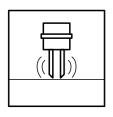
## **Vibration Limit Switch**



## LVL-T1



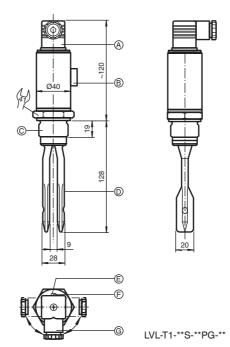




### **Features**

- · Level limit switch for liquids
- · External test option using test magnet
- On-site function control using external LED display
- · Easy to install even at points difficult to access due to compact design
- Due to its compact construction, it can be directly connected to a miniature contactor, magnet operated valve or programmable logic control (PLC)
- · Rugged stainless steel housing
- · Cost-saving plug connections

### **Dimensions**



- A) PG11 cable gland (IP65/IP67)
- B) Test magnet
  C) G1A (cylindrical), 1 NPT (conical), R 1
  (conical), made of corrosion resistant steel
- D) Vibration fork made of heavy duty corrosion resistant steel
- E) Green light-emitting diode "ready to
- F) Red light-emitting diode for switch indicator "circuit cut off"
- G) The connector housing can be mounted at a 90° angle.

#### **Function**

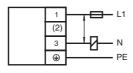
The symmetrical vibrating probe vibrates at its resonance frequency. If it is submerged in liquid, this resonance frequency changes, and the electronics activate an electronic switch.

The Vibracon LVL-T1 can be operated in minimum or maximum closed circuit safety, i. e. the electronic switch closes by obtaining the limit level, by fault and by power failure.

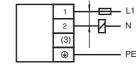
### **Electrical connection**

Connection output WA

Maximum fail-safe mode



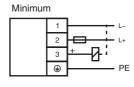
Minimum fail-safe mode



Connection output E5

Maximum

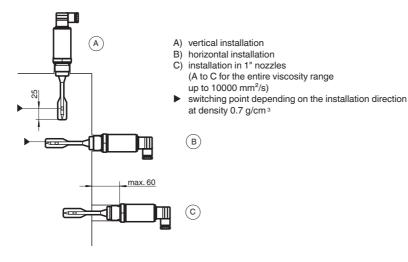
R = external load



mA) - nesiblad current max. 4 mA with blocked thyristor - output E5 (the load is switched via a translator and a separate connection): transcert (1, 1), max. 1, A max. 55 (the stock), max. 1, pt. and 1, 1, p		
Output Notaberderisties         Output locked           Fail-said mode         Minimum-invasimum closed dirout safety, determined by the way of connection           Switching time         Minimum-invasimum closed dirout safety, determined by the way of connection           Load         White Covering the sensor approx. 0.5 s., when uncovering the sensor approx. 1.0 s.           Jordan VA (Dadi switched across thyristor clined by prover supply circuit):	• •	
Signation alarmmer   Configuration   Configu	Description	level limit switch for application in storage tank, stirring container and pipeline with liquids
Switching lime  Among the sensor approx. 15.5, when unconvening the sensor approx. 15.8  Load  Load  When covering the sensor approx. 15.8, when unconvening the sensor approx. 15.9  Load when covering the sensor approx. 15.8, when unconvening the sensor approx. 15.9 (and south-old carross thysistor disorbly in power supply circuit):  - Insalicular and a sensor approx. 15.8, and a 250 V, max. 84 VA at 24 V (not short-circuit proof)  - Loadinuouse max. 87 VA at 250 V, max. 84 VA at 24 V (not short-circuit proof)  - Loadinuouse max. 87 VA at 250 V, max. 84 VA at 24 V, min. 2.5 VA at 250 V (10 mA), min. 0.5 VA at 24 V (20 mA)  - Insalicular current max. 450 mA, mix. 0.5 pf at 35 V, max. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, max. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, max. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, max. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 350 mA, mix. 0.5 pf at 35 V, mix. 1 pF at 34 V  - Loadinuouse max. 1 pF at 35 V mix. 0.5 pf at 35 V mix. 0.5 pf at	Output characteristics	
when covering the sensor approx. 0.5 s. when uncovering the sensor approx. 1.0 s upput WA Roads advelled across thy tiple of decidity in prove supply fortually and a sensor sens	Signal on alarm	Output locked
output WA (Dead switched across thyristor directly in power supply circuit): - leasinet (20 ms.) max. 1.5 M, and 250 V, max. 81 VA at 24 V (not short-clicual proof) - continuous max. 87 VA at 250 V, max. 81 VA at 24 V (not short-clicual proof) - continuous max. 87 VA at 250 V, max. 81 VA at 24 V (not short-clicual proof) - continuous max. 87 VA at 250 V, max. 81 VA at 24 V (not short-clicual proof) - continuous max. 87 VA at 250 V, max. 81 VA at 24 V (not short-clicual proof) - residual values of the san thinked was attendable and a separate connection; - continuous max. 350 MA, max. 0.5 up at 35 V, max. 1 µF at 24 V - residual values of the san thinked attendable of the san thinked atte	Fail-safe mode	Minimum/maximum closed circuit safety, determined by the way of connection
- Inansient (40 ms); max. 1.5 A, max. 375 VA at 250 V or max. 36 VA at 250 V (not short-circuit proof) - continuous max. 87 VA at 250 V, max. 54 VA at 250 V (not short-circuit proof) - continuous max. 87 VA at 250 V, max. 54 VA at 250 V (10 mA), min. 0.5 VA at 24 V (0.5 mA) - residual current max. 4 mA with blocked thyristor - output E5 (the load is switched via a transistor and a separate connection) - continuous max. 350 mA, max. 55 FM at 50 V, max. 1 µF at 34 V - residual victure 1-100 µA (with closed transistor) - residual current - 100 µA (with closed transistor) - residual victure - 100 µA (with closed transistor) - residual current - 100 µA (with closed transistor) - residual current - 100 µA (with closed transistor) - residual current - 100 µA (with point transistor) - residual c	Switching time	when covering the sensor approx. 0.5 s, when uncovering the sensor approx. 1.0 s
Electrical connection  output WA: Always connect the LVL-T1 in series with a load! Take into account the voltage drop via the LVL-T1 when switched in circuit and the residual current when isolated (see technical data, output) and, for low supply voltages, take into account the voltage drop via the load, in order to ensure that the terminal voltage on the LVL-T1 does not fall below the permissible value. output IES: Should be used in conjunction with programmable logic controllers (PLC), positive signal on the sensor switch output (PRP).  The protective circuit is implemented in the connection. Output WA: 19253 V AC, 50/60 Hz, output IES: 1055 V DC Outrent consumption Output WA: max. 4 m/s (sand by), output IES: max. 15 mA Output IES: max. 1.7 V , 0 400 Hz Output IES: m	Load	- transient (40 ms): max. 1.5 A, max. 375 VA at 250 V or max. 36 VA at 24 V (not short- circuit proof) - continuous: max. 87 VA at 250 V, max. 8.4 VA at 24 V, min. 2.5 VA at 250 V (10 mA), min. 0.5 VA at 24 V (20 mA) - residual current max. 4 mA with blocked thyristor output E5 (the load is switched via a transistor and a separate connection): - transient (1 s): max. 1 A, max. 55 V (overload and short-circuit protection) - continuous: max. 350 mA, max. 0.5 $\mu$ F at 55 V, max. 1 $\mu$ F at 24 V - residual voltage < 3 V (with closed transistor)
Electrical connection  output WA: Always connect the LVL-T1 in series with a load! Take into account the voltage drop via the LVL-T1 when switched in circuit and the residual current when isolated (see technical data, output) and, for low supply voltages, take into account the voltage drop via the load, in order to ensure that the terminal voltage on the LVL-T1 does not fall below the permissible value. output IES: Should be used in conjunction with programmable logic controllers (PLC), positive signal on the sensor switch output (PRP).  The protective circuit is implemented in the connection. Output WA: 19253 V AC, 50/60 Hz, output IES: 1055 V DC Outrent consumption Output WA: max. 4 m/s (sand by), output IES: max. 15 mA Output IES: max. 1.7 V , 0 400 Hz Output IES: m	Auxiliary energy	
Supply voltage         output WA: max. 4 mA (stand by), output E5: nax. 15 mA           Residual ripple         output MA: max. 4 mA (stand by), output E5: max. 15 mA           Voltage drop         output WA: max. 12 V           Reverse potarity protection         yes           Measurement accuracy         approx. 4 mm with vertical mounting           Hysterosis         approx. 4 mm with vertical mounting           Operating conditions         installation conditions           Installation position         any position           Ambient conditions         any position           Ambient emperature         -40 70 °C (-40 158 °F)           Storage temperature         -40 150 °C (-40 185 °F)           Process conditions         -40 150 °C (-40 302 °F)           Process pressure (static pressure)         -40 150 °C (-40 302 °F)           Process pressure (static pressure)         -1 40 bar (-14.5 580.2 psi)           Density         min. 0.7 g/cm³           Viscosity         max. 10000 mm²/s (10000 cSt)           Mechanical specifications         Protection degree           Mechanical construction         (-17.1-1-16.39-E5FG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 protection WHG           Versions         -1.17.1-1-33-WAPG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 protec		Always connect the LVL-T1 in series with a load! Take into account the voltage drop via the LVL-T1 when switched in circuit and the residual current when isolated (see technical data, output) and, for low supply voltages, take into account the voltage drop via the load, in order to ensure that the terminal voltage on the LVL-T1 does not fall below the permissible value. output E5:  Should be used in conjunction with programmable logic controllers (PLC), positive signal on the sensor switch output (PNP).
Current consumption  Residual ripple  output WS: max. 4 mA (stand by), output E5: max. 15 mA  output E5: max. 1.7 V, 0 400 Hz  Voltage drop  Reverse polarity protection  Measurement accuracy  Hysteresis  approx. 4 mm with vertical mounting  Operating conditions  Installation position  Ambient temperature  40 70 °C (-40 158 °F)  Storage temperature  40 70 °C (-40 158 °F)  Process conditions  Medium temperature  40 85 °C (-40 185 °F)  Process pressure (static pressure)  Process pressure (static pressure)  Density  Viscosity  max. 10000 mm²/s (10000 cst)  Mechanical specifications  Protection degree  Versions  Protection degree  1-LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11  - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG  All above-mentioned versions are also available with thread 1 NPT.  Dimensions  Mass  Approx. 450 g  Material  Process connection  Fig. 3.2 µm/RB grift  Process connection  Fig. 3.2 µm/RB grift  Fig. 3.2 µm/RB grift  - conical thread G1 in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603  - conical thread R1 in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603  - conical thread R1 in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603  - conical thread G1 in acc. with DIN ISO 228/1 with flat seal gland PG11,  Electrical connection  4-pin by up connection in acc. with DIN 18999, part 1  Electrical connection  4-pin by up connection in acc. with DIN 18999, part 1  Electrical connection  4-pin by up connection in acc. with DIN 18999, part 1  Electrical connection  4-pin by up connection in acc. with DIN 3999, part 1  - conical thread G1 in acc. with DIN 2899, part 1  - conical thread F1 in acc. with DIN 2899, part 1  - conical thread F1 in acc. with DIN 2899, part 1	Supply voltage	
Residual ripple output E5: max. 1.7 V , 0 400 Hz  Voltage drop output W3: max. 12 V yes  Measurement accuracy Hysteresis approx. 4 mm with vertical mounting  Operating conditions Installation conditions Installation position Ambient conditions Ambient temperature Storage temperature 1-40 70 °C (-40 188 °F) -40 85 °C (-40 185 °F) Process conditions  Medium temperature 1-40 150 °C (-40 302 °F) -1 40 bar (-14.5 580.2 psi) min. 0.7 g/cm³ max. 10000 mm²/s (10000 cSt)  Mechanical specifications  Protection degree  IP65/IP67 with connector (PG11 cable gland)  Mechanical construction  Construction type  Versions  1-VV-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, roverspill protection WHG All above-mentioned versions are also available with thread 1 NPT.  Dimensions  Mass approx. 4 mm with vertical mounting  output (240 188 °F) -40 150 °C (-40 188 °F) -1 40 bar (-14.5 580.2 psi) min. 0.7 g/cm³ max. 10000 mm²/s (10000 cSt)  Mechanical construction  Construction type  Versions  1-VV-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 cubt legisland)  Dimensions  All above-mentioned versions are also available with thread 1 NPT.  Dimensions  Mass approx. 450 g  process connection and vibration fork: stainless steel 1.4571/316Ti housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, wark acids and alkalis  Surface quality  Process connection 4-pin florical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 -conical thread 1 NPT in acc. with DIN 2999, part 1 -conical thread 1 NPT in acc. with DIN 2999, part 1 -conical thread 1 in acc. with DIN 3959-0, ISO 4400 with cable gland PG11, -conical thread 1 in acc. with DIN 3959-0, ISO 4400 with cable gland PG11,		
Voltage drop         output WA: max. 12 V           Reverse polarity protection         yes           Measurement accuracy         Hysteresis         approx. 4 mm with vertical mounting           Operating conditions         Installation conditions         Installation position           Ambient conditions         any position           Ambient conditions         40 70 °C (-40 158 °F)           Storage temperature         -40 85 °C (-40 185 °F)           Process conditions         Medium temperature         -40 150 °C (-40 302 °F)           Process pressure (static pressure)         -1 40 bar (-14.5 580.2 psi)           Density         min. 0.7 g/cm³         3           Viscosity         max. 10000 mm²/s (10000 cst)           Mechanical specifications         Protection degree         P65/IP67 with connector (PG11 cable gland)           Mechanical construction         Versions         LVL-T1-G3S-ESFG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, currently protection WHG           Versions         LVL-T1-G3S-ESFG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG         LVL-T1-G3S-ESFG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG           Dimensions         see dimensions           Mass         approx. 450 g           Material	•	
Resurrent accuracy         yes           Hysteresis         approx. 4 mm with vertical mounting           Operating conditions         Installation conditions           Installation position         any position           Ambient conditions         40 70 °C (-40 158 °F)           Storage temperature         40 85 °C (-40 185 °F)           Process conditions         40 150 °C (-40 185 °F)           Medium temperature         40 150 °C (-40 302 °F)           Process pressure (static pressure)         1 40 bar (-14.5 580.2 psi)           Density         min. 0.7 g/cm³           Viscosity         max. 10000 mm²/s (10000 cSt)           Mechanical specifications         1P65/IP67 with connector (PG11 cable gland)           Protection degree         IP65/IP67 with connector (PG11 cable gland)           Mechanical construction         compact device           Versions         - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG           Versions         - LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG           Lux-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG         All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions		
Measurement accuracy         approx. 4 mm with vertical mounting           Hysteresis         approx. 4 mm with vertical mounting           Operating conditions         Installation conditions           Installation position         any position           Ambient conditions         40 70 °C (-40 158 °F)           Ambient temperature         -40 85 °C (-40 185 °F)           Process conditions         Medium temperature           Medium temperature         -40 150 °C (-40 302 °F)           Process pressure (static pressure)         -1 40 bar (-14.5 580.2 psi)           Density         min. 0.7 g/cm³           Viscosity         max. 10000 mm²/s (10000 cst)           Mechanical specifications         Protection degree           Protection dyre         compact device           Versions         LVL-11-433-ESPG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11           LVL-11-433-ESPG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG           LVL-11-433-ESPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG           All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions           Mass         approx. 450 g           Material         process connection and vibration	* '	·
Approx. 4 mm with vertical mounting	· · · · · · · · · · · · · · · · · · ·	yes
Installation conditions   Installation conditions   Installation position   any position	Measurement accuracy	
Installation conditions Installation position Ambient conditions Ambient conditions  Ambient temperature -40 70 °C (-40 158 °F) Storage temperature -40 85 °C (-40 185 °F) Process conditions Medium temperature -40 85 °C (-40 185 °F) Process pressure (static pressure) Process pressure (static pressure) -1 40 bar (-14.5 580.2 psi) min. 0.7 g/cm³ Viscosity max. 10000 mm²/s (10000 cSt)  Mechanical specifications Protection degree   IP65/IP67 with connector (PG11 cable gland) Mechanical construction Construction type  Versions -LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 10	Hysteresis	approx. 4 mm with vertical mounting
Installation position  Ambient conditions  Ambient temperature  40 70 °C (-40 158 °F)  Storage temperature  40 85 °C (-40 185 °F)  Process conditions  Medium temperature  -40 150 °C (-40 302 °F)  Process pressure (static pressure)  Density  min. 0.7 g/cm³  Viscosity  Mechanical specifications  Protection degree  IP65/IP67 with connector (PG11 cable gland)  Mechanical construction  Construction type  compact device  -LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 -LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-NA process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-E5PG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG -LVL-T1-G3S-WAPG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection W	Operating conditions	
Ambient conditions Ambient temperature After a conditions Ambient temperature After a conditions  Medium temperature After a conditions  Protection degree After a conditions  Mechanical specifications  Protection degree  Mechanical construction  Construction type  Versions  After a condition type	Installation conditions	
Ambient conditions Ambient temperature After a conditions Ambient temperature After a conditions  Medium temperature After a conditions  Medium temperature Process conditions  Medium temperature Process pressure (static pressure) Process pressure (static pressure) Process pressure (static pressure) Protection degree Protection degree Protection degree Protection degree Protection dype Versions  Mechanical specifications Protection type  Versions  LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.  Dimensions  Mass  approx. 450 g  Material  Material  process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing: stainless steel 1.4404/316L housing: stainless steel 1.4404/316L housing: stainless and alkalis  R <sub>a</sub> < 3.2 µm/80 grit  Process connection  Process connection  Surface quality  Process connection  Process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing: stainless steel 1.4571/316Ti housing: stainless steel	Installation position	any position
Storage temperature Process conditions  Medium temperature Process pressure (static pressure) 1 40 bar (-14.5 580.2 psi) Density Min. 0.7 g/cm³ Wiscosity Mechanical specifications Protection degree  IP65/IP67 with connector (PG11 cable gland)  Mechanical construction Construction type  Versions  - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.  Dimensions  Mass  approx. 450 g  Material  process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal fing for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis  Surface quality  Process connection  - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread R1 in acc. with DIN 2939, part 1  Electrical connection  4-pin plug connection in acc. with DIN 3650-A, ISO 4400 with cable gland PG11,	Ambient conditions	
Storage temperature Process conditions  Medium temperature Process pressure (static pressure) 1 40 bar (-14.5 580.2 psi) Density Min. 0.7 g/cm³ Wiscosity Mechanical specifications Protection degree  IP65/IP67 with connector (PG11 cable gland)  Mechanical construction Construction type  Versions  - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.  Dimensions  Mass  approx. 450 g  Material  process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal fing for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis  Surface quality  Process connection  - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread R1 in acc. with DIN 2939, part 1  Electrical connection  4-pin plug connection in acc. with DIN 3650-A, ISO 4400 with cable gland PG11,	Ambient temperature	-40 70 °C (-40 158 °F)
Process conditions  Medium temperature  -40 150 °C (-40 302 °F)  Process pressure (static pressure)  -1 40 bar (-14.5 580.2 psi)  Density  max. 10000 mm²/s (10000 cSt)  Mechanical specifications  Protection degree  IP65/IP67 with connector (PG11 cable gland)  Mechanical construction  Construction type  Compact device  - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.  Dimensions  see dimensions  Aass  approx. 450 g  process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis  Surface quality  Process connection  - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread R1 in acc. with DIN 2999, part 1  Electrical connection  4-pin plug connection in acc. with DIN 3650-A, ISO 4400 with cable gland PG11,	•	· · · · · · · · · · · · · · · · · · ·
Medium temperature	· ·	-40 65 O (-40 105 T)
Process pressure (static pressure) Density min. 0.7 g/cm³ min. 0.0 g/cm³ min. 0.7 g/cm³ min. 0.7 g/cm³ min. 0.7 g/cm³  Mechanical specifications Protection degree  IP65/IP67 with connector (PG11 cable gland)  Mechanical construction  Construction type  Versions  - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG - All above-mentioned versions are also available with thread 1 NPT.  See dimensions  Mass  Material  process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis  Surface quality  Process connection  - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread 1 NPT in acc. with DIN 2999, part 1  Electrical connection  4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11,		
Density         min. 0.7 g/cm³           Viscosity         max. 10000 mm²/s (10000 cSt)           Mechanical specifications         IP65/IP67 with connector (PG11 cable gland)           Protection degree         IP65/IP67 with connector (PG11 cable gland)           Mechanical construction         Construction type           Versions         - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-WBPG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions           Mass         approx. 450 g           Material         process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flow cover: PPSU connector: PA plug seal: Elastomer flow cover: PPSU connector: PA plug seal: Elastomer flow cover: PRSU connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis           Surface quality         Ra < 3.2 μm/80 grit         cyclindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 conical thread G11 in acc. with DIN 2999, part 1           Electrical connection         4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11,	·	
Viscosity         max. 10000 mm²/s (10000 cSt)           Mechanical specifications         IP65/IP67 with connector (PG11 cable gland)           Mechanical construction         Construction type           Versions         - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions           Mass         approx. 450 g           Material         process connection and vibration fork: stainless steel 1.4571/316Ti housing; stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis           Surface quality         Ra < 3.2 µm/80 grit           Process connection         - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread 1 NPT in acc. with DIN 2999, part 1           Electrical connection         4-pin plug connection in acc. with DIN 190 4400 with cable gland PG11,	Process pressure (static pressure)	
Mechanical specifications         IP65/IP67 with connector (PG11 cable gland)           Mechanical construction         compact device           Versions         - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions           Mass         approx. 450 g           Material         process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis           Surface quality         R <sub>a</sub> < 3.2 μm/80 grit	Density	min. 0.7 g/cm <sup>3</sup>
Protection degree         IP65/IP67 with connector (PG11 cable gland)           Mechanical construction         compact device           Versions         compact device           Versions         - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions           Mass         approx. 450 g           Material         process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis           Surface quality         R <sub>a</sub> < 3.2 μm/80 grit	Viscosity	max. 10000 mm <sup>2</sup> /s (10000 cSt)
Protection degree         IP65/IP67 with connector (PG11 cable gland)           Mechanical construction         compact device           Versions         compact device           Versions         - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions           Mass         approx. 450 g           Material         process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis           Surface quality         R <sub>a</sub> < 3.2 μm/80 grit	Mechanical specifications	
Mechanical construction         compact device           Versions         - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.           Dimensions         see dimensions           Mass         approx. 450 g           Material         process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis           Surface quality         Ra < 3.2 µm/80 grit		IP65/IP67 with connector (PG11 cable gland)
Construction type  Versions  - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.  Dimensions  see dimensions  Mass  approx. 450 g  process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis  Surface quality  Process connection  - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread T NPT in acc. with ANSI B 1.20.1 - conical thread R1 in acc. with DIN 2999, part 1  Electrical connection  4-pin plug connection in acc. with DIN 2999, part 1	· · · · · · · · · · · · · · · · · · ·	
Versions       - LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG All above-mentioned versions are also available with thread 1 NPT.         Dimensions       see dimensions         Mass       approx. 450 g         Material       process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis         Surface quality       Pa < 3.2 μm/80 grit		compact device
Massapprox. 450 gMaterialprocess connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalisSurface quality $R_a < 3.2 \mu\text{m}/80 \text{grit}$ Process connection- cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread 1 NPT in acc. with ANSI B 1.20.1 - conical thread R1 in acc. with DIN 2999, part 1Electrical connection4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11,	••	- LVL-T1-G3S-E5PG-NA, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11 - LVL-T1-G3S-E5PG-WH, process connection G1, 10 55 V DC, PNP 3-wire, connector PG11, overspill protection WHG - LVL-T1-G3S-WAPG-WH, process connection G1, 19 253 V AC, 3-wire, connector PG11, overspill protection WHG
$\begin{tabular}{lll} Material & process connection and vibration fork: stainless steel 1.4571/316Ti \\ housing: stainless steel 1.4404/316L \\ housing cover: PPSU \\ connector: PA \\ plug seal: Elastomer \\ flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis \\ Surface quality & $R_a < 3.2 \ \mu m/80 \ grit$ \\ Process connection & - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 \\ & - conical thread 1 NPT in acc. with ANSI B 1.20.1 \\ & - conical thread R1 in acc. with DIN 2999, part 1 \\ Electrical connection & 4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11, $\frac{1}{2}$ \left{ PG1}, $$	Dimensions	see dimensions
$\begin{tabular}{lll} Material & process connection and vibration fork: stainless steel 1.4571/316Ti \\ housing: stainless steel 1.4404/316L \\ housing cover: PPSU \\ connector: PA \\ plug seal: Elastomer \\ flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour, weak acids and alkalis \\ Surface quality & $R_a < 3.2 \ \mu m/80 \ grit$ \\ Process connection & - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 \\ & - conical thread 1 NPT in acc. with ANSI B 1.20.1 \\ & - conical thread R1 in acc. with DIN 2999, part 1 \\ Electrical connection & 4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11, $\frac{1}{2}$ \left{ PG1}, $$	Mass	approx. 450 g
Process connection  - cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603  - conical thread 1 NPT in acc. with ANSI B 1.20.1  - conical thread R1 in acc. with DIN 2999, part 1  Electrical connection  4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11,		process connection and vibration fork: stainless steel 1.4571/316Ti housing: stainless steel 1.4404/316L housing cover: PPSU connector: PA plug seal: Elastomer flat seal ring for process connection G1A: elastomer fibre, asbestos-free, unaffected by oils, solvents, vapour,
- conical thread 1 NPT in acc. with ANSI B 1.20.1 - conical thread R1 in acc. with DIN 2999, part 1  Electrical connection 4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11,	Surface quality	$R_a < 3.2 \mu\text{m}/80 \text{grit}$
	Process connection	- cylindrical thread G1A in acc. with DIN ISO 228/1 with flat seal 33 x 39 in acc. with DIN 7603 - conical thread 1 NPT in acc. with ANSI B 1.20.1
	Electrical connection	4-pin plug connection in acc. with DIN 43650-A, ISO 4400 with cable gland PG11, for cable diameter 6 9 mm (0.24 0.35 in), max. conductor cross section 1.5 mm <sup>2</sup>

Indication and operation	
Display elements	The LED display is on the connection side. green LED: indication of ready to operate red LED: switch indication circuit cut off
Function test	function test with test magnet: Put the testing magnet to the shown location (see graph). The vibration fork reacts with the test magnet as in the case of covering with fluid.
Certificates and approvals	
Overspill protection	Z-65.11-302 (overspill protection in acc. with WHG)
General information	
Directive conformity	
Directive 73/23/EEC (Low Voltage Directive)	output WA: EN 50178
Directive 89/336/EEC (EMC)	emitted interference to EN 50081-1 and EN 61326, class B equipment noise immunity to EN 50082-2 (field strength 10 V/m) and EN 61326, annex A (industrial sector)
Conformity	
Electromagnetic compatibility	NE 21
Protection degree	EN 60529
Climate class	EN 60068, part 2-38, fig. 2a
Supplementary documentation	operating instructions KA035O operating instructions KA032O weld-in adapter G1A (LVL-Z70) operating instructions KA151O sliding sleeve for unpressurised operation G1A, 1 NPT (LVL-Z120, LVL-Z122) operating instructions KA153O high pressure sliding sleeve G1A, 1 NPT (LVL-Z124, LVL-Z125, LVL-Z128, LVL-Z129) approval ZE186O overspill protection in acc. with WHG (Z-65.11-302)
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

# **Mounting position**



### **Accessories**

- LVL-Z15, test magnet
- LVL-Z64, socket spanner
- LVL-Z70, welding bushing for vessels G1, viton sealing
- LVL-Z120, sliding sleeve for unpressurised operation G1A
- LVL-Z122, sliding sleeve for unpressurised operation 1 NPT
- LVL-Z124, high pressure sliding sleeve G1A
- LVL-Z125, high pressure sliding sleeve G1A
- LVL-Z128, high pressure sliding sleeve 1 NPT
- LVL-Z129, high pressure sliding sleeve 1 NPT

# Type code/model number

