User information

Digital overflow controller

Article No: 351 017

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.

Note:
Batteries are not included in the delivery. A plug in power supply unit can be optionally purchased from the manufacturer .

Please read carefully the user information before mounting and operating the equipment!

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.

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1. Description of the equipment

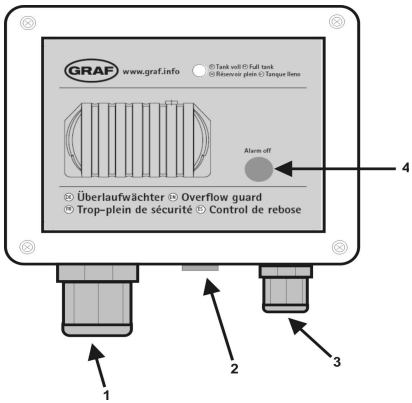
The overflow controller is applicable for use in tank systems from synthetic materials (plastics), cement or metal, and either in a cellar room or under ground.
„Tank full“ is displayed by a red light-emitting diode (LED). There is also a simultaneous acoustic signal. This signal can be cancelled/re-set 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
- Battery operation with a 6V DC voltage (4xR06)
- Optional mains supply operation (plug in power supply unit 6-12V DC)

The following picture shows a summary of your newly purchased equipment:



1: Sound opening

2: Blind threaded connection

3: Cable routing for data line

4: Re- set acoustic signal

Picture 1: General view of equipment

Technical data :

Overflow controller	
Battery operating current	: 6 Volt DC
Mains supply operating current	: 6-12 Volt DC
Dimensions	: 120 x79 x59 mm
Degree of protection	: IP 32
Mean operating voltage without triggering	: approx. 600µA
Operating voltage when triggering	: approx. 10mA
Measurement intervals	: approx. 60s

Sensor electronic	
Measurement voltage	: 3 Volt
Cable length	: max. 50m
Degree of protection	: IP 66

2. Mounting:

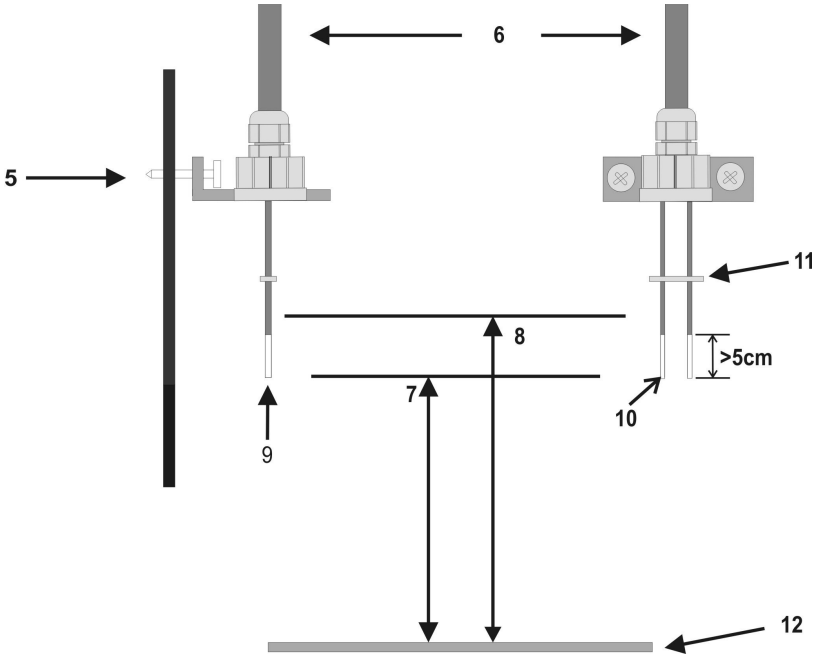
The digital overflow controller includes a 20m data cable, a sensor and a controller unit. The controller unit should be mounted in a position where the user is sure to hear if an acoustic alarm signal is triggered.

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.

13: Data cable connection

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!)

3. Putting into operation

Place 4 new batteries R6 ("Mignon") into the battery compartment (see diagram 3). Pay special attention to the polarity of the batteries!

To complete the installation and begin of operation a function check of the equipment must be performed. Please press the "Alarm off" button. Release the button as soon as the alarm is triggered (approx. 5 seconds).

4. 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!

5. 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.**

6. Trouble shooting

Should the alarm be triggered when the tank is not filled to the maximum level, then follow the next instructions.

Check also the sensor in the tank for example for dirt or fouling and clean/remove if found. If all cables are correctly connected and there are no short circuits then the controller must function!

7. Operation with the optional plug in power supply

For operation using a mains power supply, a plug in power supply is available from the manufacturer. It is also possible to use a commercially available standard plug in power supply by using the following data:

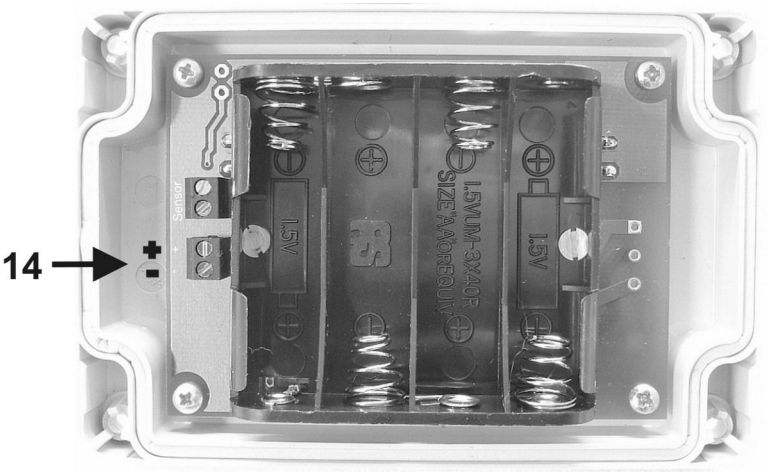
Output voltage: 6V to 12V DC

Output current: minimum 50mA

8. Connection of the plug in power supply

For operation with a plug in power supply, the batteries must first be removed from the battery

compartment (protection against the possibility of battery leakage). There is **no** automatic switch-over between batteries and mains supply! **The batteries must be removed**. Remove the blind screws beside the screws for the data cable. In their place, screw in an M12x1.5 threaded connection (this is supplied when ordering a mains power supply unit from the manufacturer). Route the cable of the mains power supply through the threaded connection and connect the cores to the correct + and – poles on the clamp. Now lightly tighten the threaded assembly and re-close the controller housing. Thereafter, the mains power supply unit can be plugged into an outlet.



14: 6Volt DC - 12Volt DC

Picture 4: Connection of the mains power supply unit

9. Battery operation:

The operation is with 4 type R6 batteries. Please use only fresh batteries and do not combine batteries from different manufacturers or even the same manufacturer but from dissimilar dates. The battery life depends on the usage e.g. if the alarm remains triggered for any length of time but also simply from the battery performance rating. We recommend using the "Alkaline" type that have, when compared to the regular zinc or carbon batteries, up to a 4x longer life (Type LR6).

A battery test should be regularly made. Press the "Alarm off" button for a few seconds. The set of batteries will then be stressed with an approximately 5x triggering current. If the LED

"Tank full" lights weakly or the acoustic tone is weak or fails, then replace the complete battery set.

Note:

Should the equipment not be in operation for a longer period such as in winter, then remove the batteries from the unit. (there is a danger of leakage).

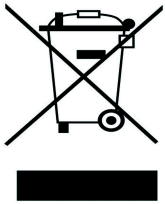
10. Battery directives :

In the European union since 2008, there exists the battery directives (2006/66/EC) in force. According to this, the consumer is obliged to return all used batteries. Disposal in the house refuse is not permitted. Please follow the regulations in your country for battery use as also those regulations in other countries regarding the disposal of used batteries.

11. 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.



12. Manufacturer and service telephone:

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

A + S Aktuatorik und Sensorik GmbH
Franz Wienholz Straße 40
D - 17 291 Prenzlau
Tel. : +49 3984 80 87 17
Fax : +49 3984 80 69 61

Internet : http://www.aktuatorikundsensorik.de/
E-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.)

Design and specifications are subject to change without notice.
Dated: February 2016