

# Manual

## Pump control 1 pump

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This manual is for the following pumpingstations:

- PP850/1/TOP 2                      PP850/1/TOP 5
- PP850/1/RXm 2/20                PP850/1/RXm 5/40
- PP850/1/MCm 10/45              PP850/1/MCm 15/45
- PP850/1/TRITUS TRm

## Legend:

- |   |  |
|---|--|
| 1. Plug mains connection                        | 8. Multifunktional test and reset button |
| 2. Main swith                                   | 9. Led green, yellow, red (led 3)        |
| 3. Single push button to test the pump manually | 10. Led green (led 1 and 2)              |
| 4. Connection for the pump                      | 11. Float swith low in tank              |
| 5. Connection float swith low (IN1)             | 12. Float swith high in tank             |
| 6. Connection float swith high (IN2)            | 13. Float swith very high in tank        |
| 7. Connection float swith very high (IN3)       | 14. One-way valve                        |

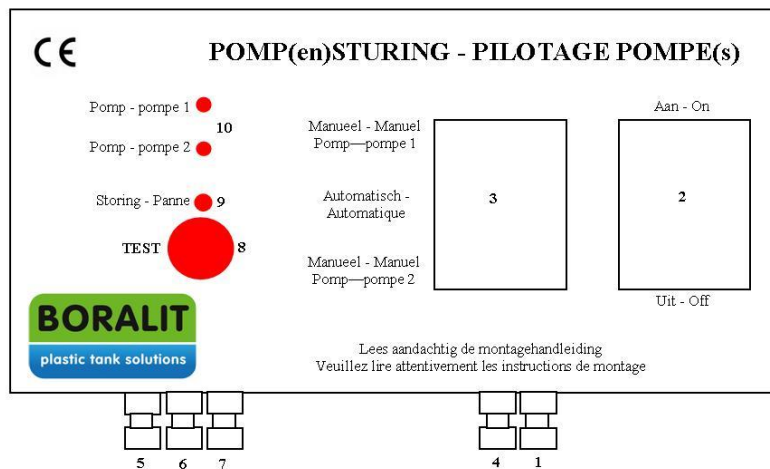
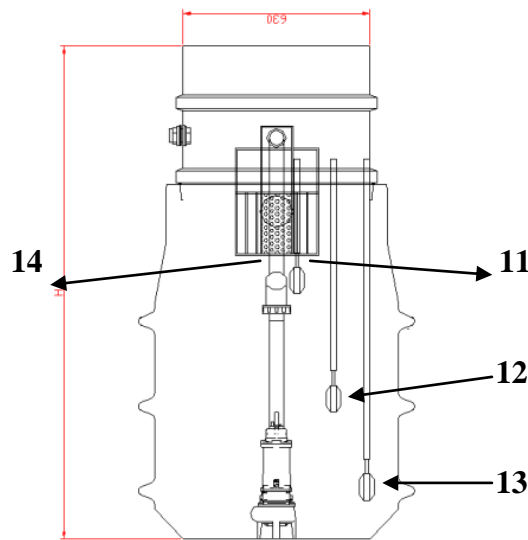


Fig 1

**IMPORTANT: Please read this manual before using the pump control.**

Repairs on the pump control may only be performed by professionals, improper repairs can cause serious accidents. Installation of the pump control can only be executed following the rules and with proper safety precautions.

The pump control has an IP44 value. So keep this in mind when installing.  
The control may only be opened by skilled craftsmen (electricians)

**1) Description of the various components. Switches and LEDs on the front panel of the pump control.**

1. Main switch (lit) (see fig 1 number 2)  
This switch will bring the pump control off tension or on tension, mind you, the control is completely off tension only when the plug is out of the power supply. So if the pump control is turned off with the power switch there will still be voltage on certain components of the control, so this may only be opened by qualified personnel.
2. Single pole push button for pump (see fig 1 number 3)  
By operating this button you can control the pump independent of the floats switches, mind you, the float switch of the pump must be active (floating switch on the pump), so the pump must be submerged. With this function you can check the operation of the pump regardless of the float switches.
3. Float switch 1 (fig 1 number 11, clamb 1 and 2)  
The lowest float switch (level L-) turns off the pump, the pumping station is empty.
4. Float switch 2 (fig 1 number 12, clamb 3 and 4)  
The middel float switch turn on the pump
5. Float switch 3 (fig 1 number 13, clamb 5 and 6)  
The highest float switch is for the alarm.
6. Test en reset button (fig 1 number 8)  
The alarm (LED and audio) can be reset. The alarm (audio) signal is on until it is been reset with the reset button. When the fault is restored the alarm (LED) can be resetted when pushed (5 a 6 sec.) on the reset button.
7. LED (the 3 led's on the display)  
These led's have multiple functions.
  - a. The led's with normal operation:
    - LED 1 (functioning pump 1) is on when the pump is working (constant light)
    - LED 2 (is not in use)
    - LED 3 (green) is trouble-free operation
    - LED 3 (red) is a state with disturbance
    - LED 3 (yellow) is an abnormal state
  - b. Possible fault causes of disturbances are:
    - Disturbance of the pump
    - Disturbance of a floating switch
    - A time exceeded
  - c. Test program  
The pump control is equipped with a test program. This program runs the various installed products (floats and pump), so to see if the pump and the floats are connected electrically. After solving a possible error, the pump control must be reseted with the reset button. This is done by a first push on the test button to stop the audio alarm, and a longer push on the test button (5 a 6 sec.) for the led alarm.

## 2) Operation of the pump control

### 2.1) Normal operation of the pump control

The control of the pump is made possible by 3 floating switches.

The lowest (low level) and middle (High level) floating switch will turn on the pump (after ca. 3 sec.). When the pumping station is empty, the lower floating switch will stop the pump.

When the highest floating switch is on, the alarm will go off. The pump continues to work. Led 3 red will go on.

### 2.2) Error messages

There are several errors that may appear

The floating switch sequence must always be correct:

- a. When filling the pumping station: First the lower, than the middle, and if the pump is not working or the flow rate is to high the highest floating switch.
- b. When emptying the pumping station: First the highest, than the middle, and then the lowest floating switch.

If this order is not respected an alarm will occur (audio and yellow LED)

- **Errors of the floating switches** (alarm audio and yellow LED)

- a. The lower floating switch is down AND the middle floating switch is up.  
This State is only possible if one of the floating switches is blocked or not connected.  
The pump will still work.
- b. The lowest floating switch is up AND the middle floating switch is down AND the highest floating switch is down.  
If the pump is working several times longer than 4 hours, that will give an alarm message.  
This condition might indicate a continuous flow in the pumping station or a defect of the lower floating switch.

- **Error recognition during pumping:** (alarm audio and yellow LED)

If the pump is electrically not connected or if it has an electrical fault, the alarm will go on.

- **To reset the alarm:**

Resetting the audio signal: push the test button.

Resetting the visual signal: push for 5 à 6 seconds the test button. This will only go if the fault has been corrected.

## 3) Installation and connection

### **3.1) Installing of the pump control**

The control must be installed in a dry easy-to-access places, close to an electrical outlet. The control can then be attached to the wall with 4 screws. The housing of the control is splash-waterproof, but should not be placed outside.

### **3.2) Connection of the pump**

The pump can be connected electrically by means of the already fitted plug. The power cord can directly be connected to the terminal block in the pump control (see fig 2 OUT 1). This must always be done by an experienced technician. Connecting the pump to the pump control must always happen in de-energised condition, so take the power cord out of the wall plug.

### **3.3) Connection of the floating switches**

Please note, the float switches don't switch on the pumps directly. The float switches will send a signal to the processor that is placed in the control.

The float switches are only suitable for low voltages.

The 3 float switches are to be connected on the terminal block (see fig. 2) in the pump control.

The order is very important:

The lower floating switch (low level): on IN1

The middle floating switch (high level): on IN2

The highest floating switch (very high level and alarm): on IN3

### **3.4) Contact for external alarm**

The pump control has an alarm relay that closes when an alarm occurs. This is a potential-free contact (see fig 3 clamps X2).

### 3.5) Clamps on the pump control:

Note: OUT 2, OUT 3, OUT 4 and OUT 5 ARE NOT IN USE!!!!!

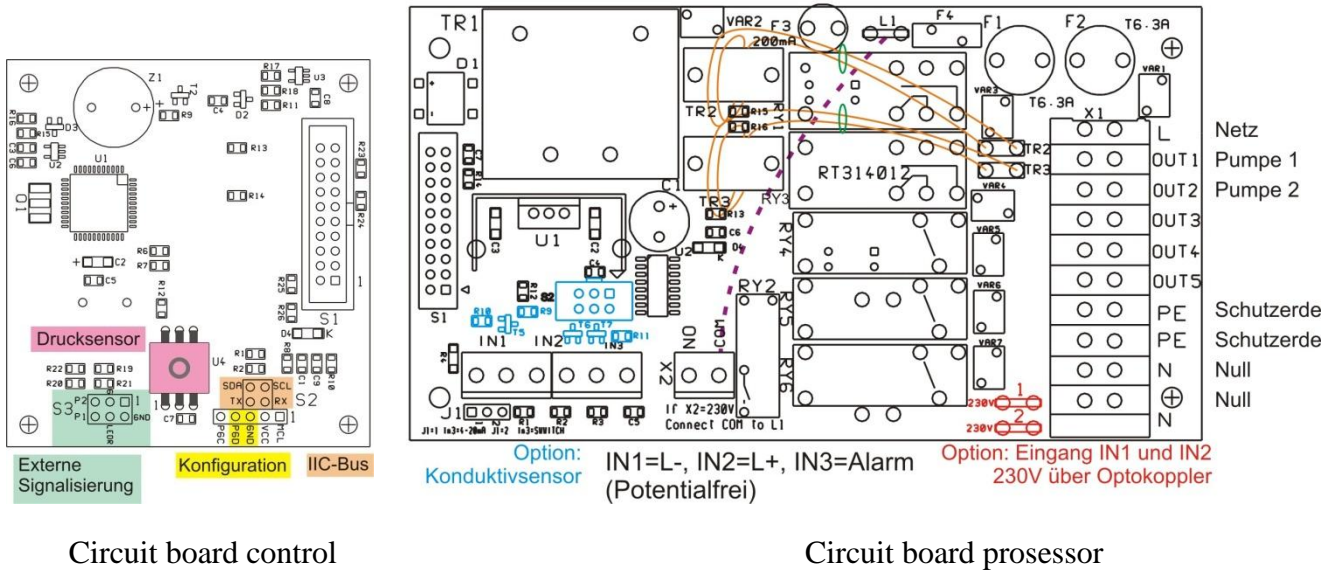
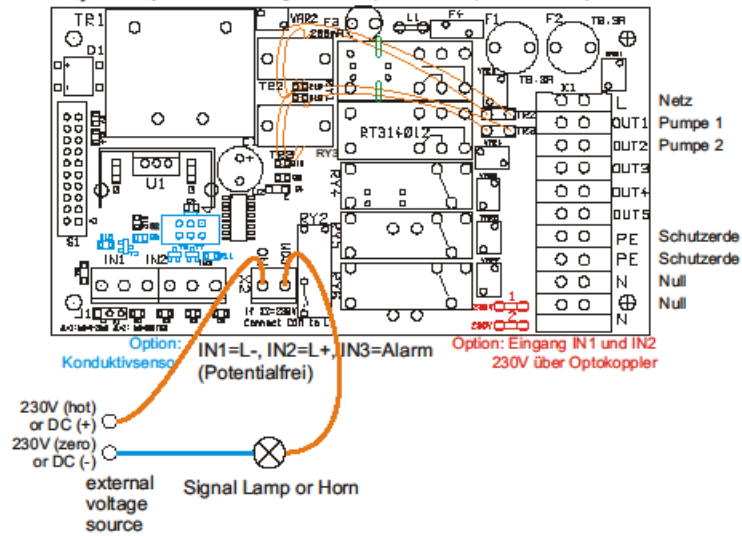


Fig 2

### 3.6) Possibilities for connection of an alarm.

**Possibilities to use the Alarm Relay:**  
 The alarm relay is energised in case of malfunction.

**Possibility 1: Any external voltage source (AC or DC up to 250V 3A)**



**Possibility 1: Internal 230 voltage source (up to 250V 3A)**

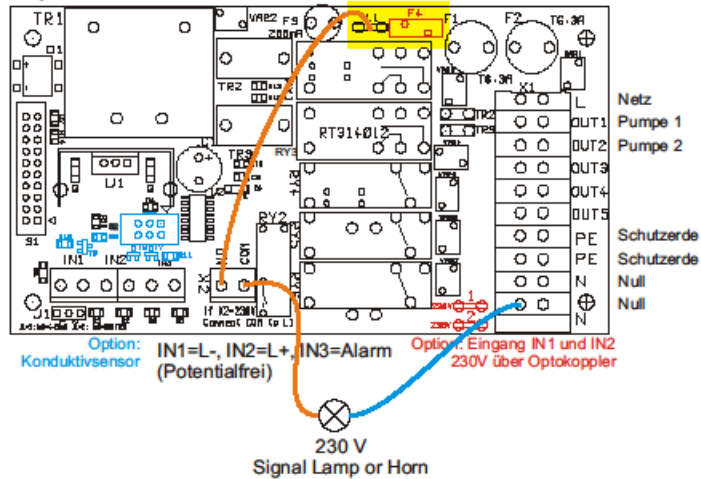


Fig 3

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