



GRF18S

Compact, rugged and low-maintenance point level switch with easy handling.

SICK
Sensor Intelligence.



Technical data overview

Measurement principle	Optical level switch
Detection principle	Contact
Medium	Fluids
Measurement	Switch
Process connection	G ½
Process temperature	-10 °C ... +55 °C
Process pressure	-0.5 bar ... 20 bar
Output signal	1 x NPN / 1 x PNP (depends on variant)
Connection type	M12 round connector x 1, 4-pin

Product description

The GRF18S is a compact optical level switch which is characterized mainly by its extremely simple commissioning. The proven technology of the energetic photoelectric proximity sensor from SICK is the foundation for the sensor. This allows for easy, rugged and reliable sensor construction. Thanks to the use of high-quality materials such as stainless steel 1.4404 and polysulfone as well as the housing design in enclosure rating IP69, the GRF18S guarantees high process reliability, even under harsh ambient conditions outside the tank. Quick and problem-free commissioning, without medium calibration, reduces not only commissioning costs, but also maintenance. Due to the optical technology, the GRF18S is particularly well-suited for water-based media.

At a glance

- Rugged fill level measurement in fluid media
- Small, compact design; no medium calibration required
- Process temperature up to 55 °C, process pressure up to 20 bar
- IP 67 and IP 69 enclosure rating
- Process connection G ½
- Highly medium resistant due to stainless steel housing 1.4404, polysulfone apex
- Output available as PNP or NPN transistor
- FDA compliant, UL

Your benefits

- Small, compact sensor ideal for difficult installation conditions with limited space
- Quick commissioning without medium calibration saves time and money
- No moving mechanical parts reduce maintenance and eliminate the need to recalibrate, even after long periods of use

Fields of application

- Level monitoring, in particular in watery and water-based fluids
- Dry-run protection for pumps
- Level monitoring in rinsing units of cleaning systems

Type code

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

Type code

Switching output

P	1 x PNP transistor output, normally closed
F	1 x PNP transistor output, normally open
E	1 x NPN transistor output, normally open
N	1 x NPN transistor output, normally closed

Wetted parts

L	Stainless steel 316L, polysulfon, FPM
E	Stainless steel 316L, polysulfon, EPDM

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Ordering information

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- **Communication interface:** -
- **Process connection:** G ½
- **Remote amplifier:** no
- **Output signal:** 1 x NPN
- **Connection type:** M12 round connector x 1, 4-pin
- **Process temperature:** -10 °C ... +55 °C
- **Process pressure:** -0.5 bar ... 20 bar
- **Switching mode:** NO
- **Housing material:** Stainless steel 1.4404 / 316L
- **Enclosure rating:** IP67, IP69

Wetted parts	Type	Part no.
EPDM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-E234EV	1148200
FPM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-E234LV	1092960

- **Communication interface:** -
- **Process connection:** G ½
- **Remote amplifier:** no
- **Output signal:** 1 x PNP
- **Connection type:** M12 round connector x 1, 4-pin
- **Process temperature:** -10 °C ... +55 °C
- **Process pressure:** -0.5 bar ... 20 bar
- **Switching mode:** NO
- **Housing material:** Stainless steel 1.4404 / 316L
- **Enclosure rating:** IP67, IP69

Wetted parts	Type	Part no.
EPDM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-F234EV	1148198
FPM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-F234LV	1092958

- **Communication interface:** -
- **Process connection:** G ½
- **Remote amplifier:** no
- **Output signal:** 1 x NPN
- **Connection type:** M12 round connector x 1, 4-pin
- **Process temperature:** -10 °C ... +55 °C
- **Process pressure:** -0.5 bar ... 20 bar
- **Switching mode:** Normally closed
- **Housing material:** Stainless steel 1.4404 / 316L
- **Enclosure rating:** IP67, IP69

Wetted parts	Type	Part no.
EPDM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-N234EV	1148199
FPM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-N234LV	1092959

- **Communication interface:** -
- **Process connection:** G ½
- **Remote amplifier:** no
- **Output signal:** 1 x PNP
- **Connection type:** M12 round connector x 1, 4-pin
- **Process temperature:** -10 °C ... +55 °C
- **Process pressure:** -0.5 bar ... 20 bar
- **Switching mode:** Normally closed
- **Housing material:** Stainless steel 1.4404 / 316L
- **Enclosure rating:** IP67, IP69

Wetted parts	Type	Part no.
EPDM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-P234EV	1148197
FPM, Stainless steel 1.4404 / 316L, polysulfon	GRF18S-P234LV	1092957

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