

Basement Pumping Systems and Ancillaries

NEWTON NP400LLPS (SP1)

Low Level Pumping System



Operational Manual

INFORMATION

This is a dual purpose document that is designed to be the reference manual for the installation of the Pumping System and then should be handed over to the occupier as the user manual and service record.

Panel Serial Number	
Date Installed	
Installation Company	
Installation Engineer	
Service Contact Number	

WARNINGS

SHOCK HAZARD – DO NOT OPEN

THIS PUMPING SYSTEM PANEL MUST ONLY BE INSTALLED BY TRAINED ENGINEERS.

NO USER SERVICE PARTS INSIDE PANEL - DO NOT OPEN.
THE MAINS POWER INPUT MUST BE ISOLATED BEFORE SERVICE OF PANEL OR PUMPS.

Please keep this Operational Manual with the system Control Panel at all times. The service engineer should confirm findings using the service sheet below.



Date of service	Engineer name	Company

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PANEL DIMENSIONS

225 mm wide x 145 mm deep x 315 mm high. Weight - 1.58 kg

WARRANTY STATEMENT

Limited Product Warranties. The Control Panel and probe set have a one-year limited product warranty from date on delivery note or invoice to the customer. Delivery note must include the product code number and serial number of the product. The pump has a 3-year manufacturers warranty or a 5-year back-to-base warranty if the pumps are serviced by a Newton approved service engineer.

What is covered by this limited hardware warranty?

This limited warranty covers warranty back to base (Newton Waterproofing Systems) only for defects in materials and workmanship. The manufacturer will exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product.

What is not covered by this limited hardware warranty?

- Products the supplier has not received payment for
- Normal wear and tear
- Problems caused by defective electrical power supply
- Failure to follow product installation instructions and user instructions
- Failure to perform preventive maintenance of the supplied product or the system the product is used within
- Usage that is not in accordance with the product instructions
- Servicing not authorised by the manufacturer
- Problems caused by connecting devices not supplied or authorised by the manufacturer

Warranty Information

This warranty gives you specific legal rights, and you may also have other rights which may vary from area to area (or jurisdiction to jurisdiction). The manufacturers responsibility for malfunctions and defects in the product is limited to repair and replacement as set forth in this warranty statement. All expressed and implied warranties for the product, including but not limited to any implied warranties and conditions of merchantability and fitness for a particular purpose, are limited in time to the term of the limited warranty period reflected on your delivery note or invoice. No warranties, whether expressed or implied, will apply after the limited warranty period has expired.

We do not accept liability beyond the remedies provided for in this limited product warranty or for consequential or incidental damages, including without limitation, any liability for third party claims against you, for damages for products not being available for use. Our liability will be no more than the amount you paid for the product that is the subject of a claim. This is the maximum amount for which we are responsible. Newton Waterproofing Systems reserve the right to change the product specification at any time.

IMPORTANT - This manual has been produced for the specific use of the Newton NP400LLPS pumping system and should be the main reference document for the installation and safe use of the panel. Please also familiarise yourself with the manual included in the packaging, supplied by the manufacturer.

INTRODUCTION, FEATURES, ENCLOSURE & CONNECTIONS

The [Newton NP400LLPS](#) pumping system comprises of a Control Panel, Probe Set and a single [Newton NP400PP](#) puddle pump. The panel is simple to install and is enclosed in an IP55 rated casing.

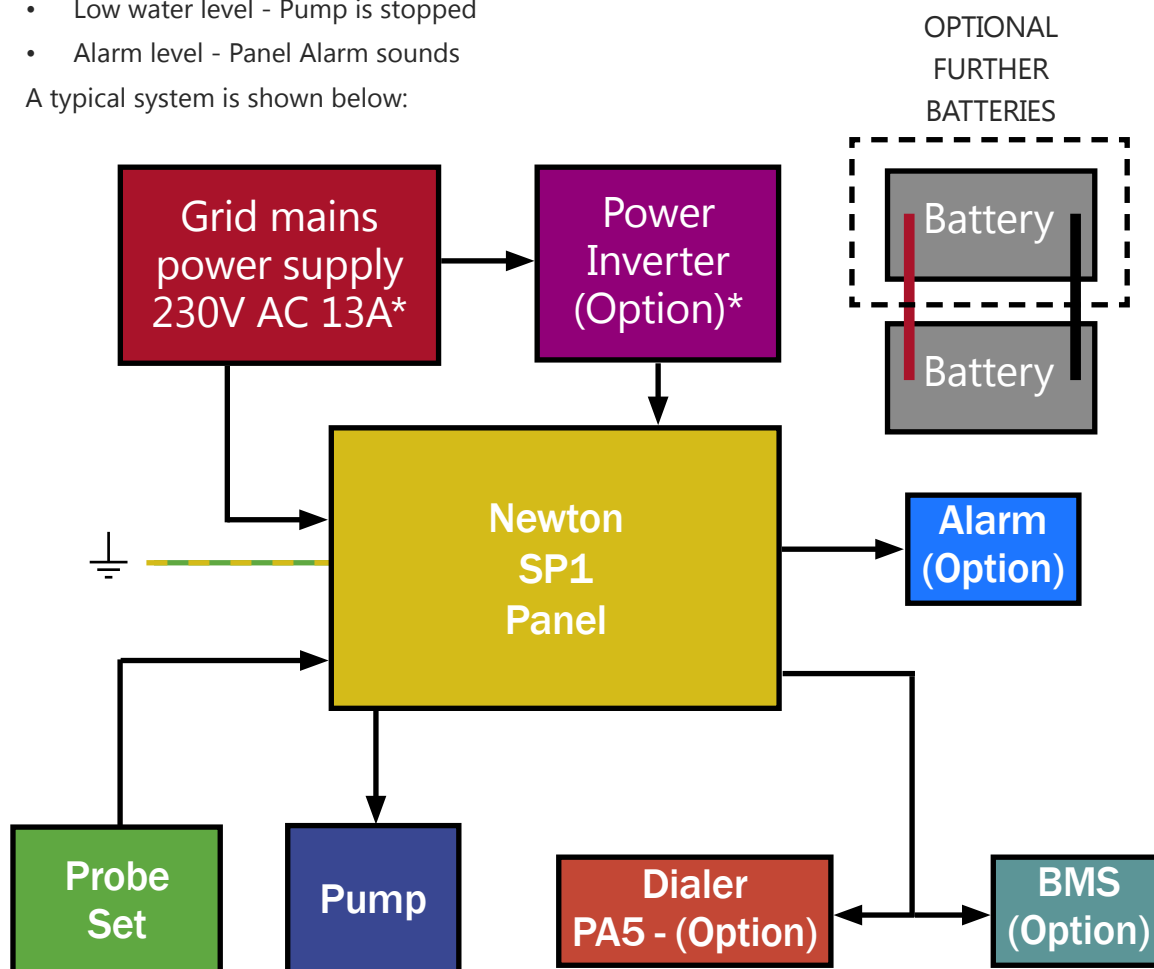
The panel has one power supply input which should be connected to a 230V power supply.

The Newton SP1 Panel features interfaces for use with the optional [Newton High Water Level Alarm](#), the [Newton Dialer](#), as well as connections to whole house alarm and monitoring systems.

The control panel uses a probe set that monitors the water level and informs the panel of:

- High water level - Pump is started
- Low water level - Pump is stopped
- Alarm level - Panel Alarm sounds

A typical system is shown below:



* There is only one 230 VAC power supply. Connection is either directly from mains AC or from Inverter AC.

ENCLOSURE

The Newton NP400LLPS panel is housed in 225 mm wide x 145 mm deep x 315 mm high ABS plastic enclosure with 6 knockouts for fitting plastic cable glands, ready for the following cables:

Main power, 1 x Probe Set, 1 x pumps and 1 x Dialer or BMS. 2 knockouts will not be used. If optional Alarm is fitted, use one of the two spare knockouts.

Parts:

- 1 x Panel
- 1 x NP400PP Puddle Pump
- 1 x Probe Set

The enclosure is fixed to the wall using fixings that are suitable for the weight of the unit and your wall type. The face plate is attached to the back box with the supplied screws. A ribbon cable connects the face plate display to the main PCB.

PANEL HIGHLIGHTS

- ABS enclosure rated at IP55
- Connection to external sounders or Building Management Systems (BMS)
- Connection to Newton Dialer for warnings received by text or voice message
- Pump motors protected by fuses
- Thermal relay overload protection
- Indicator lights for power, running and thermal trip

CONNECTION NOTES

Ensure that the grid mains connection is not connected until all the connections are complete and the panel face plate is fitted and locked.

The Probe Set has three coloured insulated wires inside the outer insulation – brown, green and white.

The pump has three coloured insulated wires inside the outer insulation: brown - Live, blue - Neutral, and green & yellow - Earth

Connection to the terminal block of the panel for the Probe Set and the Pump is confirmed on pages 6 & 7.

Over-current trimmer is set by default to 9 A. Set the amps on the trimmers to the nominal current of the pump (written on the pump) x 1.3. For example, if nominal current of the pump is 7 A, set the trimmer to 9 A. If on testing, the panel trips the pumps, try setting to the next trimmer up, which for a 7 A pump, would be 12 A.

DISPLAY AND CONTROLS INFORMATION

The panel face is fitted with a single button for operation of one pump:

AUT – 0 – MAN

AUT relates to automatic mode (where floats operate the pumps) – this is default mode and has to be chosen by continuously for standard operations.

0 – the panel is switched off.

MAN – the panel is in manual mode where pressing and holding the MAN buttons operates pumps. This is used for testing the pumps after wiring up, troubleshooting and for manual operating of the pumps in case of floats failure.

Green LED light indicates that the panel is turned on. For normal operation, there must be green LEDs showing.

If the pump is overloaded, the pump will be disabled and will not operate. A red LED will show on the front face. The reason for failure must be investigated and the panel reset by switching it off and on again.

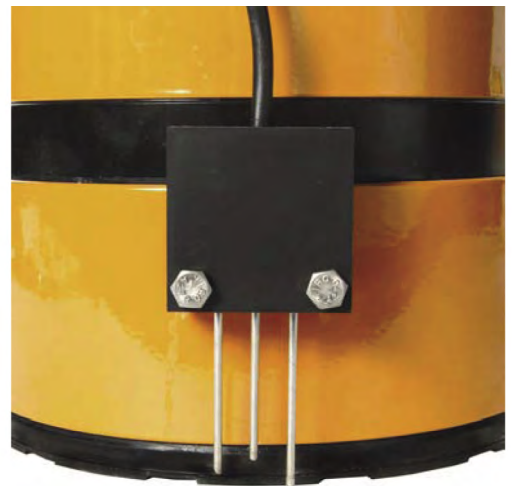
PROBES

Right hand Probe is 'Common' - This must be in the water at all times

Centre Probe is 'Max' and denoted the starting level. This can be adjusted by cutting to the height from the floor you wish the pump to operate.

Left hand Probe is 'Min' and denotes the stop level. This can be cut to the height you wish the pump to stop operating.

Cut the probes carefully with sharp snips.



ELECTRICAL CONNECTION OF CONTROL PANEL

INSTALLATION WARNINGS:

THIS CONTROL PANEL MUST ONLY BE INSTALLED BY TRAINED ENGINEERS.

BEFORE COMMENCING INSTALLATION, ISOLATE YOUR MAINS ELECTRIC SUPPLY.

This product should be installed in accordance with the relevant sections of the building regulations code and the current edition of the IEE Wiring Regulations (BS 7671: Requirements for electrical installations) and appropriate statutory regulations.

As of April 2004, new installations in the UK should be wired using the EU harmonised colours for the supply conductors. NEW COLOURS: BROWN = Live, BLUE = Neutral, YELLOW / GREEN = Earth. This installation **MUST** be earthed.

This control panel is IP55 rated.

Warning: it is important to read and understand the Control Panel instructions

The panel has been designed to be wall mounted. When the unit is recessed into the wall, the routing of all cables is also within the wall, making a neater installation than if the unit is wall mounted. Cable entry is via the knock-outs to the bottom and side of the panel, and glands are supplied for recessed mounting.

For ease of maintenance in changing pumps, it is recommended to always use 50 mm conduit for the high-voltage pump cable, and a separate 50 mm conduit for the low-voltage Probe Set cable.

NOTES:

Please note that low-voltage rated cables cannot be run in the same conduit as high-voltage (230V AC) cables. The Panel must be earthed.

If the water level is above the alarm probe on first powering up the panel, the alarm may sound.

CONNECTIONS

Power supply – 230V AC suitably rated to operate the pump from a locally fused spur, preferably from its own feed off the consumer board.

- Probe Set Brown Wire (Common) - Terminal COM (7)
- Probe Set Green Wire (Min) - Terminal MIN (8)
- Probe Set White Wire (Max) - Terminal Max (9)
- Pump Brown Wire (Live) – Terminal U1 (14)
- Pump Blue Wire (Neutral) – Terminal N (15)
- Pump Green & Yellow Wire (Earth) – Terminal PE (17)
- Alarm float (Option) – Terminal 1 & 2 (No polarity)
- Dialer (Option) – Terminal USCITA ALLARME 11 & 12 (No polarity)

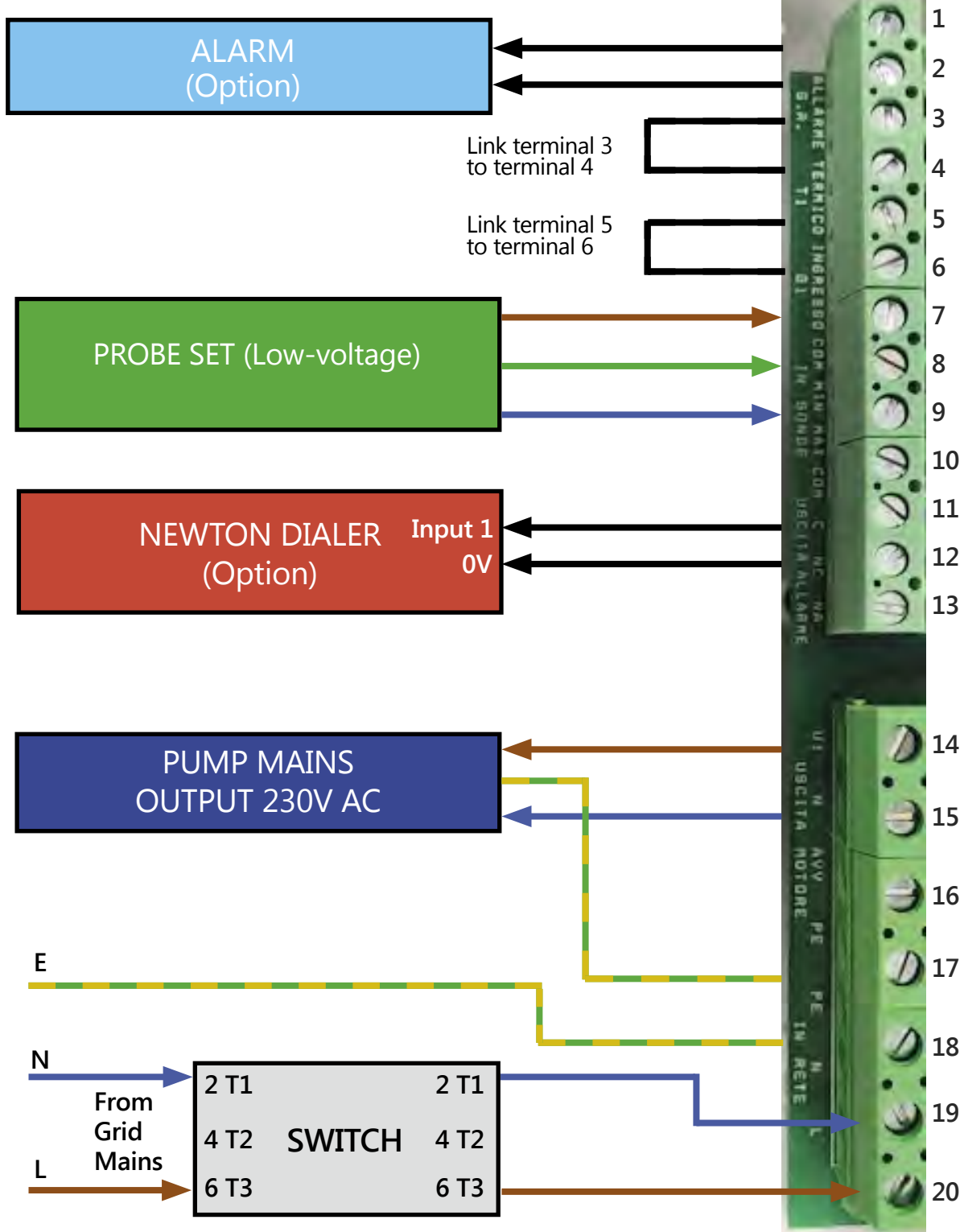
CONNECTION TO NEWTON DIALER – PA5

The Newton Dialer - PA5 can receive a signal from the panel allowing notice of the alarm condition to be received as a voice message or text message to mobile phones. Up to 8 separate numbers can receive the voice or text message.

The terminals for the connection to the Dialer are at the bottom of the inside circuit board of the panel and are marked USCITA ALLARME with normally closed – common – normally open terminals (NC – C – NA).

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 Dialer needs a separate power supply (12V power pack PA7 or battery connection kit - PA6 if the battery backup system is used within the pumping system).

CONNECTION WIRING DIAGRAM





INDICATES THAT THE MAIN POWER IS ON (**GREEN LIGHT**)



INDICATES THAT THE ALARM LEVEL IS ON (**RED LIGHT**)



INDICATES THAT THE MOTOR IS RUNNING (**GREEN LIGHT**)



CONTEMPORARY LIGHTING INDICATES THAT THE OVERLOAD PROTECTION IS ON (**RED LIGHTS**)



INDICATES THAT THE CLICSON THERMAL PROTECTION IS ON (**RED LIGHT**)



KEEPING IT SWITCHED, THE MOTOR STARTS, EVERY ALARM IS BY-PASSED. WHEN IT IS RELEASED, THE MOTOR IS DISCONNECTED



PUSH TO DISCONNECT THE MOTOR AND RESET THE ACTIVE PROTECTIONS



WHEN PUSHED, THE AUTOMATIC MODE IS ACTIVATED WHICH IS INDICATED BY THE GREEN LED; THE BOARD IS READY TO RECEIVE SIGNALS FROM THE FLOAT SWITCHES OR PRESSURE SWITCHES

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