



## Level sensors Vibrating level switch, LFV310

LFV310-XXGAVXMRX



**Model Name** > **LFV310-XXGAVXMRX**  
**Part No.** > **6039134**



*Product may differ  
from illustration*

#### At a glance

- Several housing materials and electrical outputs available
- Commissioning without filling
- Process temperature up to 250 °C
- Immune to deposit formation
- Very high repeatability
- Aseptic versions according to EHEDG and FDA available, CIP and SIP resistant
- ATEX and marine certifications available

#### Your benefits

- Easy installation and commissioning, no calibration necessary
- Easy operation and integration, saves time
- Maintenance-free sensor, reduces downtime
- Testing in place possible - no mounting required, which reduces installation time
- Flexible and tough system for a multitude of applications
- Universal technology works in all kinds of liquids



#### Features

|                        |                   |
|------------------------|-------------------|
| Medium:                | Fluids            |
| Measurement:           | Switch            |
| Probe length:          | 66 mm             |
| Process pressure:      | -1 bar ... 64 bar |
| Process temperature:   | -50 °C ... 150 °C |
| WHG approval:          | -                 |
| ATEX certification:    | -                 |
| Ship approval:         | -                 |
| Fill material density: | 0.5 ... 2.5       |

#### Performance

|                             |                          |
|-----------------------------|--------------------------|
| Accuracy of sensor element: | ± 2 mm                   |
| Repeatability:              | 1                        |
| Viscosity:                  | 0.1 mPas ... 10,000 mPas |
| Response time:              | 500 ms                   |

#### Mechanical data

|                     |             |
|---------------------|-------------|
| Housing material:   | Aluminum    |
| Process connection: | G 1 A PN 64 |

Wetted parts:  
Sensor material:

Stainless steel 316L (optional  $Ra \leq 0.8 \mu m$ )  
Stainless steel 1.4404

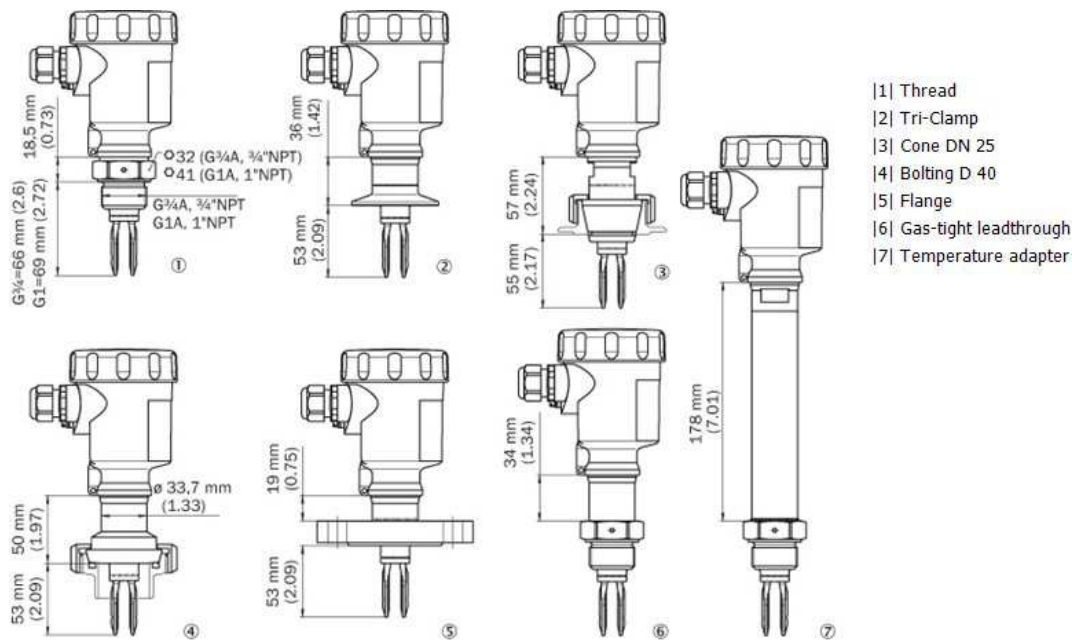
#### Electrical data

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| Temperature drift:     | 0,03 mm/K                                                  |
| Enclosure rating:      | IP 66                                                      |
| Power consumption:     | 5 mA ... 30 mA                                             |
| Protection class:      | 0, 1                                                       |
| Initialization time:   | 2                                                          |
| Output signal:         | Double relay (DPDT): 20 V DC ... 72 V DC / 20 ... 253 V AC |
| Hysteresis:            | 2 mm                                                       |
| Output current:        | > 10 UA, 3A AC, 1A DC                                      |
| Capacitive load:       | 750 VA 54 W                                                |
| Inductive load:        | 750 VA 54 W                                                |
| Electrical connection: | M20 x 1.5                                                  |

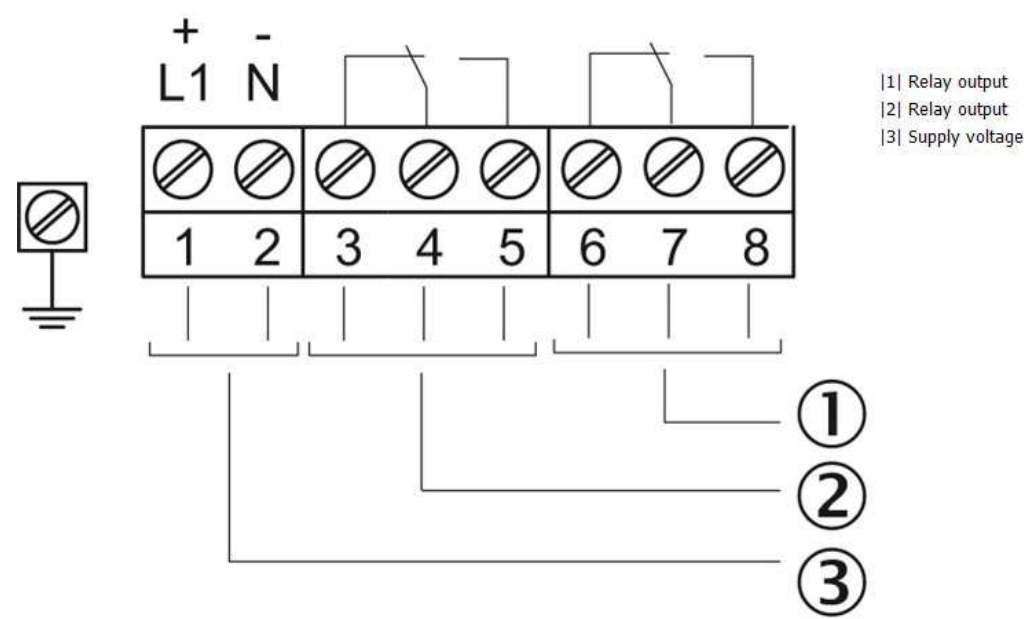
#### Ambient data

|                                |                  |
|--------------------------------|------------------|
| Ambient temperature operation: | -40 °C ... 70 °C |
| Ambient storage temperature:   | -40 °C ... 80 °C |

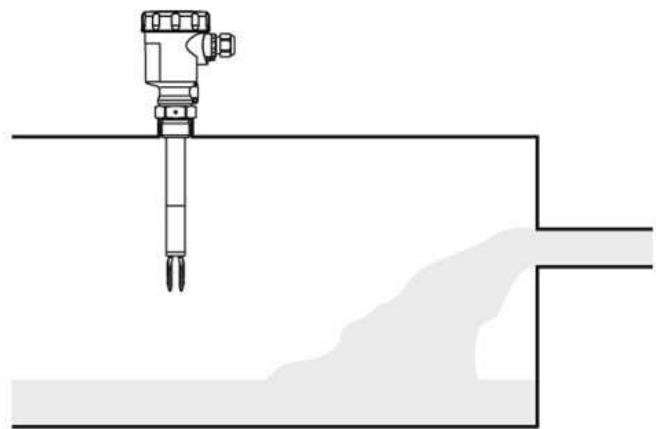
#### Dimensional drawing



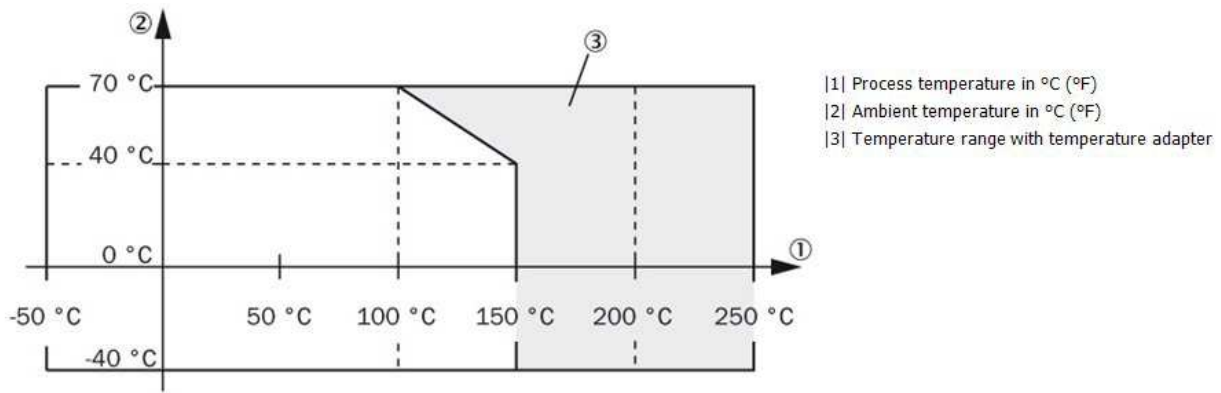
Double relay connection diagram



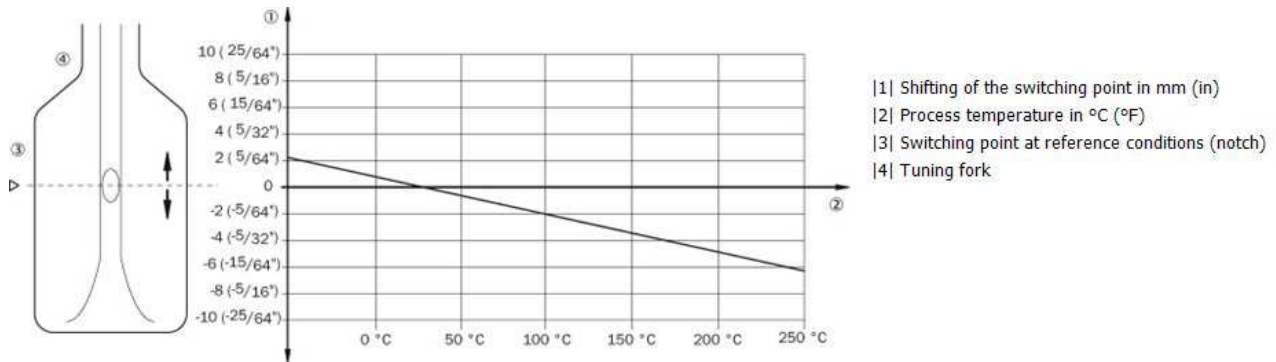
Instruction for installation



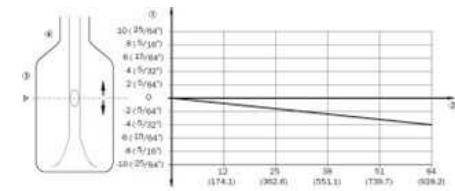
## Ambient temperature - process temperature



## Influence of the process temperature on the switching point

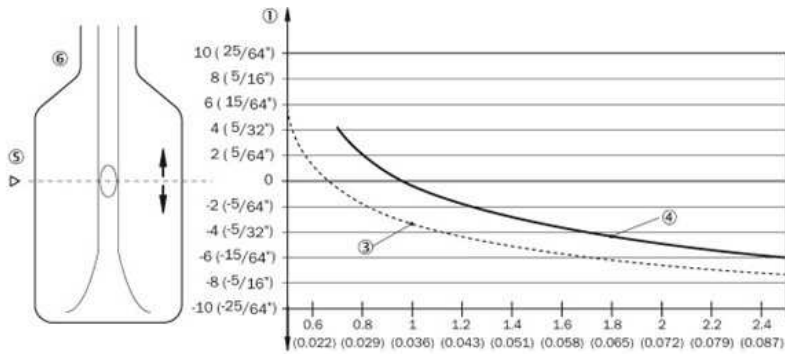


## Influence of the process temperature to the switching point



- |1| Shifting of the switching point in mm (in)
- |2| Process pressure in bar (psig)
- |3| Switching point at reference conditions (notch)
- |4| Tuning fork

## Influence of the product density on the switching point



- |1| Shifting of the switching point in mm (in)
- |2| Product density in g/cm3 (lb/in3)
- |3| Switch position 0.5 g/cm3 (0.018 lb/in3)
- |4| Switch position 0.7 g/cm3 (0.025 lb/in3)
- |5| Switching point at reference conditions (notch)
- |6| Tuning fork

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)