CAMLogic®
Via dell'Industria 12 - 12/A - 42025 CAVRIAGO - RE - Italy
CF/PI/Iscr.Reg.Imprese RE 00303000350
VAT IT00303000350 REA 90637
Telefono/Phone +390522942641 / +390522941172
www.camlogic.it - email: camlogic@camlogic.it

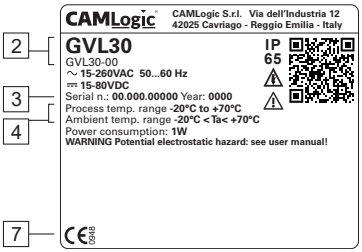
UK CA CE 0948

COSTRUZIONI MECCANICHE ELETTRICHE

Operating and maintenance instructions for vibrating fork level indicator series GVL30

PRODUCT IDENTIFICATION

The **GVL30** series are vibrating fork level indicators for liquids of **maximum viscosity 10,000 mm²/s (=centiStokes)**.
The device is identified by the label on the side of the case, the characteristics of which are given below:

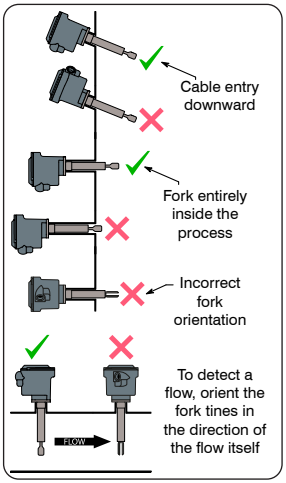


1. Manufacturer information
2. Product model and reference code for the specific configuration
3. Serial number and year of production
4. Ambient and process temperature range
5. QR code leading to the specific configuration and IP rating
6. Usage warnings
7. Conformities and certification symbols

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

PRODUCT CHARACTERISTICS

- Casing and cover in die-cast aluminium
- G 3/4 or G 1" 1/2 (**GVS30AT**) connection to process and vibrating fork in AISI 316L / EN 1.4404 stainless steel
- Cable entry M20x1,5 or 1/2 NPT (on request)
- Power supply voltages: 15-260VAC - 50...60Hz or 15-80VDC
- Power consumption: max 0,7W
- Cables size: 0,5 ÷ 2,5 mm² (14 AWG)
- Contacts capacity 5A at 220VAC or 24VDC
- Signal output: DPDT
- Ambient temperature: -20 ÷ +70°C (-4 ÷ 158°F)
- Process temperature: -20 ÷ +70°C (-4 ÷ 158°F)
  -20 ÷ +200°C (-4 ÷ 392°F) for **GVL30AT** models
- Process pressure: 0,8 ÷ 15 bar (11,6 ÷290 psi)
- Casing protection rating: IP65 (dust-tight, protection against water jets)
- Wetted parts protection rating: IP68 (dust-tight, protected against the effect 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) - 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, it is necessary to rotate the prongs in the direction of the flow (as in the image opposite).
If the indicator is installed in close proximity to the liquid inlet, the fork should be protected to prevent the triggering of false signals, or the WET DLY, described on the next page, should be used.
The coupling of the instrument with the container wall can be threaded or flanged; the reference figures on page 3 show general dimensions and standard product couplings.
Always refer to the technical drawings provided by the manufacturer with the manual.
Seal the cable entry with cable glands suitable for the working range indicated on the label.
The red protective cap supplied with the device serves only to protect it during transport; it is not suitable for use during operation of the instrument and is the responsibility of the installer to replace it.
The diameter of the power cable must match the clamping range indicated by the cable gland used.

SAFETY WARNINGS

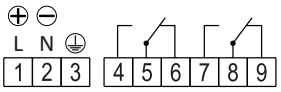
Installation, maintenance, and diagnostics of the device should be carried out only by authorized personnel who are informed of current regulations. Before starting work, trained

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 product certifications. 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.
The earthing, in particular, must be made before any other, using an M5x8 screw and a notched stainless steel washer.
There are two protective earth connection terminals on the device, one inside the enclosure (terminal 3) and one outside near the cable entry, marked IEC 60417-5019.
The cross section of the protective earth (PE) conductor should be the same as that of the phase conductor, with a maximum of 2.5 mm2.

1	Live (positive)
2	Neutral (negative)
3	Protective earth (PE)
4	Normally open
5	Common
6	Normally closed
7	Normally open
8	Common
9	Normally closed

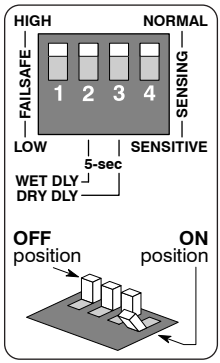


Max. 5A at 220VAC or 24VDC

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 picture shows the wiring diagram, also printed on the mask covering the electronic components, inside the instrument.

CONFIGURATION

Configuration of the product is done using the switches inside, which as a standard are set to OFF.
The picture shows the switches, each of which has an identifying number, as well as an example of the OFF and ON positions.
Each individual switch corresponds to a specific function described below:



1. Failsafe setting

For the instrument to operate safely, this switch must be set according to the installation and use of the indicator. If installed to check the maximum level, leave the selector switch to **OFF**.
Conversely, for minimum level control, the selector should be set to **ON**. In case of failure or malfunction, it is designed to return to the safest condition, as evidenced by the summary tables below and on the next page.

2. "WET" delay of 5 seconds

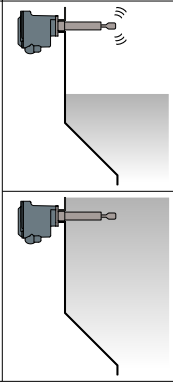
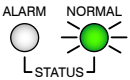
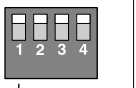
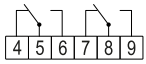
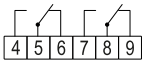
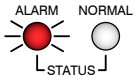
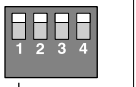
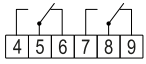
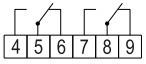
Setting the switch to **ON** allows you to set a 5-second delay in the signal, when the fork is covered by the material. No delay, however, with the switch set to **OFF**.

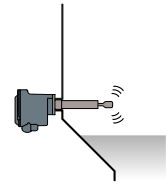
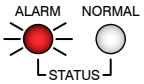
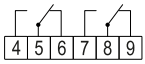
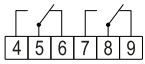
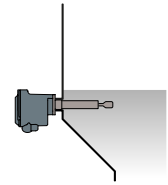
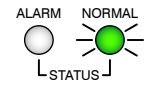
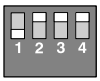
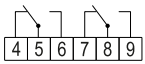
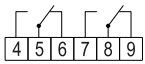
3. "DRY" delay of 5 seconds

Setting the switch to **ON** allows you to set a 5-second delay in the signal, when the fork returns free from the material. No delay, however, with the switch set to **OFF**.

4. Sensitivity control

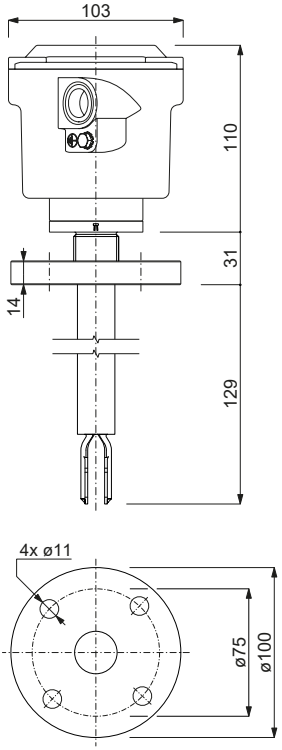
With the selector switch set to **OFF**, the instrument can detect liquids with a maximum viscosity of **1000 mm2/s (=centiStokes)**. For higher viscosity fluids, up to **10000 mm2/s (=centiStokes)**.move the switch to ON.

	Liquid status / LED status	Failsafe	Contacts (power on)	Contacts (power off)
Maximum level (LOW)	 ABSENCE OF LIQUID  ALARM NORMAL STATUS	 Switch #1 **OFF** FAILSAFE **HIGH**	 Relay energized Normal operation	 Relay not energized No power supply
	PRESENCE OF LIQUID  ALARM NORMAL STATUS	 Switch #1 **OFF** FAILSAFE **HIGH**	 Relay not energized Alarm	 Relay not energized No power supply

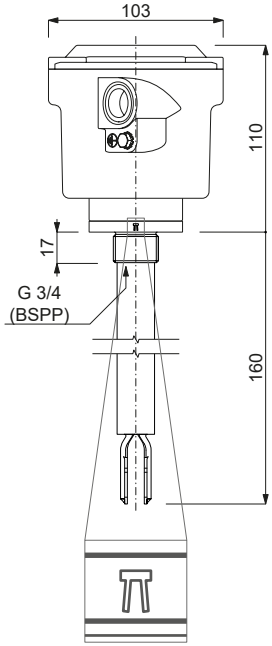
	Liquid status / LED status	Failsafe	Contacts (power on)	Contacts (power off)
Minimum level (LOW)	 ABSENCE OF LIQUID 	 Switch #1 **ON** FAILSAFE **LOW**	 Relay not energized Alarm	 Relay not energized No power supply
	 PRESENCE OF LIQUID 	 Switch #1 **ON** FAILSAFE **LOW**	 Relay energized Normal operation	 Relay not energized No power supply

REFERENCE FIGURES

GVL30
Flanged connection

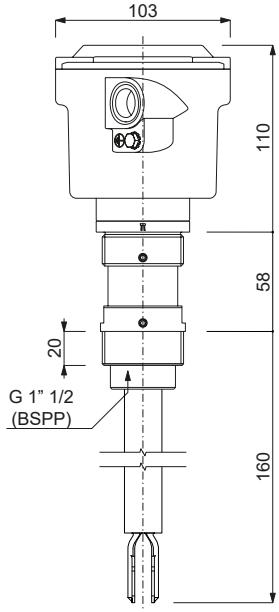


GVL30
Threaded connection



Fork orientation symbol
It facilitates the correct positioning of the indicator during installation (see picture on page 1)

GVL30AT



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

MAINTENANCE

CAMLogic instruments do not require routine maintenance. It is however recommended to visally check the lid gasket (o-ring) each time the cover is opened or the instrument is removed. If there are signs of damage or excessive tearing of the lid gaskets or other parts of the device, contact the CAMLogic manufacturer for replacement with suitable materials.
Only use original spare parts supplied by the camlogic manufacturer.
Cover screws should be fully tightened and cable glands and/or end caps should be tightened securely; ensure that power and ground terminals are connected properly and in good condition. Always turn off the power before opening the instrument cover.

REPAIRS

GVL30 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 shall be expressed exclusively in the repair or replacement free of charge of parts which, after careful examination by the manufacturer, are found to be defective.
The warranty, excluding any liability for direct or indirect damages, shall be limited to material defects only and shall have 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.