

System Sump and Pump

NEWTON HIGH WATER LEVEL ALARM

Detects High Water Levels Within Pump Chambers

Rev 2.2 - 28 July 2017

PRODUCT CODE - PA50

INTRODUCTION

The [Newton High Water Level Alarm](#) - PA50 is designed to detect high water levels within pump sump chambers, and is included within Newton Titan-Pro and Newton Titan-2 pumping systems.

The alarm is battery operated and uses a standard 9V PP3 battery. The alarm can be programmed to automatic reset or manual re-set if an alarm condition occurs.

PARTS

- Alarm Box
- Float switch - Reed type with 5m of twin core cable
- Duracell 9V PP3 battery
- Double socket holding clip
- Cable Tie

THE ALARM BOX

The alarm has two separate parts: the Back-Box and the Face Plate, and can be either surface mounted or flush mounted. Surface mounting uses the provided Back-Box whilst flush mounted does not use the Back-Box but utilises a standard twin electrical back box instead.

**FITTING THE ALARM - SUPPLIED BACK-BOX**

- Unscrew the Face-Plate from the Back-Box.
- Decide whether to have the float cable entering via the bottom of the box or the rear of the box. If the back, use the hole provided. If the bottom, carefully push out the recessed and thinner metal cover with a screw driver. If the float wire is to enter from the rear with the switch cable within the wall, use electrical conduit for the routing of the wire.
- Fix the Back-Box to the wall with appropriate fixing screws using the four fixing holes supplied.
- After the battery and float cable are attached, screw the Face-Plate to the Back-Box using the screws provided.

FITTING THE ALARM - ELECTRIC BACK-BOX

- Unscrew the Face-Plate from the Back-Box.
- Discard the supplied Back-Box.
- Bring the float wires in to the electrical back box via conduit within the wall.
- After the battery and float cable are attached, screw the Face-Plate to the Back-Box using the screws provided with the electrical back box, not the screws supplied with the alarm.

FITTING THE SWITCH

The switch should be fitted to the vertical pump discharge pipe using the double clip and cable tie supplied. Wrap and tighten the cable tie around a pump vertical discharge pipe and the clip so as to secure the clip. Push the threaded barrel of the switch onto the still available second clip to secure the switch to the discharge pipe. Tighten the nut to further secure.

NOTE: It is important that the switch is fitted in the correct orientation so that the switch is normally closed and becomes open when lifted by rising water.

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TECHNICAL DATA

Features	Result	Units
Width	152.0	mm
Height	92.0	mm
Depth	37.0 (8.00 if mounted in back box)	mm
Weight	700	g
Power supply	9 - PP3 battery (supplied)	V
Sounder volume (dB)	90	(at 1000mm)
Switching	Reed switch	

POSITIONING THE SWITCH

The switch should be positioned so that the alarm will sound after the pump should have operated. Slide the clip and cable tie up or down the discharge pipe to adjust to the correct height for the pump.

Where two pumps are installed, the switch should be positioned between the points where the two pumps turn on so that the alarm sounds after the first pump should have operated, not after the second pump should have operated. The sequence of pumping and alarm should be:

PUMP 1 - ALARM - PUMP 2.

FLOAT SWITCH CABLE

To conform with current building regulations and electrical regulations, low voltage wiring should not use the same conduit as high voltage. This means the alarm float switch cable should NOT be in the same conduit or pipe as the 230V pump cable.

ALARM RESET MODE

The alarm can be set with two modes of alarm:

MODE A - Manual Reset - The alarm sounder will continue to operate until manual reset (via the MUTE button on the front face of the unit), even when the water level drops.

MODE B - Automatic Reset - The alarm sounder will automatically stop if the water level drops.

Discussions should take place with the client to agree which mode is preferred.

MODE A - Manual Reset will mean that the alarm will continue to sound until the client manually resets the alarm. This means that the client will be aware of an alarm condition, even when the second pump has lowered the water in the sump. MODE A ensures that the client will always be aware of the alarm condition and so is the safest option. It does however mean that neighbours could be disturbed by the alarm sounding for extended periods.

MODE B - Auto Reset will mean that when the second pump lowers the water level, the alarm will stop sounding. If the alarm condition occurs when the client is out of the house, they may not be aware of the problem to the first pump. It does mean however that the alarm will not keep sounding for extended periods.

PROGRAMMING THE ALARM RESET MODE

NOTE: The Alarm Reset Mode must be set before inserting the 9V battery:

To set MODE A, insert the battery with the switch in the CLOSED position.

To set MODE B, insert the battery with the switch in the OPEN position.

FLOAT SWITCH



Float Switch Open



Float Switch Closed

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INDICATORS & ALARMS

If the alarm sounds or beeps, check the status of the indicators as the table below:

Sounder	Indicator	Reason
Fast beeping	Fast blue flashing	Water level high
Off	Fast blue flashing	Water level high (in mute mode)
Slow beeping	Slow blue flashing	Battery low, replace the battery

Fast beeping /flashing = 1 beep/flash per 5 seconds

Slow beeping / flashing = 1 beep/flash per minute

ALARM MUTE

If the unit is in an alarm condition, the first pump has not operated correctly. This may be due to mechanical failure or because of power outage. The MUTE button should only be used when you have identified the reason for the alarm event, and you have taken steps to deal with that problem.

To mute the alarm, press the MUTE button ONCE to mute the sounder. The WATER HIGH indicator will still flash to indicate the sounder has been muted.

Press the MUTE button A SECOND TIME to reset the unit and to cancel the mute function. If the alarm indicator is still flashing, the water level is still high.

LOW BATTERY

The unit will inform the user when the battery is low and requires replacement – see table above. When replacing the battery, you must select the method of re-setting as removing the battery will set the unit to MODE A (if the float switch is open).

CONNECTION TO NEWTON PA5 DIALER OR HOUSE BMS

The Newton Dialer - PA5 can receive a signal from the PA50 Alarm allowing notice of the alarm condition to be received as a voice message to land-line phones and as a text message to mobile phones. Up to 5 separate numbers can receive the voice or text message.

The terminals for the connection to the dialer are at the top left of the inside of the Alarm Face-Plate. Use normal two-core bell wire and make a connection with one of the two coloured wires between the NO (Normally Open) terminal of the Alarm and Trigger Input 1 of the Dialer, with the other wire connecting the C (Common) terminal of the Alarm with the OV Trigger Input of the Dialer.

The Normally Open and Common terminals in the Alarm can also be used to send a zero-voltage signal to home alarm and building management systems.

TESTING

Test the alarm sounder and indicator each month by pressing the TEST button, the alarm will sound and the indicators will show as long as you are pressing the test button.

The test button tests the alarm sounder module only. To test the circuit for the main alarm or the zero-voltage output, raise the switch to the open position as explained above.

WARRANTY

The alarm is supplied with a one-year back-to-base warranty which is dated from either the date of purchase or a proven date of installation. If the unit develops a fault during the warranty period, Newton Waterproofing Systems will repair or replace the unit under warranty. Post the unit to the address below, together with an explanation of the problem and a return address. The warranty will be invalidated if the unit is damaged because of improper handling, storage or installation and in such cases a repair charge may be applicable.

Newton Waterproofing Systems reserve the right to update product literature at any time. Please always refer to our [website](http://www.newtonwaterproofing.co.uk) for the latest versions.