient temperature, storage	-25 °C ... +70 °C

Classifications

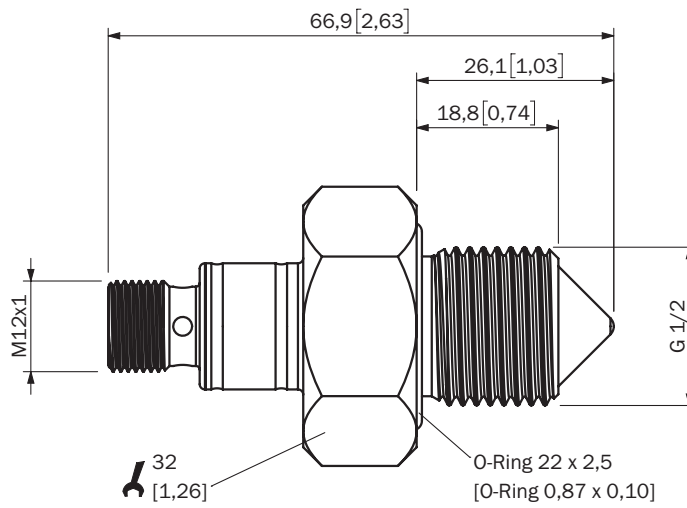
ECLASS 5.0	27273204
ECLASS 5.1.4	27273204
ECLASS 6.0	27273204
ECLASS 6.2	27273204
ECLASS 7.0	27273204
ECLASS 8.0	27273204
ECLASS 8.1	27273204
ECLASS 9.0	27273204
ECLASS 10.0	27273204
ECLASS 11.0	27273204
ECLASS 12.0	27270919
ETIM 5.0	EC002654
ETIM 6.0	EC002654
ETIM 7.0	EC002654
ETIM 8.0	EC002654
UNSPSC 16.0901	41111950

Certificates

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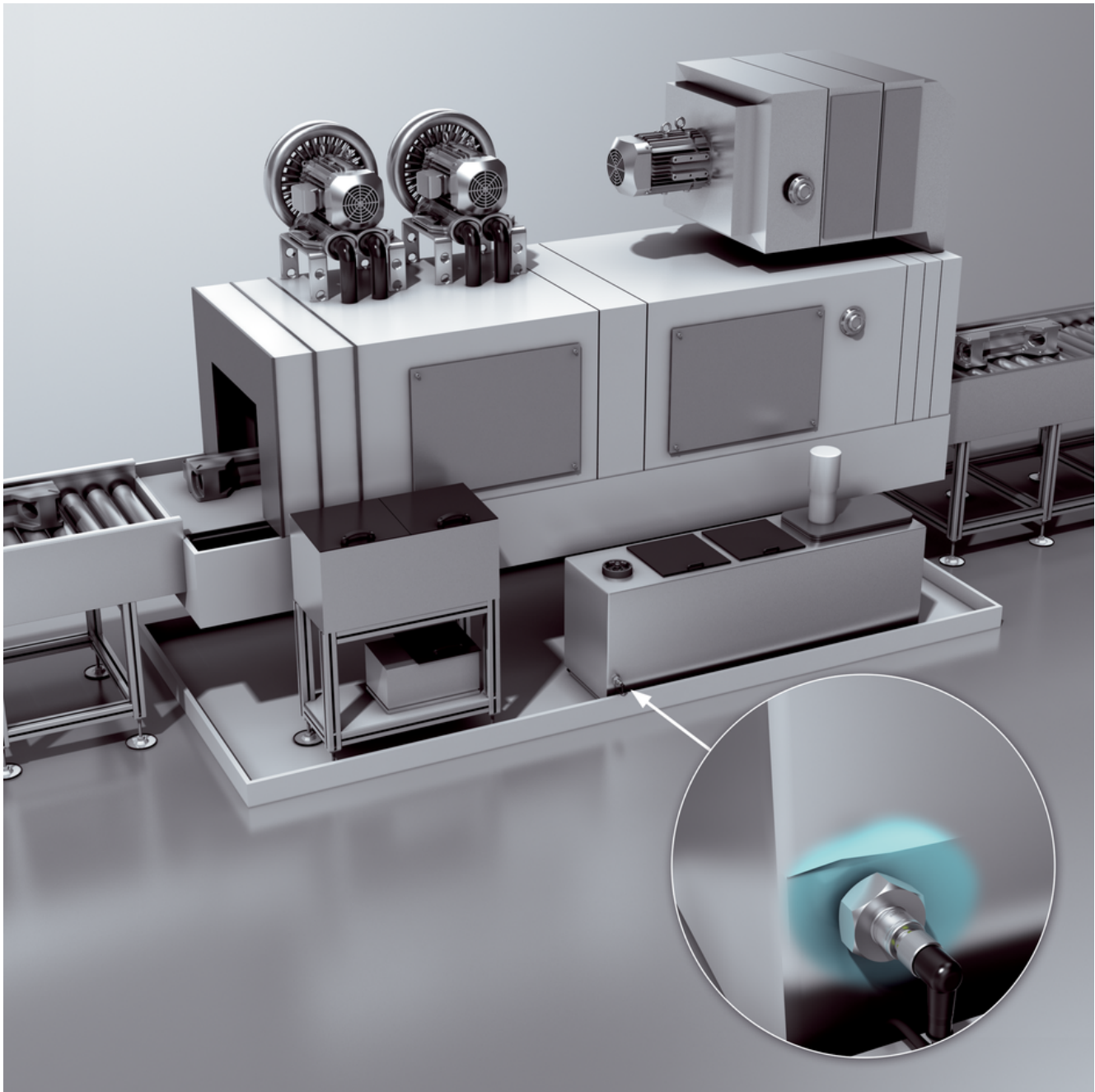
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Dimensional drawing

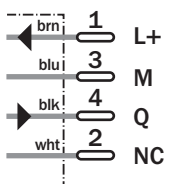


Dimensions in mm (inch)

Application



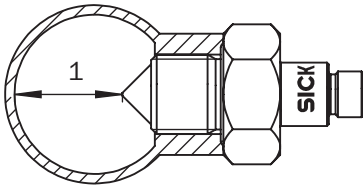
Connection diagram



Connection type



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



Note:

Fluids which leave heavy coatings can cause sensor deposits and disrupt the function.

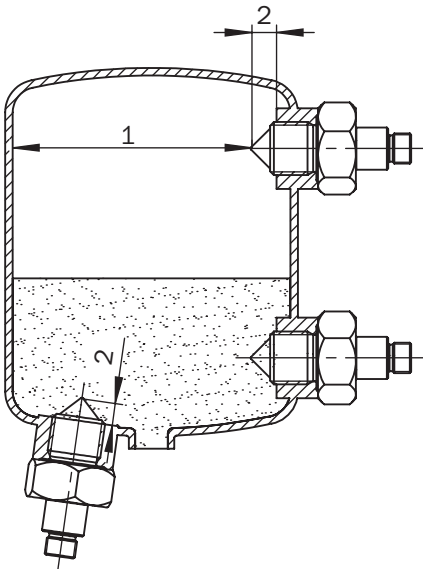
Applications with foam:

Foam with low foam density is not detected by the GRF18S.

Foam with high foam density can be detected by the GRF18S and cause switching errors.

① Distance ≥ 40 mm

Instruction for installation Installation in containers



The apex should protrude into the container

① Distance ≥ 40 mm

② Filler tip = 8 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