

Operating and maintenance instructions for vibrating level indicator GVL1C

PRODUCT IDENTIFICATION

The GVL1C is a compact vibrating fork level indicator for liquids of **maximum viscosity 10,000 mm²/s (=centiStokes)**. The device is identified by the label on the side of the housing, the characteristics of which are given below:

CAMLogic CAMLogic S.r.l. Via dell'Industria 12
42025 Cavriago - Reggio Emilia - Italy

GVL1C
GVL1C-00

Serial n.: 00.000.000000 Year: 0000

Process temp. range -30°C to +150°C
Ambient temp. range -20°C < Ta < +70°C

Power consumption: 0,7W

WARNING Potential electrostatic hazard: see user manual!

IP 65

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1. Manufacturer information

2. Product model and reference code for the specific configuration

3. Serial number and year of production

4. Ambient and process temperature range

5. QR code leading to the specific configuration and IP rating

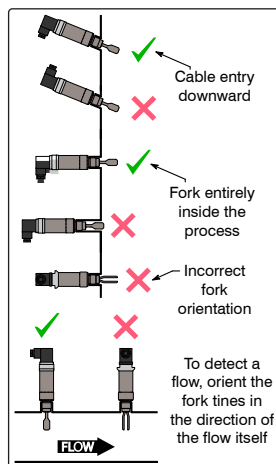
6. Usage warnings

7. Conformities and certification symbols

Tampering with the label entails the loss of validity of the certifications and the warranty.

PRODUCT CHARACTERISTICS

Materials:	casing in AISI316L / EN 1.4404 stainless steel
Connection to process:	G 1/2 (BSPP)
Cable entry:	3-pin DIN 43650 female connector with grounding, type A
Power supply voltages:	15-32VDC
Power consumption:	max 0,7W
Cables size:	0,5 ÷ 2,5 mm ² (14 AWG)
Max load current:	250mA
Signal output:	PNP
Process temperature:	-30 ÷ +150°C (-22 ÷ 302°F)
Ambient temperature:	-20 ÷ +70°C (-4 ÷ 158°F)
Process pressure:	absolute / 15 bar (217,5 psi)
Casing protection rating:	IP65 (dust-tight, protection against water jets)
Wetted parts protection rating:	IP68 (dust-tight, protected against the effects of continuous immersion in water)
Means of protection:	class I (PE connected) - overvoltage category II
Environmental conditions:	indoor and outdoor use, altitude up to 2000 m (6.562 ft), max. relative humidity 80% for temp. up to 31°C (88°F) decreasing linearly to 50% at 40°C (104°F), not for use in wet location, pollution degree 2



INSTALLATION

The indicator can be mounted in any position, on the wall of the silo or container, taking care to keep the cable entry pointing downward. In the case of side installation, the fork with the prongs should be positioned vertically (as in the image opposite). If the indicator is used to check the presence or absence of a flow in a pipe, the prongs should be rotated in the direction of the flow (as in the image opposite).

The indicator should not be installed in the immediate vicinity of the liquid inlet flow to prevent the fork from being directly affected. The coupling of the instrument with the container wall is threaded; the reference figures on page 3 show the general dimensions of the product. Always refer to the technical drawings provided by the manufacturer with the manual.

SAFETY WARNINGS

Installation, maintenance, and diagnostics of the device should be carried out only by authorized personnel who are informed of current regulations. Before starting work, trained personnel must have read and understood the instructions.

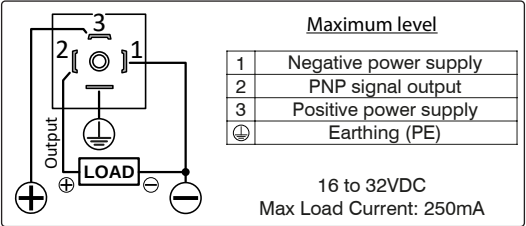
When using electrically operated equipment, appropriate safety precautions, as required by current regulations, must be taken to reduce the risk of fire, electric shock and injury to persons. Before installing the device, check its perfect integrity by ensuring that it has not been damaged during transportation.

Removal/replacement/modification of any part of the device will result in the loss of validity of the products' certifications and the warranty.

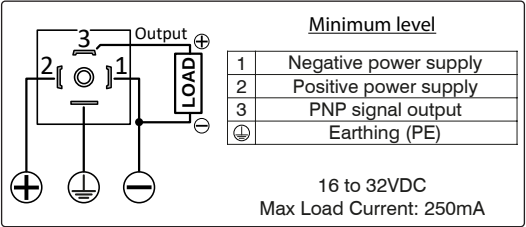
Grounding is mandatory and the sole responsibility of the installer.

WIRING

The electrical connection of the device must be made while the device is not powered. In particular, the grounding connection must be made before any other. There is a protective earth terminal on the device in the type A connector, identified by the symbol IEC 60417-5019. The cross section of the protective earth (PE) conductor must be the same as that of the phase conductor, with a maximum of 2.5 mm². Protect the cables with an overload protection element (rated current ≤ 2A). A switch or circuit-breaker, suitably located and easily reached, must be included in the installation and marked as the disconnecting device for the equipment. The pictures on the side show the wiring diagram according to the use of the instrument. The diagram is also shown on the body of the indicator itself.

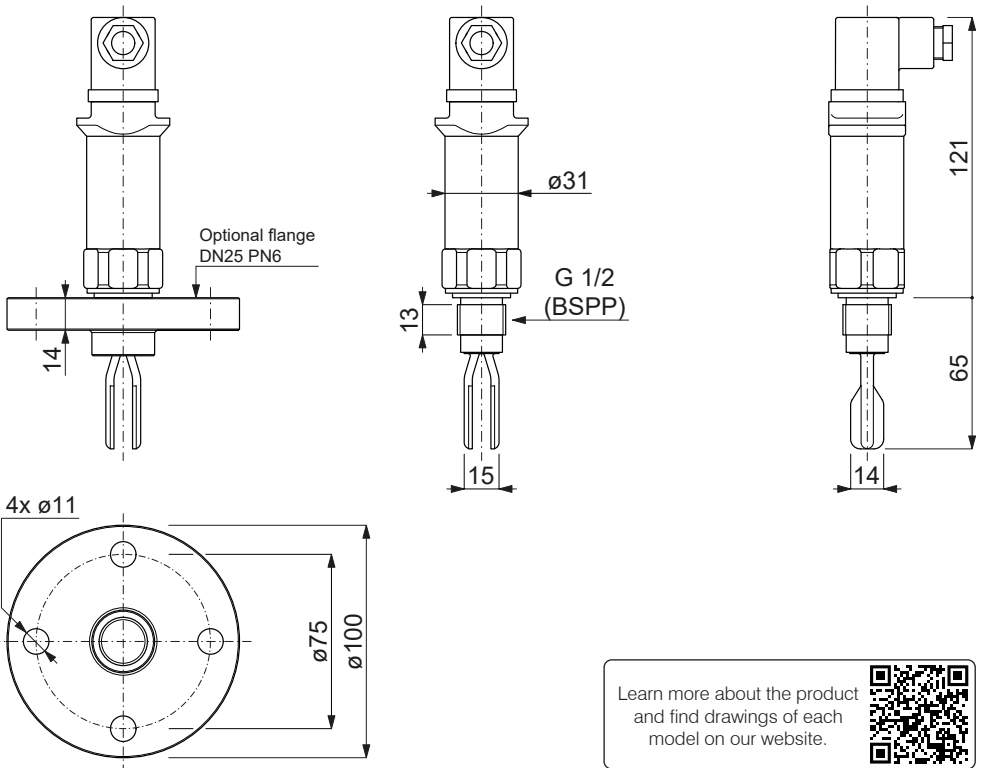


Near the type A connector are two status LEDs: green indicates normal operation (instrument powered), while red indicates an alarm status. For the instrument to operate in a safe condition, the wiring diagram regarding the use and installation of the level indicator (maximum level or minimum level) must be followed correctly. In case of failure or malfunction, the GVL1C is designed to return to the safest condition, as highlighted by the summary table below.



	Liquid status	LED status	Output signal (power on)	Output signal (power off)
Maximum level	<div>ABSENCE OF LIQUID</div>	<div>RED ALARM LED</div> <div>GREEN POWER LED</div>	Active Signal equal to the power supply positive	Inactive Null signal
	<div>PRESENCE OF LIQUID</div>	<div>RED ALARM LED</div> <div>GREEN POWER LED</div>	Inactive Null signal	Inactive Null signal
Minimum level	<div>ABSENCE OF LIQUID</div>	<div>RED ALARM LED</div> <div>GREEN POWER LED</div>	Inactive Null signal	Inactive Null signal
	<div>PRESENCE OF LIQUID</div>	<div>RED ALARM LED</div> <div>GREEN POWER LED</div>	Active Signal equal to the power supply positive	Inactive Null signal

REFERENCE FIGURES



Learn more about the product
and find drawings of each
model on our website.



MAINTENANCE

CAMLogic instruments do not require routine maintenance, however, the following precautions should be taken: always turn off the power before working on the electrical connection of the instrument and make sure that the power and ground terminals are connected properly and in good condition.

If there are signs of damage or excessive tearing in the DIN 43650 type A connector, contact the CAMLogic manufacturer for replacement with suitable materials.

REPAIRS

GVL1C series level indicators can only be repaired by the CAMLogic manufacturer or by following the manufacturer's instructions. If in doubt about malfunctions or repairs, contact the manufacturer:

CAMLogic S.r.l. - Via dell'Industria 12-12/A - 42025 Cavriago (RE) - Italy (camlogic@camlogic.it - www.camlogic.it).






WARRANTY

CAMLogic, in addition to the terms of the supply contract, guarantees its products for a period of twenty-four (24) months from the date of shipment.

This warranty is expressed exclusively in the repair or replacement, free of charge, of those parts which, after careful examination by the manufacturer, are found to be defective.

The warranty, excluding any liability for direct or indirect damages, is limited to material defects only and has no effect if the returned parts are found to have been in any way disassembled, tampered with or repaired by anyone other than the manufacturer. Also excluded from the warranty is damage resulting from negligence, carelessness, incorrect or improper use of the level indicator, operator mishandling or improper installation.

The warranty is also void if non-original spare parts have been used. A returned level indicator, even if under warranty, must be shipped freight prepaid.

Symbol	Reference	Description
	IEC 60417-5031 (2002-10)	Direct current
	IEC 60417-5032 (2002-10)	Alternating current
	IEC 60417-5019 (2006-08)	Protective earth / protective ground
	IEC 60417-6042 (2010-11)	Caution: risk of electric shock
	ISO 7000-0434B (2004-01)	Caution: if the instrument is used in a manner not specified by the manufacturer, the protection offered by the equipment may be impaired.

*Please note: the printed version of this manual may not reflect the most recent changes.
Please always refer to the updated digital version available on the official CAMLogic website: www.camlogic.it*