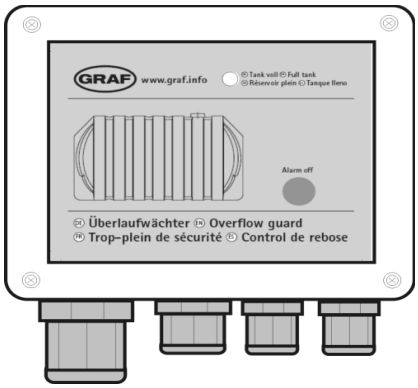
User information

Digital overflow controller

with switching output

Article – No.: 104023



We congratulate you on the purchase of our digital overflow controller. You have purchased a high quality product employing the most modern technologies. Before you begin to install and operate, please read thoroughly the user information and check that the delivered equipment is complete.

Included in the delivery are:

1. The digital overflow controller.
2. The sensor with the 20m long data cable.
3. The mounting materials.
4. The wall power supply.

Otto Graf GmbH ***Carl- Zeiss- Str. 2-6*** ***Tel.: +49 7641 5890***
Kunststofferzeugnisse ***D 79 331 Teningen*** ***Fax: +49 7641 58950***

1. Safety Insructions

Please read carefully the safety and instruction manual before using this device! Follow all instructions that are in the User Guide (Manual) to achieve the optimal performance. Please keep these safety and operating instructions safe for further use.

General Safety Instructions / Symbol Explanation

 - refers to an information

 - means warning and indicates a special situation

 - indicates a hazardous situation which may cause to heavy or serious injury or even death

1.1 Personnel

The installation, commissioning and dismantling of the device must be done only by trained and authorized personnel. During installation, it is necessary to pay attention to the safety regulations defined by the user and local laws and rules.

1.2 Proper Use of the Device

The equipment is designed exclusively for the intended purpose specified in the manual. Any other use and / or misuse of the device can lead to unpredictable risks including death and causes the loss of all the claims against the manufacturer.

1.3 Limitation of the Liability

The manufacturer would not take over any liability for damages resulting from:

- the usage of the device by untrained and unauthorized personnel,
- use of device for not intended purpose
- opening and/or manipulation of the device
- not following the manual and safety instructions

1.4 Electric Current

!!Danger of life from electric current!!

Direct contact to the parts of the device will cause an electric shock. In case of damage to the insulation, the device must be switched off immediately and the damaged area must be de-energized.
While maintaining on the device, ensure that the power supply is off at all times and make sure the device is de-energized.

1.5 Electrical Shock

If objects (e.g. hairpins, needles or coins) or liquids fall into the device, it can cause life threatening electrical short-circuits, which can lead to fire. The user has to make sure that above mentioned objects, especially made of metal and/ or liquid things, will not fall in to the device intentionally or unintentionally.

1.6 Safety Operations

The operation and use of the device is to be done by instructed and authorized personnel only.

1.7 Power Supply

The equipment exclusively operates with the operating voltage indicated in the manual.

1.8 Cable Connection

When installing the cable connections, the user needs to pay attention to the safety regulations. Always pay attention to the connection to the protective earth ground! Pay attention when connecting with other devices, that those have to be of the same earth potential (same heavy current/voltage side).

1.9 Ventilation

The equipment must be installed in so that good ventilation to the device is ensured. Do not put any covering objects on the device, such as newspapers, books or towels.

1.10 Water and Moisture

The device is not allowed to operate in close vicinity of electrical conductive liquids or moist areas. It is not allowed to place any liquid things on the device or in the nearby area of the device.

Attention: Danger of Electric Shocks!

1.11 Temperature and Heat

The operating temperature of the device is defined in the specifications. The device must not be placed near things which produce heat such as to blowers, heaters, furnaces or other devices.

1.12 Opening the Device

Disconnect the mains plug before opening the device!
There is a risk of electrical shock when touching the parts inside the device. It is not permitted to make any changes in the device.

1.13 Cleaning

Do not use any volatile solvents such as alcohol, diluents, gasoline etc. to clean the device. Only use a dry, clean cloth.

1.14 Unusual Smell

If any unusual smoke or smell occurs, immediately switch off of the device and remove it from the main power supply! Contact your dealer or the manufacturer.

1.15 Fuses

The replacement of the fuses in the device is only permitted by trained and authorized technical staff.

The change of the fuses is only allowed when the device is switched off and is removed from the main power supply. Otherwise there is a risk of electric shocks. The security functions and safety values are mentioned in the manual. The guarantee for this equipment will expire in case of using other fuses than those specified in the manual.

1.16 Repairing

The user is not allowed to perform the maintenance work by himself, except for those specified in the manual. All maintenance and repair work must be done by trained and authorized technical personnel.

1.17 Important notes of safety

Please, read and follow safety instructions carefully before assembly or using the device!

The mounting position must be suitable for a safe and secure routing and connecting of the cables. The cables may not be damaged or squeezed by some other inappropriate objects. Plan the mounting position so that the optional plug in power supply unit can be reached and removed easily from the socket should the situation dictate!
Please ensure that unattended children may not play with the equipment or cables.
We accept no responsibility for damage caused through not following this user information or through improper handling of the equipment.

2. Description and intended use

The overflow controller is applicable for use in tank systems from synthetic materials (plastics), cement or metal, and either in a cellar room or under ground. The device was designed for use in a domestic environment.

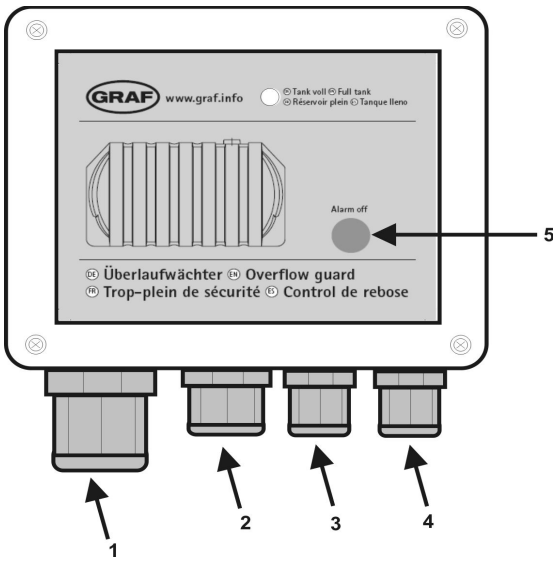
3. Description of the equipment

„Tank full“ is displayed by a red light-emitting diode (LED). There is also a simultaneous acoustic signal. This signal can be cancelled/re-set by pressing the „Alarm off“ button. The red LED continues to flash on and off when the level of liquid in the tank sinks. This signal can be cancelled/re-set by pressing the „Alarm off“ button a second time!

There are no calibration measures necessary.

Features:

- Display “Tank full” is optical and acoustic
- Mains operation with wall power supply 12V DC
- Adjustable follow-up time



1: Sound opening

2: Cable gland for switching output

3: Cable gland for wall power supply

4: Cable gland for data line

5: Re- set acoustic signal

Picture 1: General view of equipment

Technical data :

Overflow controller

Mains supply operating voltage	: 12 Volt DC
Dimensions	: 120 x79 x59 mm
Degree of protection	: IP 32
Mean operating current without triggering	: approx. 600µA
Operating current when triggering	: approx. 10mA
Measurement intervals	: approx. 60s

Sensor electronic

Measurement voltage	: 3 Volt
Cable length	: max. 50m
Degree of protection	: IP66

Switching output

Maximum voltage	: 230 Volt AC
Maximum current	: 3A
Technical design	: changeover contact
Follow-up time	: 0s to 45s (infinitely adjustable)

4. Mounting

The digital overflow controller includes a 20m data cable, a sensor and a controller unit. The controller unit should be mounted in a position where the user is sure to hear if an acoustic alarm signal is triggered.
First install the sensor in the tank. For this you use the supplied screws to secure the sensor on the tanks inner wall (in the GRAF plastic tank – preferably in the dome).

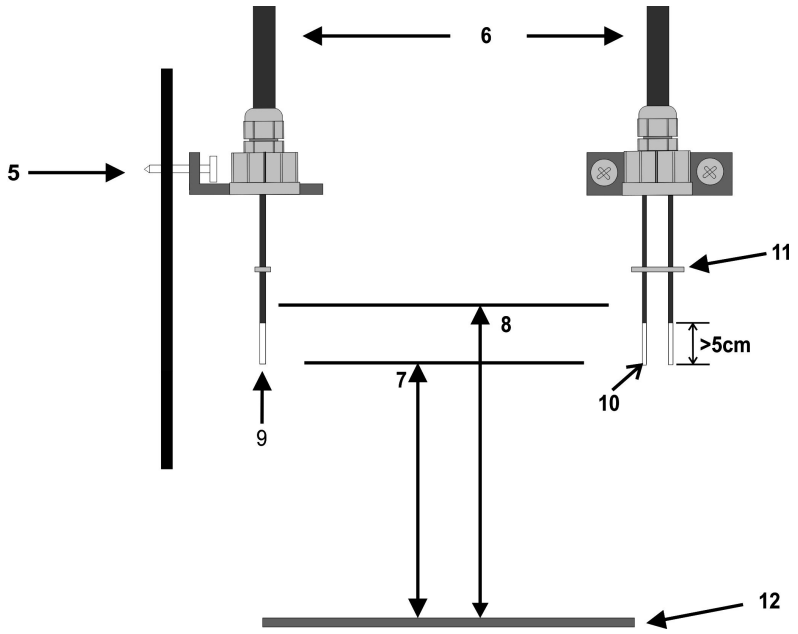
Please note that the stainless steel electrodes must be covered with at least 5cm of water for an alarm signal to be triggered by the controller unit. Shortening the stainless steel electrodes is also possible. When doing this, the insulation of the stainless steel electrodes must also be shortened accordingly.

Important

When setting the water level at which the alarm should be triggered, there must be enough reserve calculated before the tank becomes overfilled, this is to allow time for the service company to perform the task of emptying the tank.

Route the data cable from the sensor in the tank to the intended mounting position of the controller unit.

Please note that the data cable is not suitable for routing directly in the earth. Please use an appropriate protective tube.



5: Screws must be blunted! (danger of injury)

6: Data cable

7: Triggering height

8: Maximum fill height

9: Stainless steel electrode with insulation covering and distance spacers

10: Ends must have at least 6cm free from insulation

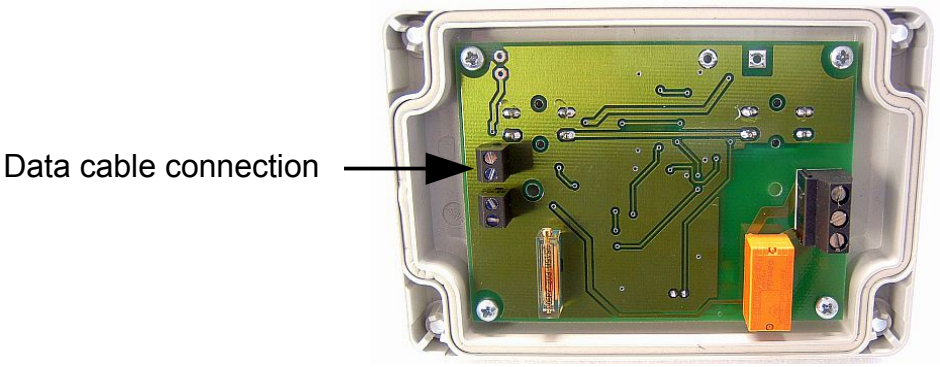
11: distance spacers

12: Tank floor

Picture 2: Connection of the sensors

Now mount the controller unit. To begin, remove the four fixing screws of the cover and remove the cover. Now, according to the sketch, mark the location of the holes for the controller box. Drill the holes and mount the controller unit with the supplied mounting materials (dowel plugs and screws).

Thereafter, connect the data cables. To do this, pass the end of the data cable through the threaded opening of the overflow controller box. Remove the insulation from the data cable cores and connect these in the clamp designated “Sensor”. Tighten the screws carefully – do not over tighten.



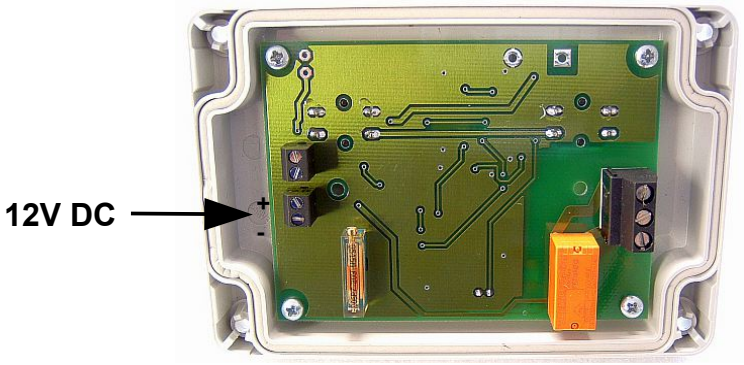
Picture 3: Interior equipment (lid open)

Before putting the overflow controller into operation, be sure that the following points have been checked for correctness:

1. The data cable is connected to the correct clamp.
2. There are no pieces of metal, such as screws etc. left in the housing.
3. The cover and screws are correctly assembled and closed. (Do not over tighten the screws!)

5. Putting into operation

Feed the cable of the wall power supply through the cable gland **[3]** and connect it to the terminal marked **"+ -"** accordingly the pole (**"+"** to **"+"** and **"-"** to **"-"**). Now pull the cable gland slightly tight and close the control unit. After that you can plug the power adapter into a power outlet. Now carry out a functional test of the device.



Picture 4: Connection of the wall power supply

Completion of commissioning is always a functional test of the device. Please press the "Alarm off" button. Release the button as soon as the alarm is triggered (approx. 5s). At the end of commissioning please press the "Alarm off" again. This will be the digital overflow controller is reset and is now ready for operation.

6. Checking the sensor

A function check of the sensor is simple and can be done at any time. It should however be done directly when putting the controller into operation.
Make a connection between the two stainless steel electrodes (water or wire). This will simulate a tank filled to maximum. On the overflow controller there will be an acoustic signal and the red LED will begin to flash “Tank full” after 60 seconds at the most.
When the alarm has been triggered and the tank has been emptied, the alarm system remains active and must be re-set. If this is not done, no further alarm can be triggered.


The acoustic signal is re-set by pressing the “Alarm off” button once.


After the function check of the sensor, the unit must be re-set by pressing the „Alarm off“ button a second time!

7. Operating the digital overflow controller

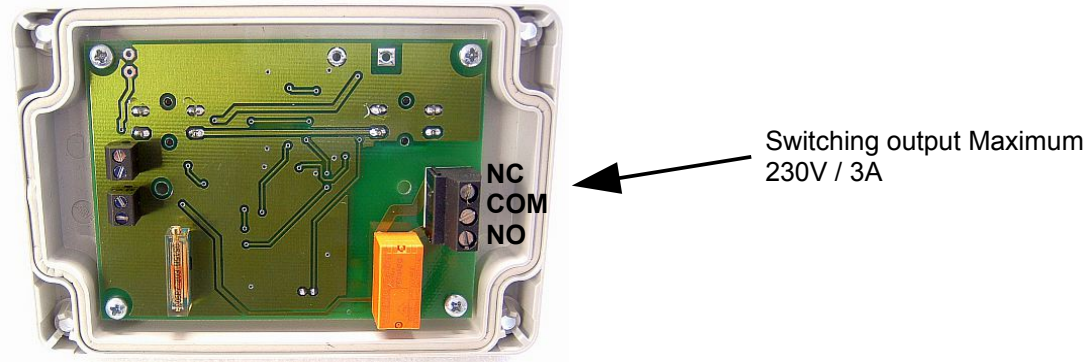
In the case of a level increase up to the sensor electrodes (the electrodes must be submersed at least 5 cm) the controller will be activated. Simultaneously, acoustic and optical signals are emitted. The acoustic signal is re-set by pressing the “Alarm off” button once. **The “Alarm off” button must be pressed a second time for the LED to no longer blink and show that the system has been re-set.**

8. Switching output

As a switching output, a potential-free changeover contact is provided. You may operate this output with DC or AC voltage. The contact may be loaded with a maximum current of 3A. The maximum voltage is the mains voltage of 230V AC. If you plan to use the switching output for the mains voltage range, it is essential to observe the relevant regulations for handling 230V mains voltage.

Important note:

The digital overflow controller must be reset after each trip by pressing the "Alarm off" button!



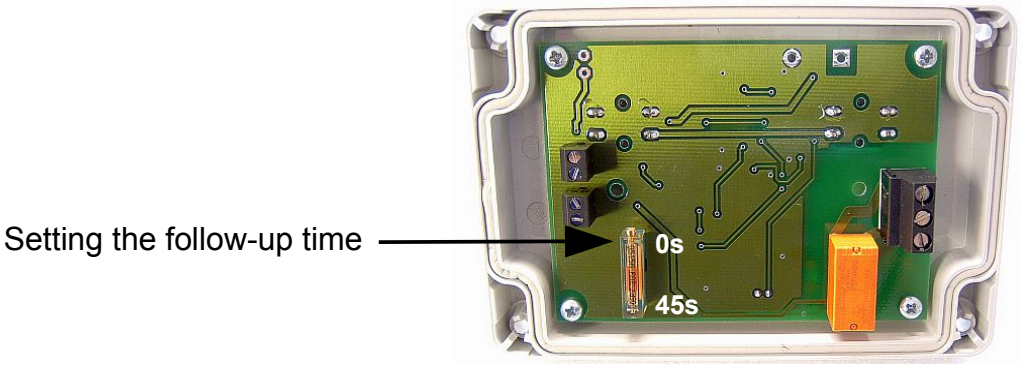
Picture 5: Switching output

9. Setting the follow-up time

The digital overflow controller is designed so that a follow-up time can be set for the switching output. The adjustment range is between 0s and 45s.
The follow-up time begins to act as soon as the sensor in the tank is no longer covered by the liquid. If one operates via the switching output, e.g. a pump, it can be achieved by the caster further lowering of the liquid level. The exact values are highly dependent on the local conditions and may need to be determined experimentally.

Note:

Please operate the potentiometer to set the follow-up time carefully. Do not overtighten the spindle when the stopper is reached.

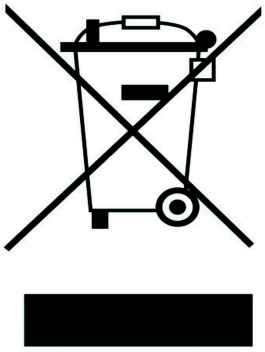


Picture 6: Setting the follow-up time

10. Disposal of the equipment

Old equipment may not be disposed of in the house refuse. It must be brought to the recognised professional recycling depot.

Please help – ensure your old electronics come to a separate recycling.



11. Manufacturer

Should you have any problems with the equipment, please contact:

VEINLAND GmbH

Niederlassung Prenzlau
Franz Wienholz Str. 40
D- 17291 Prenzlau

Tel. : +49 (0)3984- 80 87 17
Fax : +49 (0)3984- 80 69 61
Internet : www.veinland.net
Mail : info@AS-Prenzlau.de

We prefer to receive an E-Mail, if you must contact us then be sure to enter the serial number of your controller that begins with “AS”.

The serial number is found on the name/type label.

Space for your notes:

Revision history:

Revision	Date	Description	Author
Digital overflow controller 2.0	30.09.2019	Formatting A5	SU
Digital overflow controller 2.1	19.11.2019	Formatting A4	SU

Purchase date : .....

Device serial number / Type : AS DÜS .....

Design and specifications are subject to change without notice.

Dated: November 2019