

INSTALLATION & SERVICING GUIDE

Delta HLA Plus

An advanced high-water level alarm system, specifically designed for real-time tracking and monitoring of pumping stations.

www.deltamembranes.com



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THIS MANUAL SHOULD BE KEPT WITH THE DELTA HLA PLUS DEVICE OR PROPERTY OWNER

1. General information

1.1 Principles

This installation and operating manual is valid for the Delta HLA Plus .

The manual describes the proper and safe use of this equipment in all phases of operation. It is intended for Installers and Service Providers. End-users (homeowners/property owners/facilities managers) should refer to the Delta HLA Plus User Guide.

The device contains no end-user serviceable parts. End-users should contact their Delta Registered Pump Service Provider if the device needs servicing or repairing.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

The overall safety of any system incorporating this equipment is the responsibility of the Installing Contractor.

In the event of damage, immediately contact your Delta Membranes Systems Ltd to maintain the right to claim under warranty.

2. Declarations

2.1 UKCA and CE approved

The product complies with the relevant sections of:

- EN 61010-1:2010+A1:2019 "Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements"
- EN 301 489-1 V2.2.3 (2019-11) "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements"
- EN 301 489-17 V3.2.4 (2020-09) "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems"



2.2 Disposal

This PCB assembly is classified as Electrical or Electronic equipment and should not be disposed of in normal domestic or commercial waste.

The lithium ion battery should be recycled separately at an appropriate collection point. The terminals of lithium ion batteries should be taped up before disposal. The battery must not be allowed to get wet or damaged to prevent a risk of fire.

The mandatory crossed out wheeled bin symbol on these products indicates that the products shall not be mixed or disposed of in household or commercial waste. Under the WEEE Directive, the equipment should be recycled using the best possible techniques to minimise environmental impact and avoid unnecessary landfill.

For further information, visit <http://www.legislation.gov.uk/ukxi/2013/3113/contents/made>



3. Important safety instructions

3.1 Key to safety symbols and markings

Symbol	Description
DANGER	DANGER This signal word indicates a high-risk hazard which, if not avoided, will result in death or serious injury.
WARNING	WARNING This signal word indicates a medium-risk hazard which, if not avoided, could result in death, serious injury, or damage to property.
CAUTION	CAUTION This signal word indicates a hazard which, if not avoided, could result in damage to the machine and its functions.
	General hazard In conjunction with one of the signal words this symbol indicates a hazard which will or could result in death or serious injury.
	Electrical hazard In conjunction with one of the signal words this symbol indicates a hazard involving electrical voltage and identifies information about protection against electrical voltage.
	Device damage In conjunction with the signal word CAUTION this symbol indicates a hazard for the device and its functions.

3.2 Special characters

When used in conjunction with numerical values a dash "-" indicates a range, whereas a slash "/" indicates discrete values.

Example: "50/60 Hz" indicates either 50 Hz or 60 Hz and nothing in between.

Example: "110–240 VAC" indicates any AC voltage between 110 V and 240 V.

3.3 General safety notices



DANGER

Do not open this unit if not qualified to do so. To reduce the risk of electric shock, do not remove cover. No user-serviceable parts inside.



DANGER

Before carrying out any maintenance work the system MUST be disconnected from the mains power supply, and measures must be taken to prevent the system from being inadvertently switched back on.



WARNING

When undertaking works within the chamber/sump suitable measures MUST be taken to ensure safe access in accordance with current safety regulations.



WARNING

All maintenance works (inspections and services) MUST be undertaken by a technically qualified/competent company/engineer with specific training on the device.

4. Delta HLA Plus overview

4.1 Delta HLA Plus Alarm overview

The Delta HLA Plus is a smart High-Water Level Alarm and Monitoring System, capable of delivering real-time monitoring and notification services, for ground, surface and foul water pumping stations.

Designed to put property owners in control – on any digital device, anywhere, at any time. For all important or time-sensitive notifications, the Delta HLA Plus allows property owners to engage in real-time with their pump stations using the Delta Pumps App. The Delta Pumps App offers owners an uncomplicated way to register HLA Plus devices. After registration of the Delta HLA Plus all monitoring and notification services are sent directly to the listed keyholders via email.

High-water level alarms alert property owners when water levels in pump stations becomes too high and there is a risk of flooding.

The Delta HLA Plus can be retrofitted in any existing ground, surface and foul water pumping stations. Please refer to Section 7 on how to register a new Delta HLA Plus device(s) or Delta's Technical Guidance Notes.

To future-proof Delta HLA Plus devices, we recommend adding a Delta Level Float to enhance features on the Delta HLA Plus device into an 'Intelligent' High-Water Level Alarm and Monitoring System, not only detecting when a high-water level occurs in a pump station, but also to monitor pump activation(s), and changes in pump activation(s) both frequency, duration and flow rates.

4.1.1 Features

- Provides smart alarm function for single or dual pump system with or without control panel
- Suitable for ground, surface or foul water pumping stations
- Compatible with Wi-Fi or LAN/Ethernet connection
- Instant real-time monitoring to spot service failures before they make any impact
- Notification messages to users in real time on any digital device
 - if there is mains power outage,
 - when a high-water situation has been recorded
 - when a high-water level situation occurs
 - when a service or routine maintenance is due
 - when changes in pump activity occur (frequency and duration)
- Float Switch and 10 metre Cable supplied
- Colour coded LED Facia and audible displays
- Modern, lightweight, and compact design
- Compatible with Delta Level Float

4.1.2 Benefits

- Instant real-time monitoring of ground, surface and foul water pumping stations to identify potential issues before they make an impact
- Enables better planning of servicing and maintenance
- Instant communication during emergencies and other critical events
- Enhanced customer care
- Can be retrofitted to existing pump systems
- Delta Pumps App identifies multiple pump stations on one site
- Reduces risk of critical events
- A fully downloadable CSV history
- Allows for service intervals to be set at 3, 6, or 12 months
- No additional subscription fees for Monitoring and Notification Services

4.2 Delta HLA Plus Intelligent Alarm

The Delta HLA Plus Intelligent is supplied with a Delta Level Float and is compatible with all Delta V3, V4 and V6 groundwater and surface water pumping stations. Delta HLA Plus can also be retrofitted to any existing groundwater/surface water pumping station.

The Delta HLA Plus 'Intelligent' is a highly advanced High-Water Level Alarm Monitoring System. The Delta Level Float transforms the Delta HLA Plus ('Smart' High-Water Level Alarm) into an 'Intelligent' High-Water Level Alarm, not only detecting when a high-water level occurs in a pumping station, it also monitors sump pump activity – number of activation(s), and changes in sump pump activation(s) (both frequency and duration). This additional information allows for real time calculation of flow, volumes of discharge over given periods, changes in level of activity within the pumping station including decline in pump performances. For full features of the Delta HLA Plus 'Intelligent' Pump Station Monitoring Device, all devices are required to be registered for free on the Delta Pumps App.

The Delta HLA Plus Intelligent has both proactive and preventive functions. Real-time analysis of your pumping station enabling service, maintenance, or repair requirements to be detected and implemented at the earliest stage.

Please refer to Section 7 on how to register a new Delta HLA Plus device(s) or Delta's Technical Guidance Notes.

4.2.1 Features

- Instant real-time monitoring to spot service failures before they make any impact
- Records frequency of pump station activations
- Records duration of pump station activations
- Records volume of water being evacuated from pumping station
- Records and monitors pump activities within pumping stations
- Sends notification messages to users in real time:
 - if there is mains power outage,
 - when a high-water situation has been recorded
 - when a high-water level situation occurs
 - when a service or routine maintenance is due
 - when changes in pumping station activity occur (frequency and duration)
- Visual and audible displays on the HLA Plus Device
- Suitable for Domestic and Commercial Structures
- Can be retrofitted to existing groundwater or surface water pumping station

4.2.2 Benefits

- Real-time streamline log analysis of pumping stations
- Instant communication during emergencies and other critical events
- Enhanced customer care
- Full visible log of all pumping station events – logged in real time
- A fully downloadable CSV history
- Delta Pumps App identifies multiple pump stations on one site
- Reduces risk of critical events
- Logged data allows for better maintenance and service planning of pumping stations
- Allows for Service intervals to be set at 3, 6, or 12 months
- No subscription fees for Monitoring and enhanced Services
- Data stored on SD integrated card



- A. Power status
- B. High level
- C. High level recorded
- D. Service due
- E. Communications status and reset button
- F. Test button
- G. Audio alarm mute button
- H. High level float cable
- I. Level float cable for Delta HLA Plus Intelligent Alarm (optional)
- J. Volt-free contact cable (optional)
- K. Mains power cable
- L. Ethernet cable (optional)

Figure 1. Delta HLA Plus Control Unit.

4.3 Technical information

4.3.1 Technical specifications

Delta HLA Plus Control Unit (DMS HLA [®] P)	
Power supply	230 V (± 10 %) AC 50Hz
Power	5 W
Rated current	0.2 A
Internal battery	3.6 V, 7 Ah Li ion
Clock battery	3 V CR2032
Operating temperature	-10°C to +40°C
Operating humidity (relative)	20% to 85% non-condensing
Sound alarm level	80 dB
Power cable length	1 metre
Weight (excluding packaging)	640 g
Enclosure material	ABS, V-0 flame retardant
Colour	Grey
Ingress protection rating	IPX0
Impact protection rating	IK08
Installation location	Indoor use only
Max altitude	2,000 m
Overvoltage category	2
Pollution degree	2

4.3.2 Volt-free contacts

The Delta HLA Plus features three volt-free (dry) contacts for connection to a building management system (BMS).

- High level
- Power fail
- Service due

They can be set to Normally Open (NO) or Normally Closed (NC) depending on external system's requirements.

Refer to Section 5.8 for more information.

Volt free relay contact specifications	
DC Ratings	24 VAC 1 Amp max
AC Ratings	24 VAC 0.3 Amp max

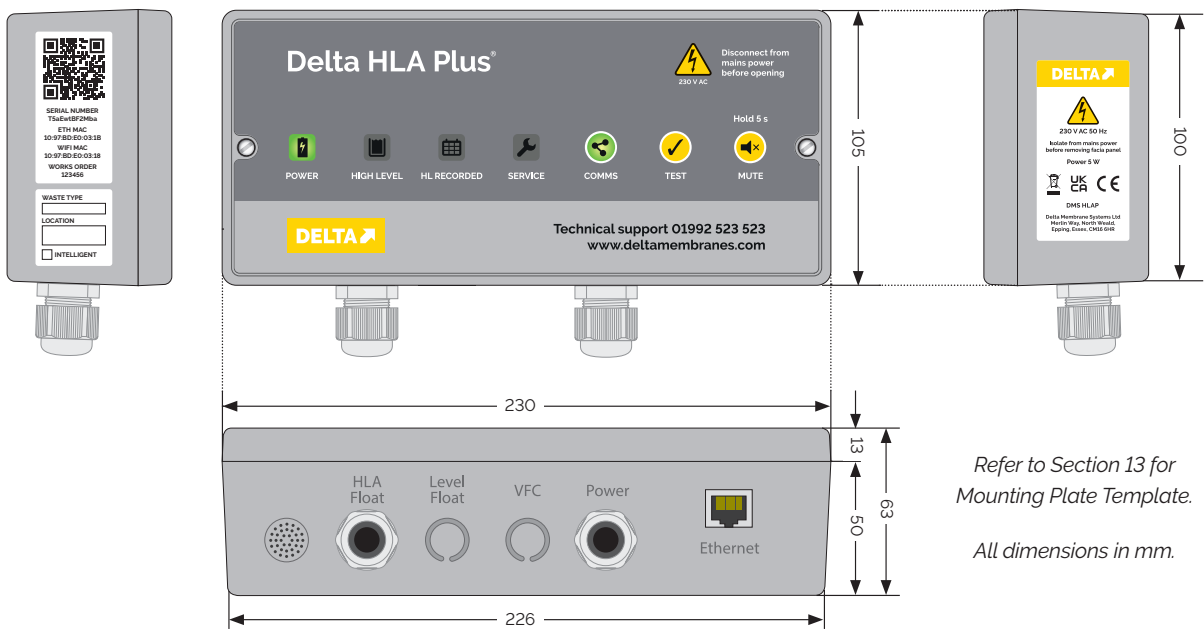


Figure 2. Dimensions of Delta HLA Plus Control Unit

4.4 Parts included with Delta HLA Plus

Item	Qty
Delta HLA Plus Control Unit (DMS HLAP)	1
Cable gland (for cable diameters 3 mm–8 mm)	3
Wall plug	4
Ø 5 x 30 mm stainless steel screw	4
Installation and operating guide	1

On delivery carefully unpack the product. Check that all items on the parts list have been received and inspect for any signs of damage. Any missing items or damage must be reported immediately. No claim will be considered after 24 hours from time of delivery.

4.5 Float kits

The Delta HLA Plus Control Unit should be purchased with a high level alarm float kit. This will be either a Delta Broken Finger Float Kit (Section 4.5.1) or a Delta Pendant Float Kit (Section 4.5.2) depending on the pumping station being installed.

For Delta HLA Plus Intelligent monitoring, a Delta HLA Plus Level Float (Section 4.5.3) is required in addition to one of the above high level alarm float kits.

4.5.1 Delta Broken Finger Float Kit (DMS E232)

Delta Broken Finger Float Kit	Qty
Delta Broken Finger Float, 10 metre cable	1
Delta Float Shroud	1
Cable tie	2

Suitable for:

- Delta Dual V3/4/6



4.5.2 Delta Pendant Float Kit (DMS E233)

Delta Pendant Float Kit	Qty
Delta Pendant Float, 10 metre cable	1
Counterweight	1
20 mm cable gland	1
Cable tie	1

Suitable for:

- Delta Foul V3
- Delta 800 Dual V3/4/6
- Delta 800 Single Foul V3



4.5.3 Delta HLA Plus Level Float (DMS 536) for Delta HLA Plus Intelligent

Delta HLA Plus Level Float Kit	Qty
Level float switch, 10 metre cable	1
Level float bracket	1
Stainless steel clip	1
Cable gland (for cable dia. 3 mm–8 mm)	1

Suitable for:

- Delta Dual V3/4/6
- Delta 800 Dual V3/4/6



5. Site preparation and installation

5.1 Advisory

All products are manufactured and developed to the highest standards and assembled with precision and care. Each product has been rigorously tested. We constantly strive to develop our products to provide you with the most innovative products possible.

Please read these installation and operating guidelines carefully prior to installation. These guidelines contain important information and hazard warnings, which will enable you to install and operate your product safely, economically, and reliably.

Only qualified personnel should carry out the installation in accordance with the latest IET wiring regulations BS7671. All works should be in line with the Health and Safety at Works Act 1974.

It is important to note that this installation guide is for guidance only and it is the installer's responsibility to satisfy themselves that the installation procedure is in accordance with good practice, this will then eliminate any potential damage to the product during or after installation.

If you are unsure on any point, then please contact Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com for more information.

5.2 Intended use

This Delta HLA Plus is designed for use indoors or in a suitable waterproof outdoor enclosure. Under no circumstances should the product be installed outdoors without suitable protection from both water and extreme temperatures (operating temperature -10°C to +40°C).

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

The overall safety of any system incorporating this equipment is the responsibility of the Installing Contractor.

5.3 Location

5.3.1 General mounting requirements

Select a suitable location for the Delta HLA Plus Control Unit, taking into account that it must be located within 10 metres of the base of the pump chamber/sump via the cable duct to the Delta HLA Plus Control Unit. It must be mounted in a dry location at a minimum of 500 mm above finished floor level where the panel is audible and safely accessible by the end user and service engineers. When siting the panel please consider the Noise Pollution Act.

The Delta HLA Plus Control Unit should be located where there is a stable Ethernet or Wi-Fi connection to enable real-time alerts.

If you need to mount the panel further away from the pump chamber/sump, please contact Delta Membranes on 01992 523 523 between 8 am and 5 pm, Monday to Friday or by email at info@deltamembranes.com for more information.

5.3.2 Installation prerequisites

A 13 amp unswitched fused spur complete with a 3 amp fuse should be installed within 1 metre of the device's location. This fused spur will connect to a dedicated 6 amp MCB in a 230 V AC distribution board. The fused spur and breaker are not included. See Section 5.9.



DANGER

Location of disconnect equipment must not be obstructed so that it is difficult to operate the disconnecting device.

5.4 Mounting the Delta HLA Plus Control Unit

The Delta HLA Plus Control Unit includes pre-installed IP68 cable glands for the high level float cable and the mains power cable. If you are installing a Delta HLA Plus Intelligent Alarm with level float, or volt-free contacts you will need to install additional cable glands (supplied) before mounting the panel to the wall.



CAUTION

Care must be taken to ensure the internal components of the panel are not damaged when drilling.

5.4.1 Installing a cable gland for a Delta HLA Plus Level Float cable (for Delta HLA Plus Intelligent Alarm systems only)

If you are installing a Delta HLA Plus Intelligent Alarm you will need to install a cable gland for the level float cable in the enclosure backbox before mounting the panel to the wall.

Open the panel and separate the backbox from the front of the panel and then disconnect the battery from the PCB board.

Drill a 16 mm hole in the underside of the panel's backbox at the Level Float position (see Figure 3).

An IP68 cable gland is supplied with the Delta HA Plus Level Float.

5.4.2 Installing a cable gland for volt-free contacts (optional)

If you require volt-free contacts for connection to the building management system (BMS) you will need to install a cable gland for the volt-free contact cable in the enclosure backbox before mounting the panel to the wall.

Open the panel and separate the backbox from the front of the panel and then remove the battery.

Drill a 16 mm hole in the underside of the enclosure backbox at the VFC position (see Figure 3).

Install the supplied IP68 cable gland.

5.4.3 Mounting the Delta HLA Plus Control Unit to the wall

Once any additional cable glands have been installed, mount the panel to a wall or backboard using the mounting points located at the back of the panel. Please see Section 14 for the mounting plate template.

Use screws and plugs suitable for the surface being mounted to. Use Delta Qwikseal Plugs (DMS 131) if penetrating MS500 or PT waterproofing membrane. Stainless steel Ø 5 x 30 mm self-tapping screws and standard wall plugs are provided (6 mm drill bit).

After mounting the panel replace the front facia for protected. Do not connect the battery to the PCB board until commissioning.

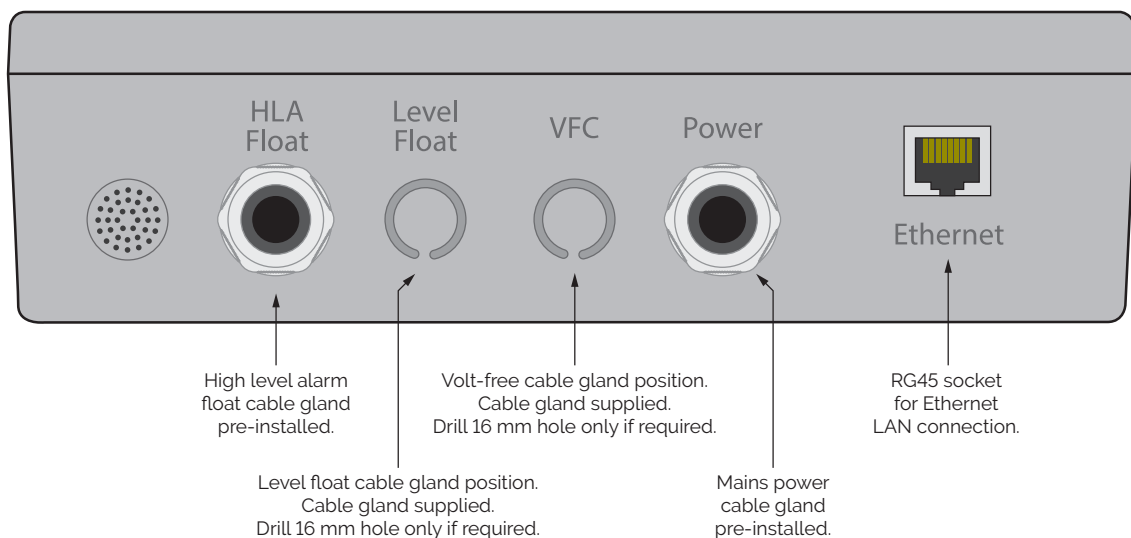


Figure 3. Delta HLA Plus Control Unit connections

5.5 Installing a Delta Broken Finger Float Kit (for Delta Dual V3/V4/V6 pumping systems)

5.5.1 Mounting a Delta Broken Finger Float

Please refer to the specific installation and operating guidelines for the chamber/sump when installing the Delta Broken Finger Float.

The Delta Broken Finger Float is supplied with a 10 metre cable. If you require more than 10 metres please contact Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com for assistance.

1. The Delta Broken Finger Float should be positioned between the activation points of the two pumps, as shown in Figure 4. This will cause the alarm to trigger if Pump 1 has failed, before Pump 2 empties the chamber. This periodic triggering is a useful indicator that there is a fault in the pumping station.
2. The Delta Broken Finger Float should be installed in the Delta Float Shroud. The shroud should be positioned on the vertical pipework of the rear pump so that it butts up to the base of the elbow and secured with cable ties. See Figure 5.
3. When positioning the Delta Broken Finger Float insert the cable through the green washer.
4. Position the Delta Broken Finger Float with the activation arm located in the upwards position as shown in Figure 6.
5. Insert the cable through the blue plastic washer and nut and tighten fully.
6. If necessary use cable ties to prevent the pump or float cables from causing an obstruction.
7. Draw cable through the cable duct along with the other cables at commissioning.

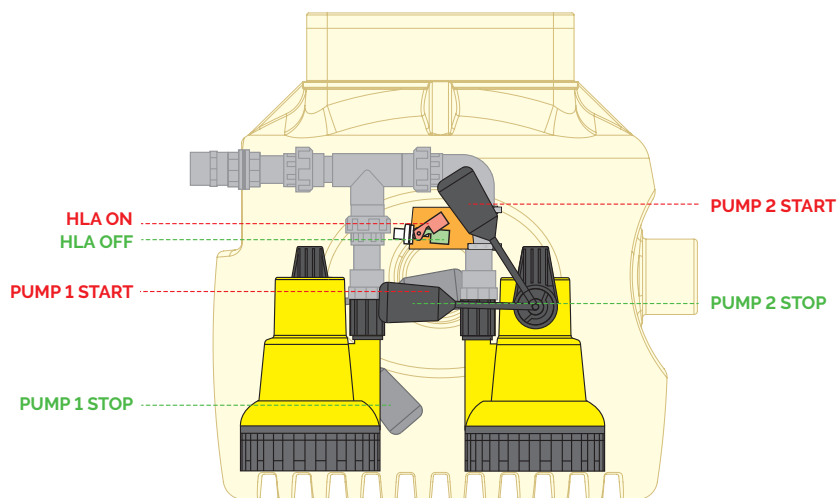


Figure 4. Delta Broken Finger Float on and off positions.

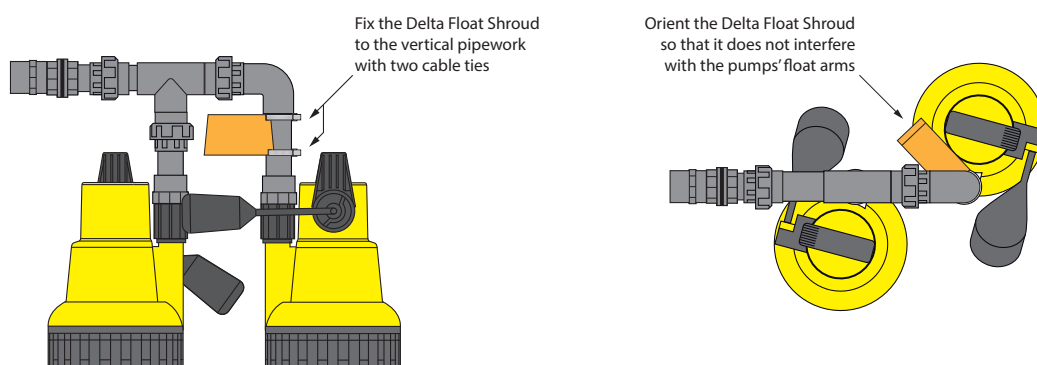


Figure 5. Fixing and orienting the Delta Float Shroud.



Figure 6. Delta Broken Finger Float on and off positions.

5.5.2 Connecting a Delta Broken Finger Float to the Delta HLA Plus Control Unit

1. Loosen the float switch cable gland located on the underside of the panel, as shown in Figure 3.
2. Draw the Delta Broken Finger Float cable through the cable gland.
3. Connect the brown core left terminal and the blue core to the right terminal of the HLA FLOAT terminal block as shown in Figure 7 inset.

The panel is factory-set to a normally closed contact. The advantage is that should the float cable become damaged and/or disconnected the alarm will activate. This can be changed to Normally Open using the Delta Pump App if required.

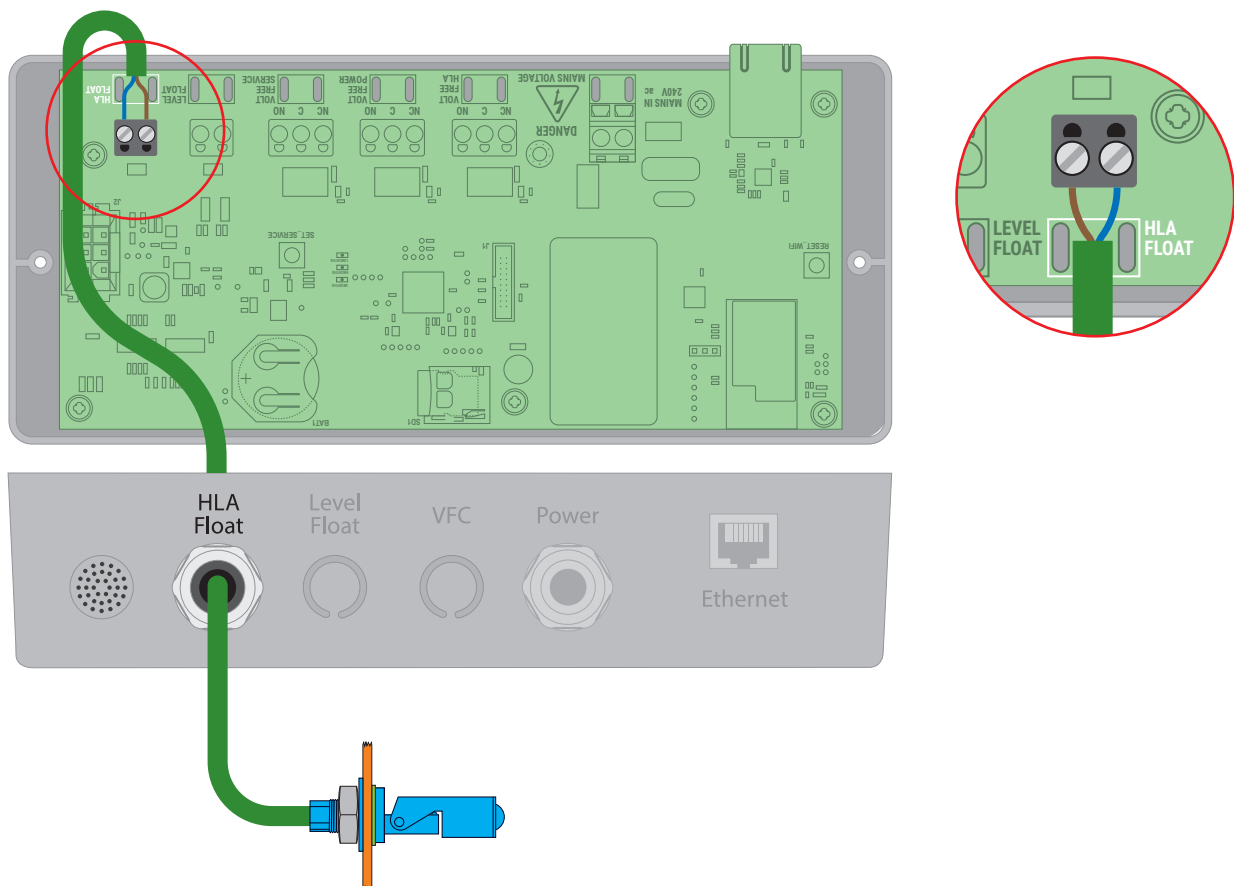


Figure 7. Connecting the Delta Broken Finger Float to the Delta HLA Plus Control Unit.

5.6 Installing a Delta Pendant Float Kit (for Delta Foul V3, Delta 800 Series)

5.6.1 Mounting a Delta Pendant Float Switch

Please refer to the specific installation and operating guidelines for the chamber/sump when installing the float switch.

The Delta Pendant Float Switch is supplied with a 10 metre cable. Should you require more than 10 metres contact Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com for assistance.

1. Please ensure you position the Delta Pendant Float Switch higher than the primary pump activation point contained within, as shown in Figures 8–10.
2. Install the cable securely. The Delta Pendant Float Switch should be installed using a float bracket in the chamber. The Delta Foul V3 chamber features an integral float bracket. 800 Series chambers feature a float bracket (see Section 11 Ancillaries).
3. Attach the counterweight approximately 70 mm from the top of the float. You must separate the counterweight by removing the centre screw using a 6 mm Allen key, once separated you will see two grooves, using the smaller of the grooves position the cable into place and put the counterweight back together ensuring the centre screw is tightened.
4. Pull the float cable through the M20 cable gland on the float bracket. Position the float higher than the primary pump activation point. Once the float has been positioned tighten the M20 gland.
5. Fix the cable into position using a cable tie to ensure the float doesn't drop down.
6. If necessary use cable ties to prevent the pump or float cables from causing an obstruction.
7. Draw cable through the cable duct along with the other cables at commissioning.

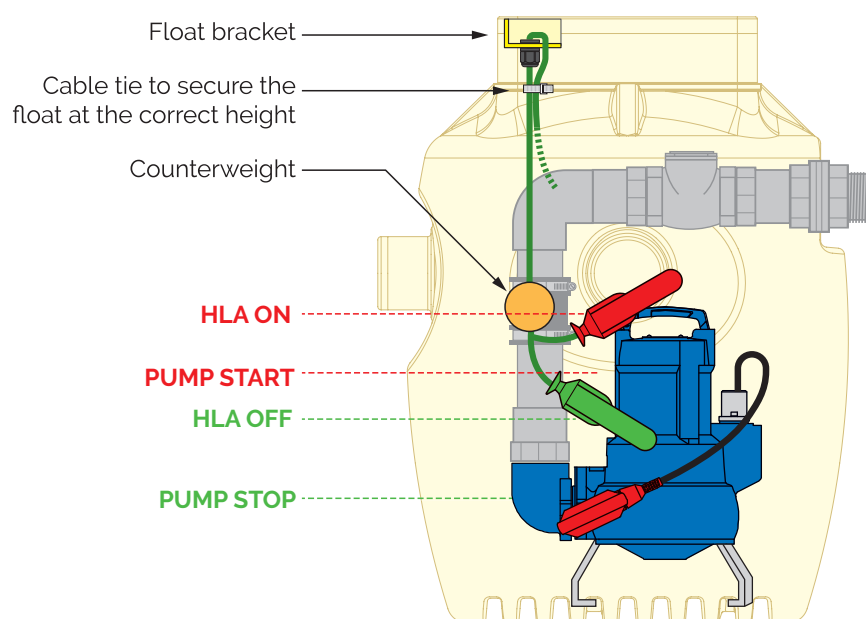


Figure 8. Setting the switching heights of the Delta Pendant Float Switch in a Delta Foul V3 Packaged Pumping Station.

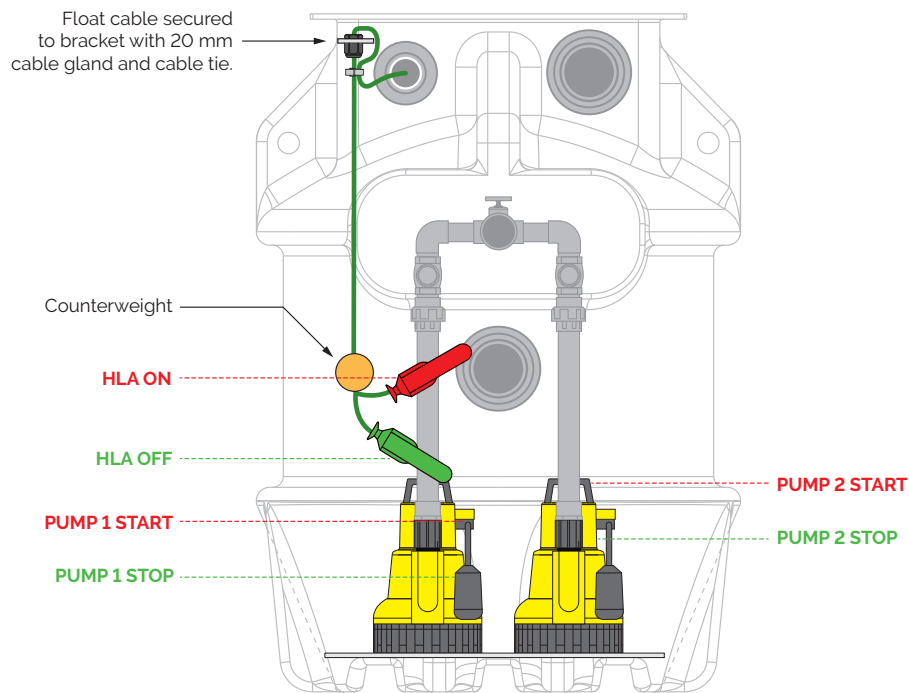


Figure 9. Setting the switching heights of the Delta Pendant Float Switch in a Delta Dual V3/V4/V6 800 Series Packaged Pumping Station.

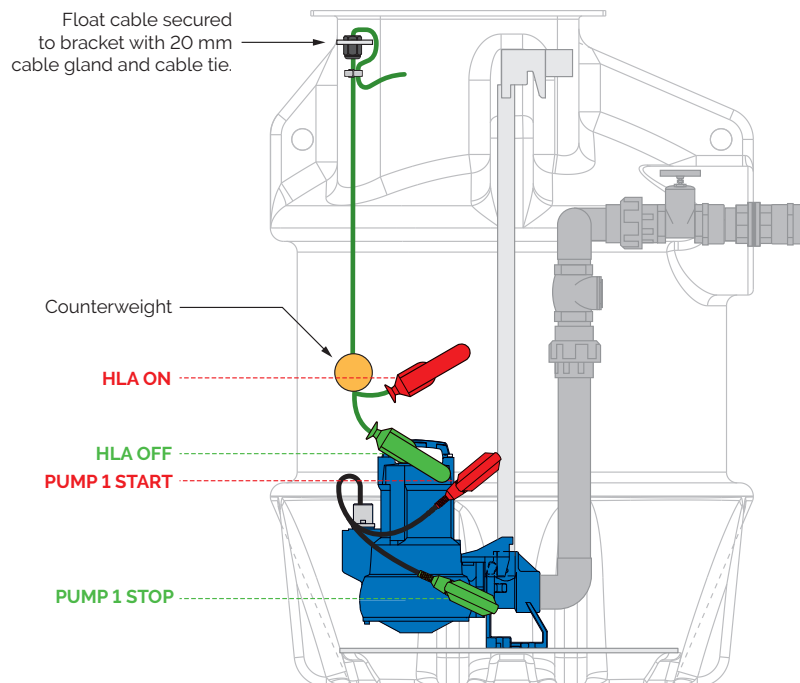


Figure 10. Setting the switching heights of the Delta Pendant Float Switch in a Delta Single V3 Foul 800 Series Packaged Pumping Station.

5. Site preparation and installation

5.6.2 Connecting a Delta Pendant Float Switch to the Delta HLA Plus

1. Loosen the float switch cable gland located on the underside of the Delta HLA Plus Control Unit, as shown in Figure 11.
2. Draw the Delta Pendant Float Switch cable through the cable gland.
3.
 - a. For NORMALLY CLOSED connections, connect the brown core to the left terminal and the blue core to the right terminal of the HLA FLOAT terminal block, as shown below. Isolate the black core.
 - b. For NORMALLY OPEN connections, connect the brown core to the left terminal and the black core to the right terminal of the HLA FLOAT terminal block, as shown below. Isolate the blue core.

The Delta HLA Plus Control Unit is factory-set to a Normally Closed contact. The advantage is that if the cable becomes damaged and/or disconnected the alarm will activate. This can be changed to Normally Open using the Delta Pump App if required.

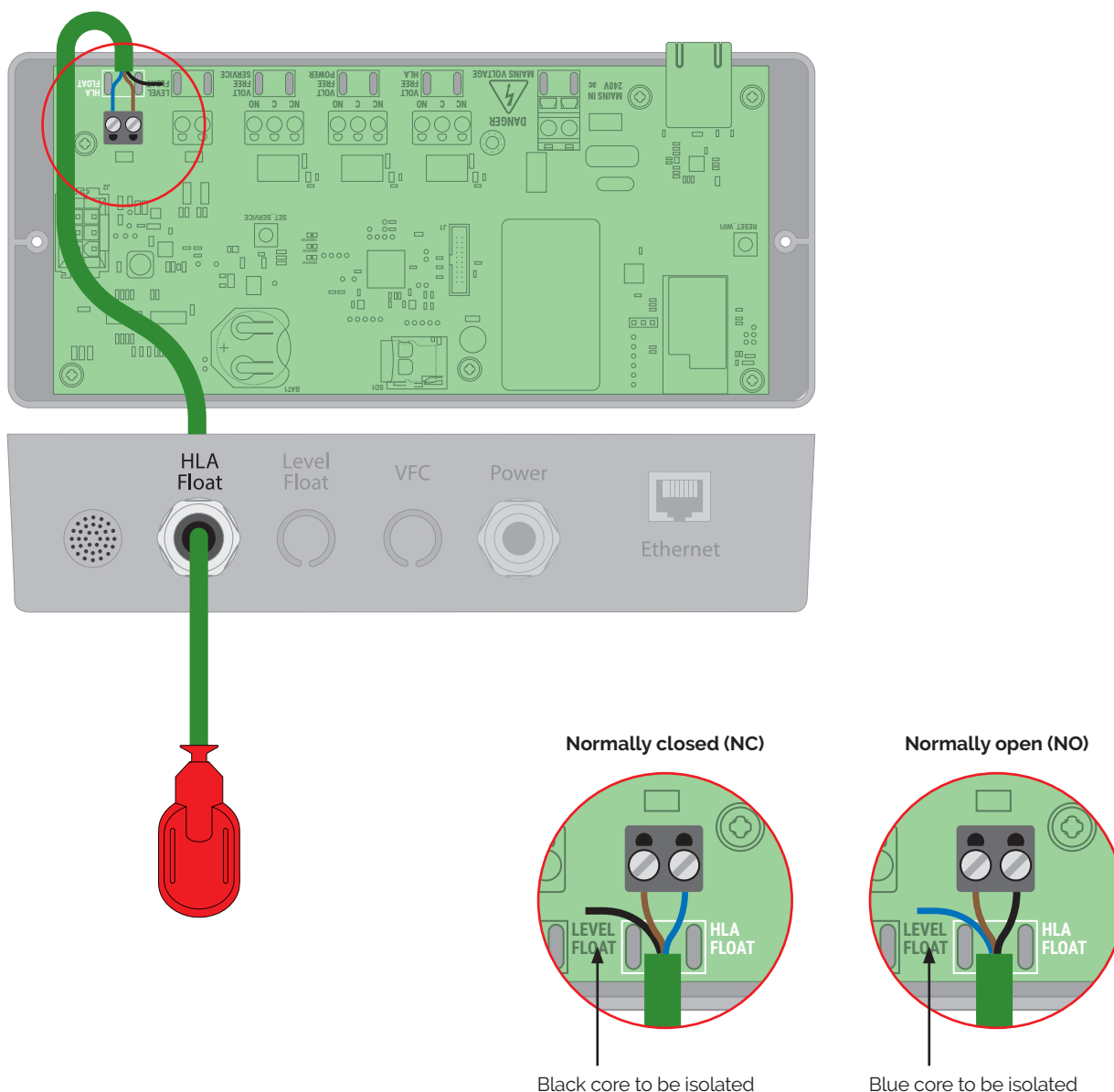


Figure 11. Connecting the Delta Pendant Float Switch to the Delta HLA Plus Control Unit.

5.7 Installing a Delta Level Float (for Delta HLA Plus Intelligent Alarm)

5.7.1 Mounting a Delta Level Float

Please refer to the specific installation and operating guidelines for the chamber/sump when installing the float switch.

The Delta Level Float is supplied with a 10 metre cable. If you require more than 10 metres please contact Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com for assistance.

1. Attach the level float bracket to the vertical leg of the primary pump's manifold using the stainless steel clip. Check that the level float switch is positioned so that the high switching point is just below the activation point of the primary pump.
2. The bracket should be secured to the vertical leg of the primary pump's discharge pipework. The Delta Level Float and pumps must be positioned so they are not obstructed in operation by each other, pipework, cables or the chamber walls (see the plan view below).
3. Once positioned at the correct height, tighten the stainless steel clip to fix the bracket in position.
4. The low switching height must be set to just above the stop height of the primary pump.
5. If necessary use cable ties to prevent the pump or float cables from causing an obstruction.
6. Draw cable through the cable duct along with the other cables at commissioning.

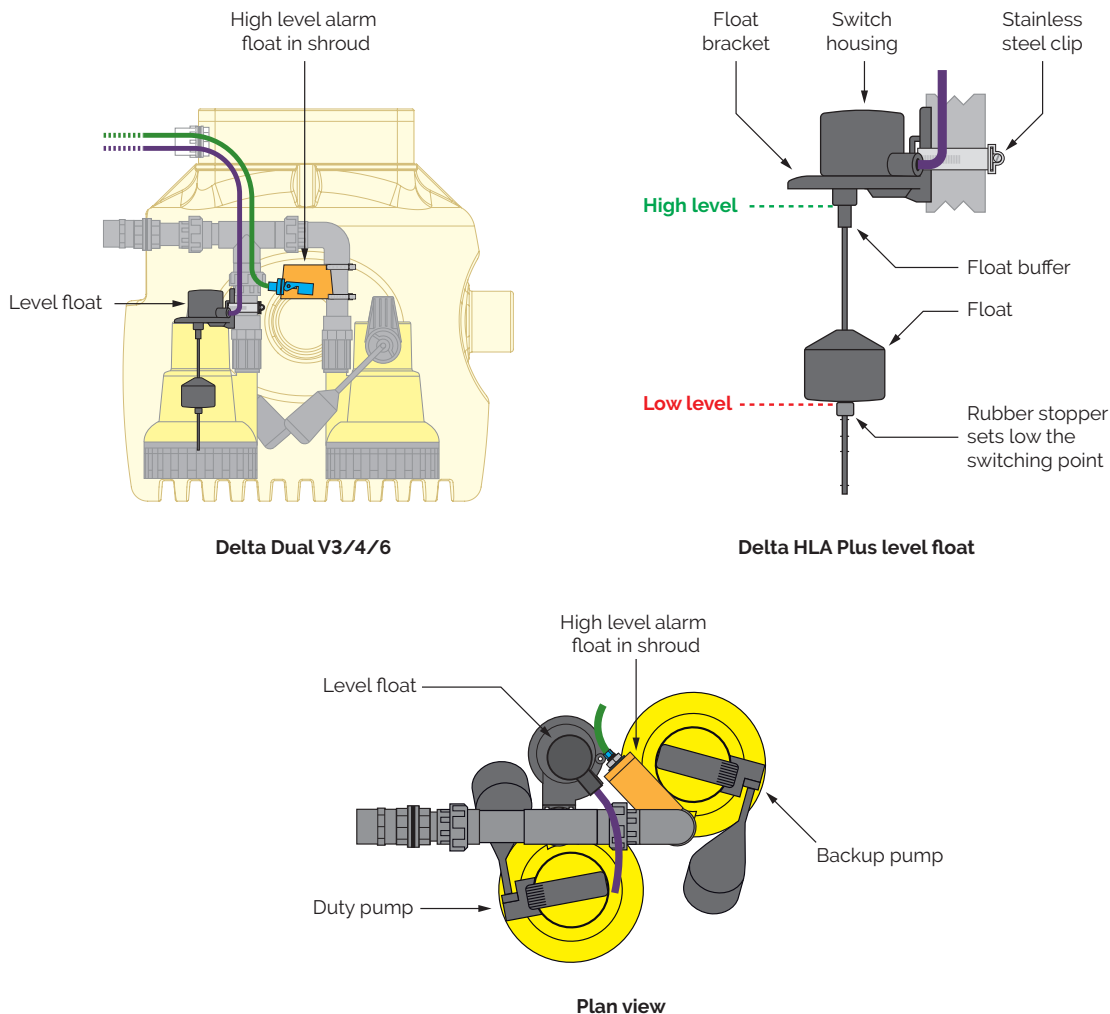


Figure 12. Mounting the Delta Level Float in a Delta Dual V3/4/6 pumping station.

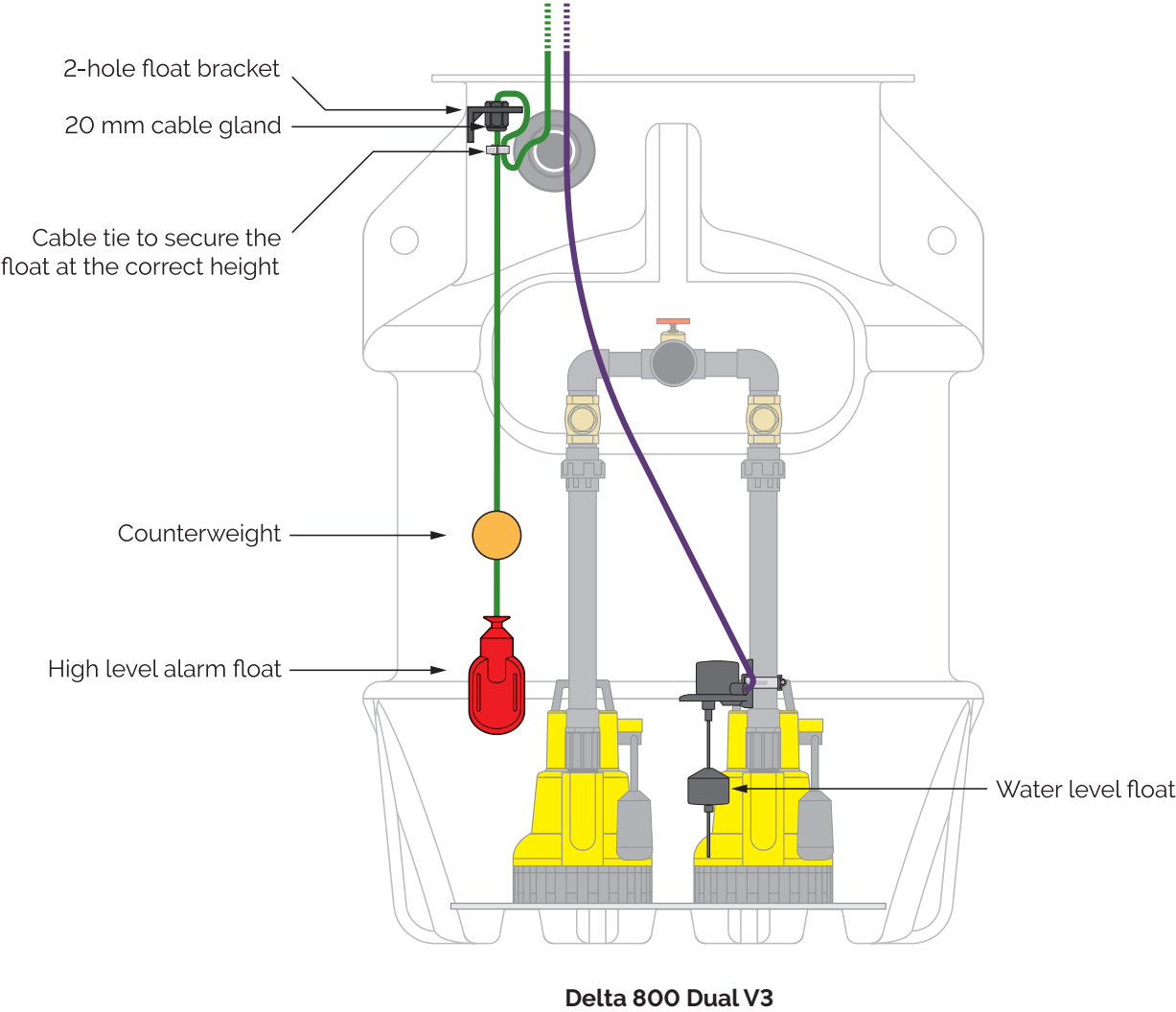


Figure 13. Mounting the Delta Level Float in a Delta Dual 800 V3/4/6 groundwater pumping station.

5.7.2 Connecting a Delta Level Float to the Delta HLA Plus Control unit

1. Drill a suitably-sized hole in the underside of the enclosure back box at the Level Float location for an IP68 cable gland (see Section 5.4.1).
2. Loosely position the IP68 cable gland in and draw the cable through it.
3. Connect the brown core to the left terminal and the blue core to the right terminal of the LEVEL FLOAT terminal block, as shown in Figure 14.
4. Tighten the cable gland to secure the cable.

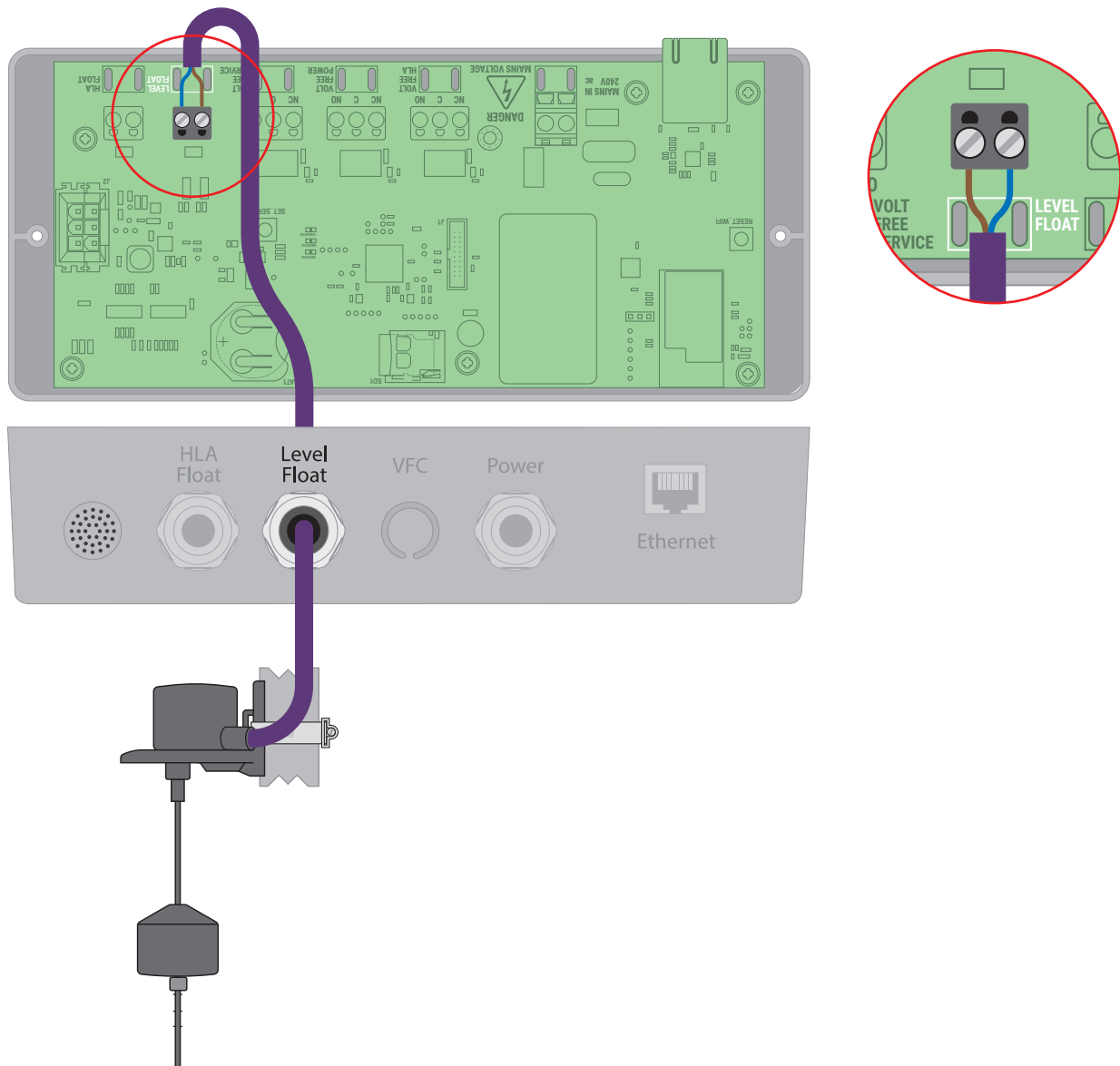


Figure 14. Connecting the Delta Level Float to the Delta HLA Plus Control Unit.

5.8 Installing volt-free contacts (OPTIONAL)

The Delta HLA Plus features three volt-free (dry) contacts for connecting to an external system such as a building management system (BMS). They can be configured to be Normally Open (NO) or Normally Closed (NC) to suit the external system.

The volt-free contacts are intended for use of 3 V DC circuits with a rated current of less than 1 A.

5.8.1 High level volt-free contact

This contact will send a signal to the building management system (BMS) if a high level situation occurs.

5.8.2 Power fail volt-free contact

This contact will send a signal to the building management system (BMS) if there is a removal of mains power to the Delta HLA Plus occurs. This relay is normally energised when mains power is applied.

5.8.3 Service due volt-free contact

This contact will send a signal to the building management system (BMS) when a service of the pump station is due.

5.8.4 Setting NC or NO contacts

To make a volt-free connection one core should connect to the Common (C) terminal (**Black**) and one core to either the Normally Open (NO) terminal (**Red**) or the Normally Closed (NC) terminal (**Blue**). The choice of NO or NC contact depends on the requirements of the receiving system.

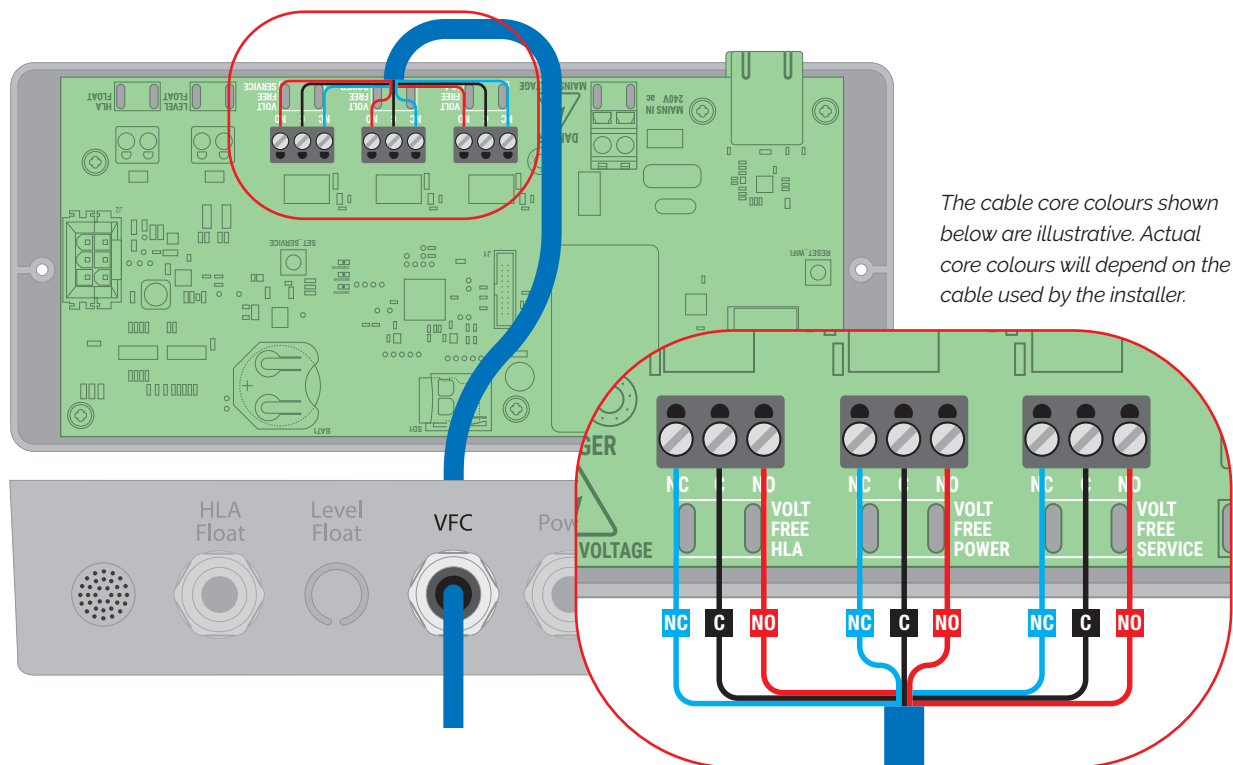


Figure 15. Connecting the volt-free contacts to the Delta HLA Plus.



DANGER

Do not apply mains voltage to these terminals.

5.9 Connect the Delta HLA Plus to the mains electrical supply



WARNING

When connecting to the mains electrical supply it is imperative that the Delta HLA Plus is connected to a dedicated power supply and not via a ring main.

The Delta HLA Plus Control Unit should be connected to the mains electrical supply by a qualified person in accordance with the Institute of Electrical Engineers Regulations with the IET wiring regulations BS7671. Please take into account all the electrical information as shown in Section 4.3.1 when installing the panel.

The Delta HLA Plus Control Unit should be connected to a clearly-labelled dedicated breaker (6 A MCB Type-B). Do not power either alarms or pumps via a ring main. If another device connected to the ring main trips the breaker your property will be at risk from flooding.

The panel comes with a 1 metre two-core mains power cable for connection to a 3 A unswitched fused spur. The unswitched fused spur should be adjacent to the Delta HLA Plus Control Unit. Only use the provided power cord.

If cable extensions are required for a pump power cable, a qualified electrical contractor must make all electrical connections. Suitable cable extension kits are available to order from Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com

Keep the connection isolated until you are ready to test the system.

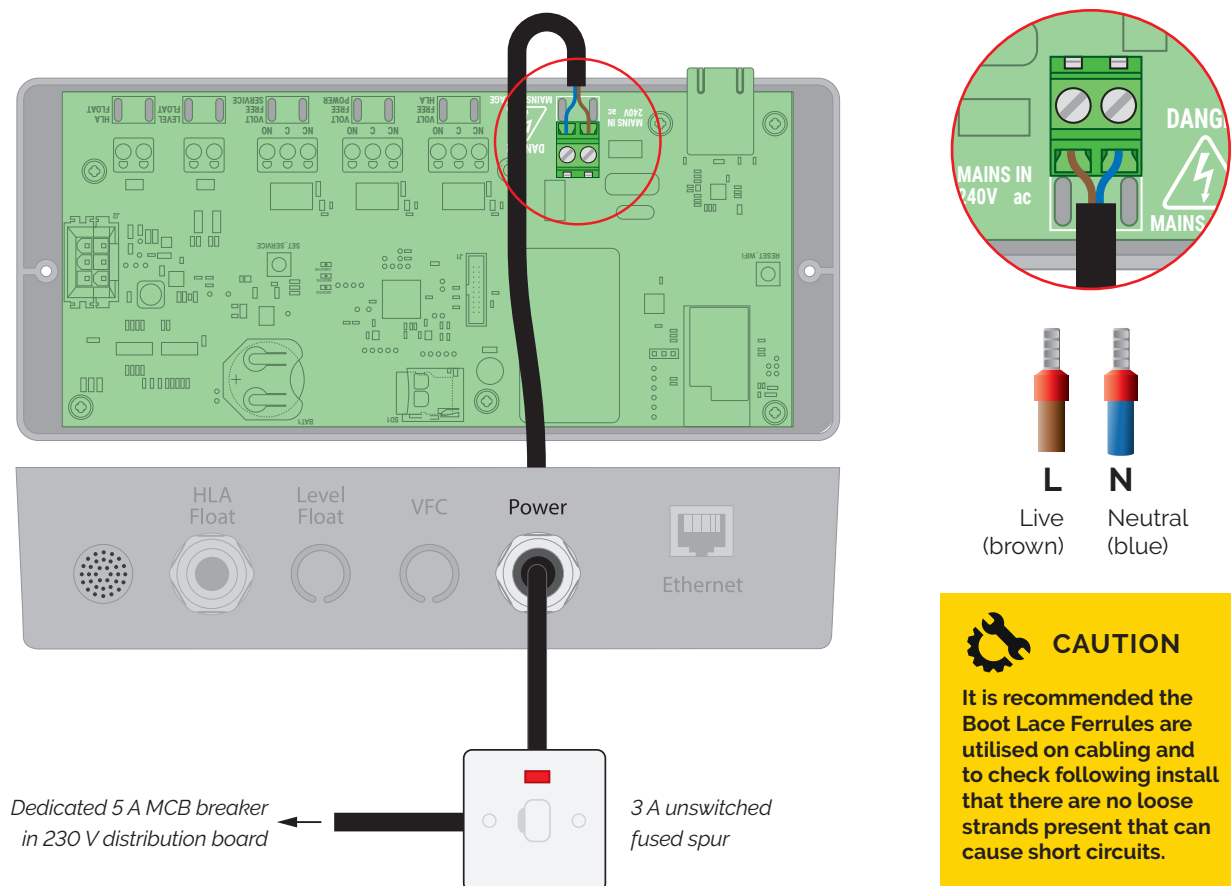
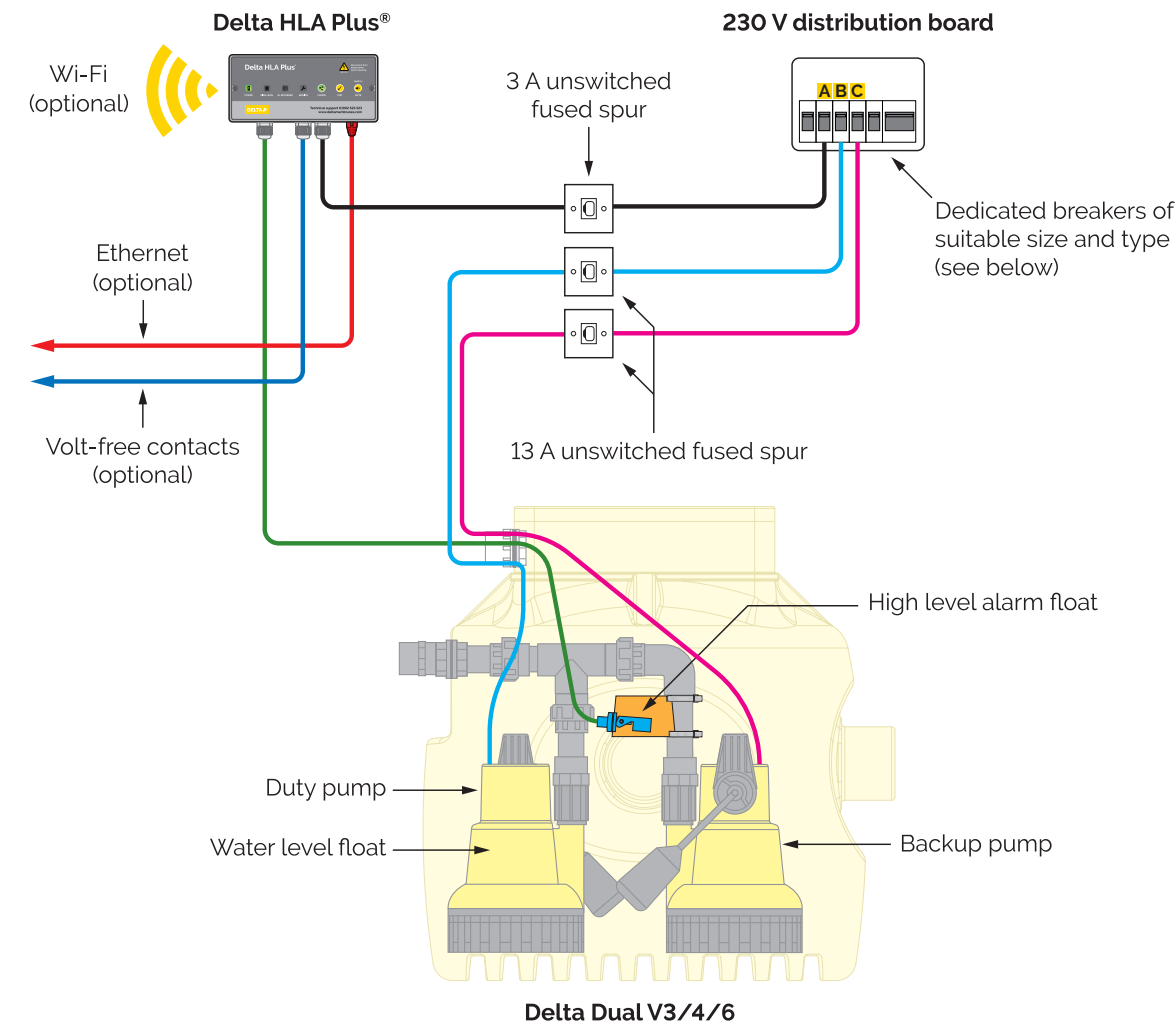


Figure 16. Connecting the Delta HLA Plus Control Unit to mains electrical supply.

5.10 Example installations

5.10.1 Delta HLA Plus with Delta Dual V3/4/6 Packaged Pumping Station



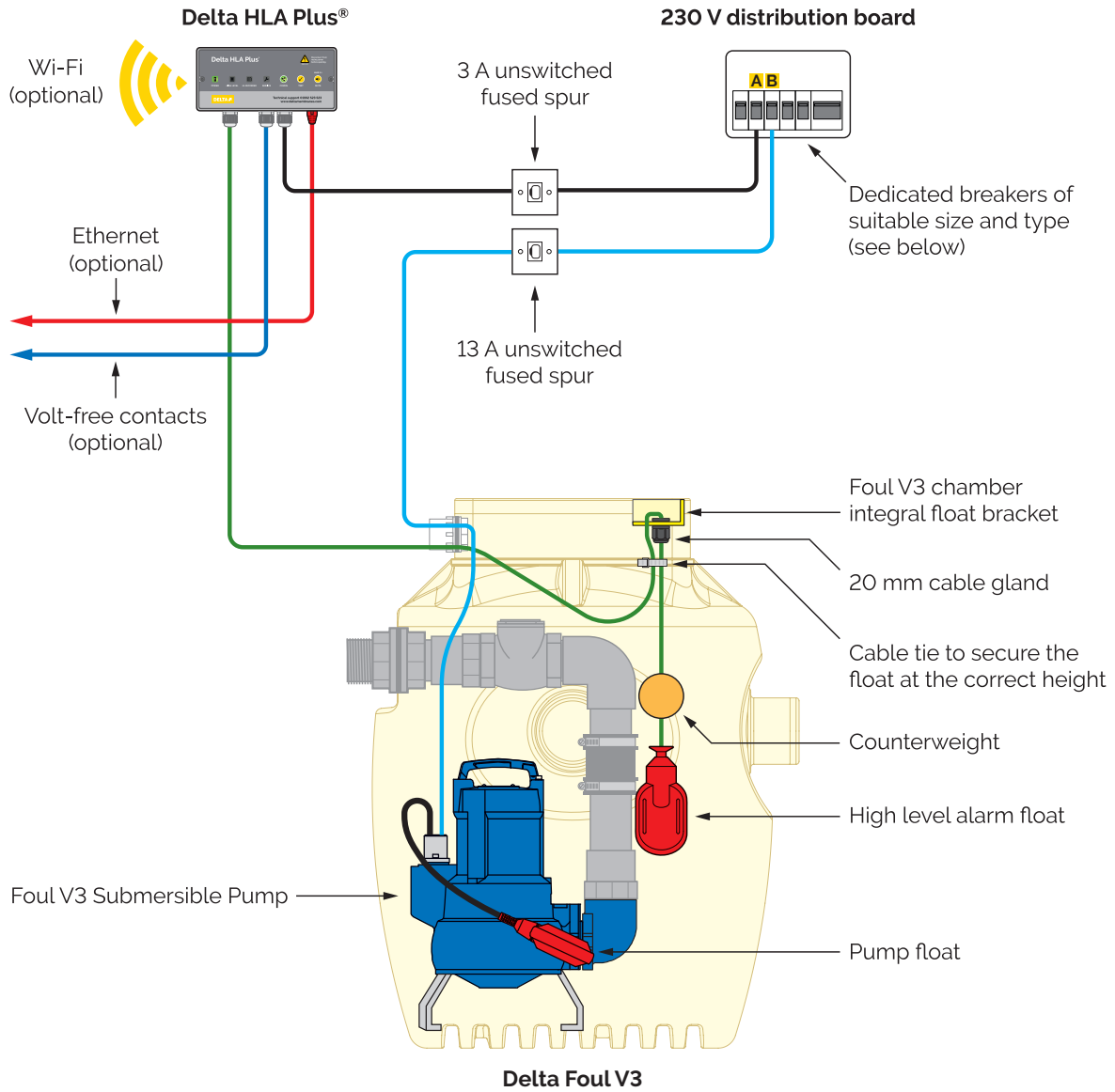
BREAKER SPECIFICATION

	Description	Device type	Rating
A	Delta HLA Plus	MCB	6 A
B	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A
C	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A

CABLE EXTENSIONS

If cable extensions are required for a pump power cable or the float cable, a qualified electrical contractor must make all electrical connections. Suitable cable extension kits are available to order from Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com

5.10.2 Delta HLA Plus with Delta Foul V3 Packaged Pumping Station



BREAKER SPECIFICATION

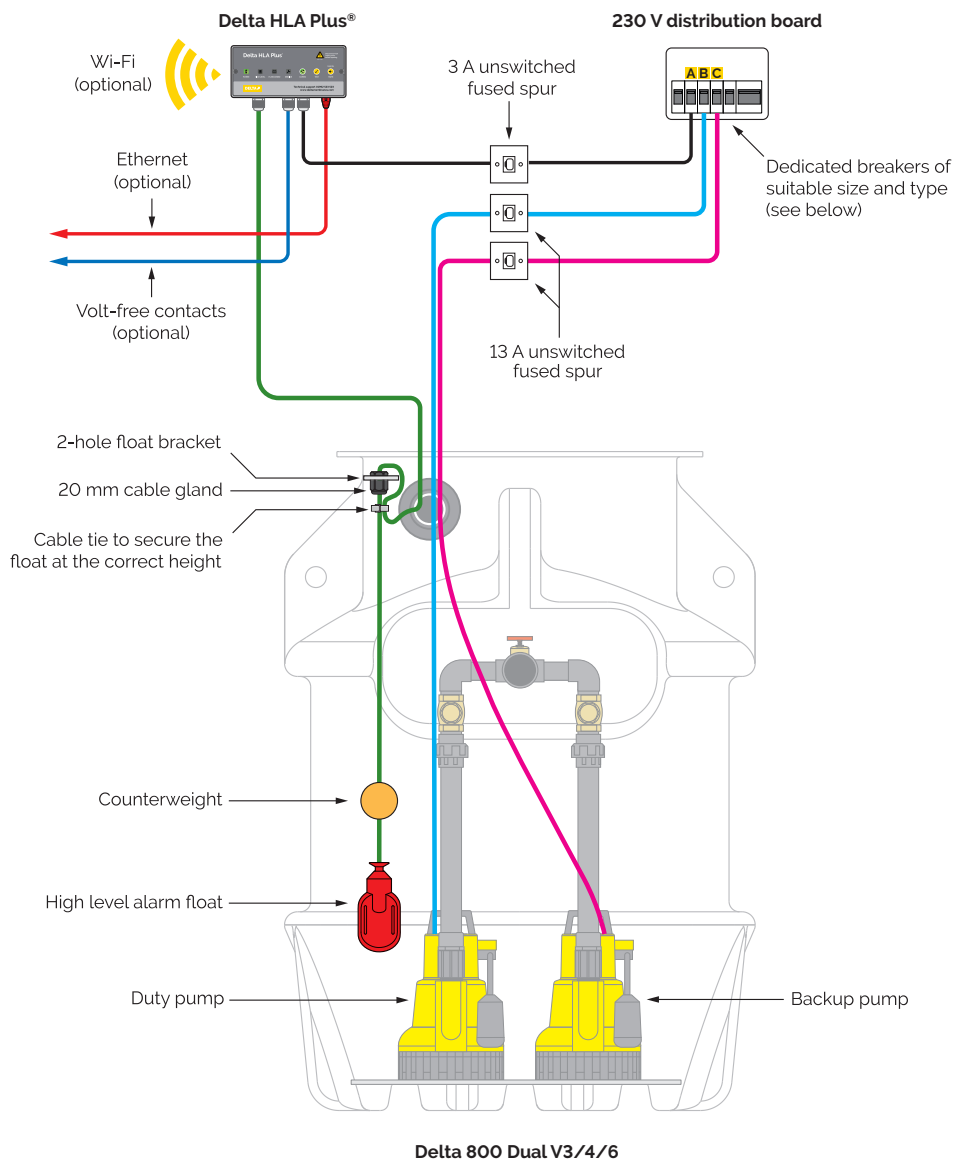
	Description	Device type	Rating
A	Delta HLA Plus	MCB	6 A
B	Delta Foul V3 pump	RCBO, Type C	10 A

CABLE EXTENSIONS

If cable extensions are required for a pump power cable or the float cable, a qualified electrical contractor must make all electrical connections. Suitable cable extension kits are available to order from Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com

5. Site preparation and installation

5.10.3 Delta HLA Plus with Delta 800 Dual V3-4-6 Packaged Pumping Station



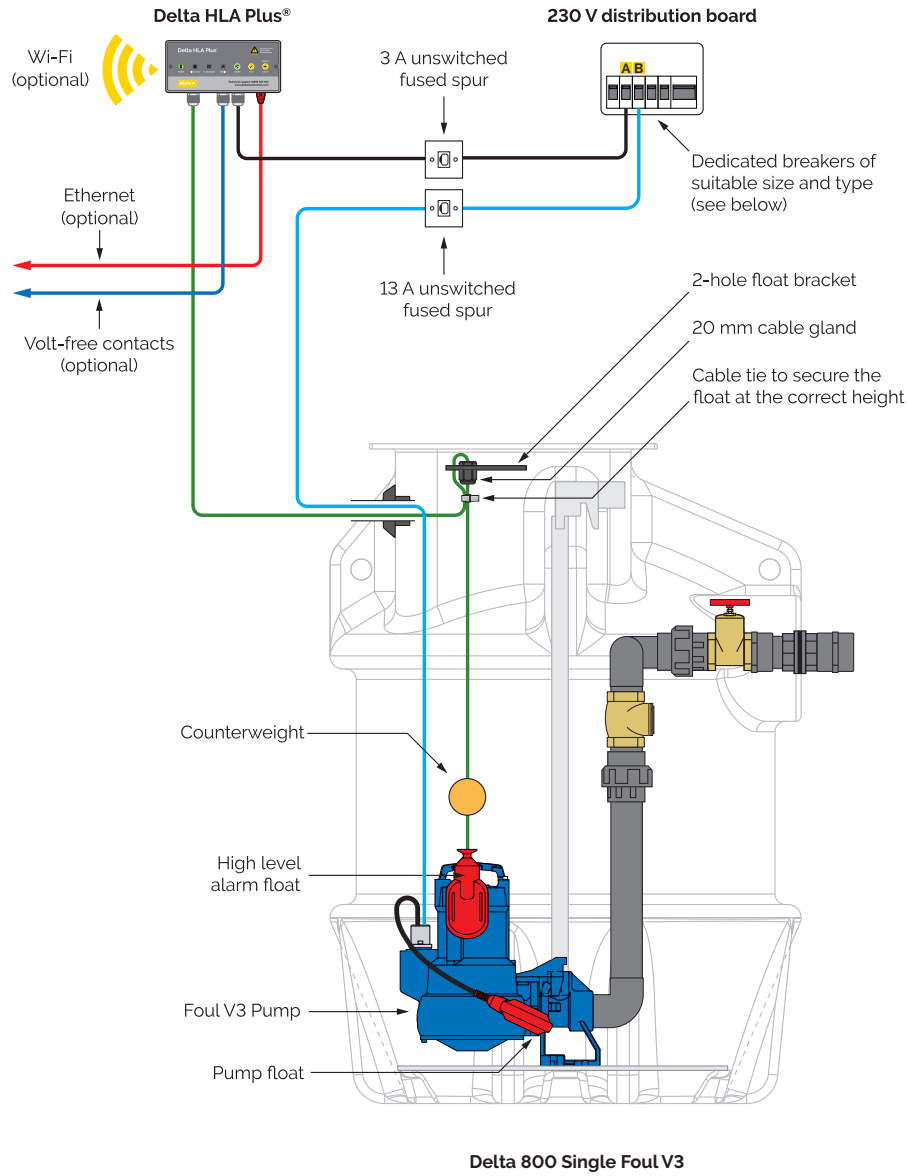
BREAKER SPECIFICATION

	Description	Device type	Rating
A	Delta HLA Plus	MCB	6 A
B	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A
C	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A

CABLE EXTENSIONS

If cable extensions are required for a pump power cable or the float cable, a qualified electrical contractor must make all electrical connections. Suitable cable extension kits are available to order from Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com

5.10.4 Delta HLA Plus with Delta 800 Single Foul V3 Packaged Pumping Station



BREAKER SPECIFICATION

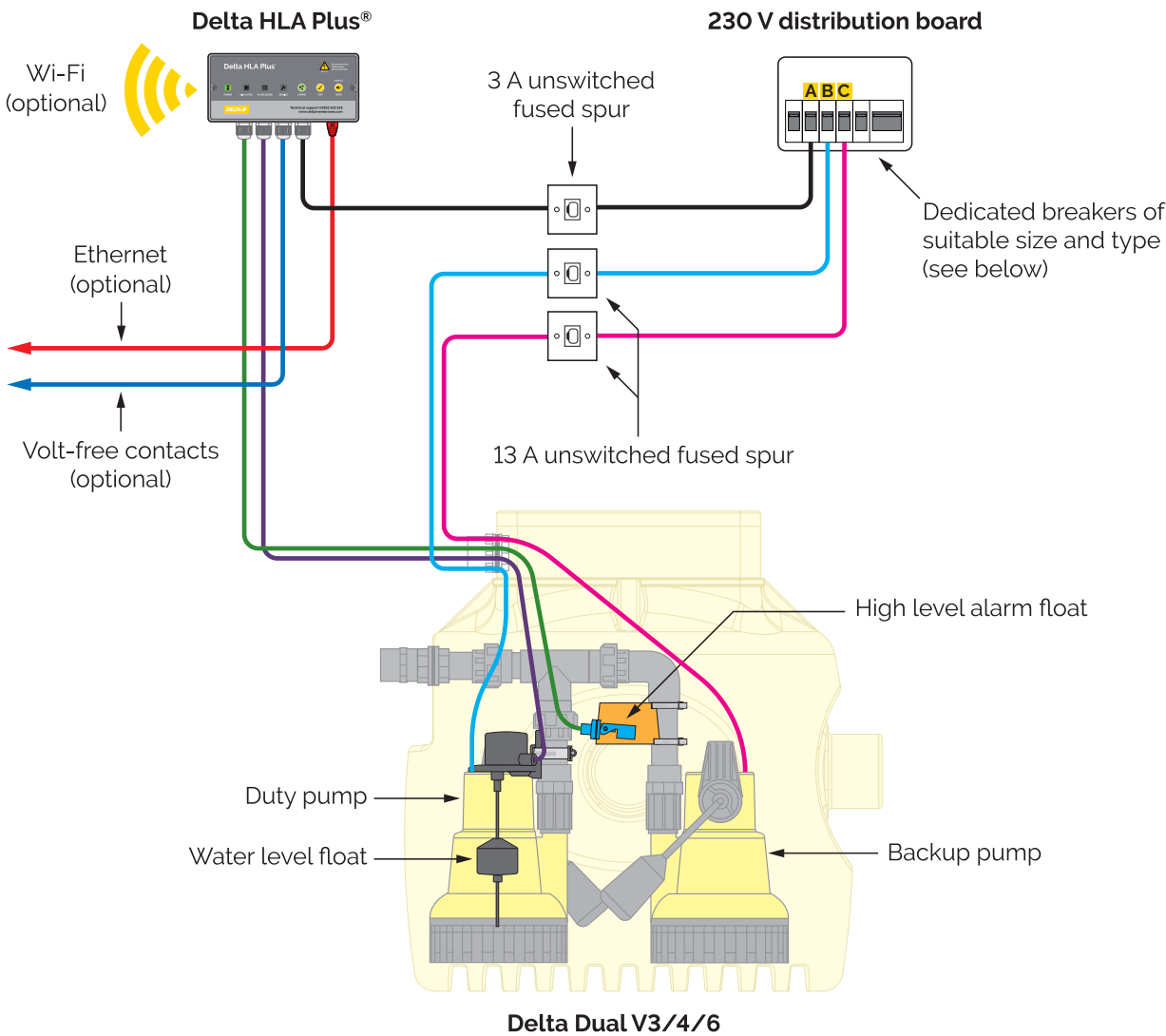
	Description	Device type	Rating
A	Delta HLA Plus	MCB	6 A
B	Delta Foul V3 pump	RCBO, Type C	10 A

CABLE EXTENSIONS

If cable extensions are required for a pump power cable or the float cable, a qualified electrical contractor must make all electrical connections. Suitable cable extension kits are available to order from Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com

5. Site preparation and installation

5.10.5 Delta HLA Plus Intelligent with Delta Dual V3-4-6 Packaged Pumping Station



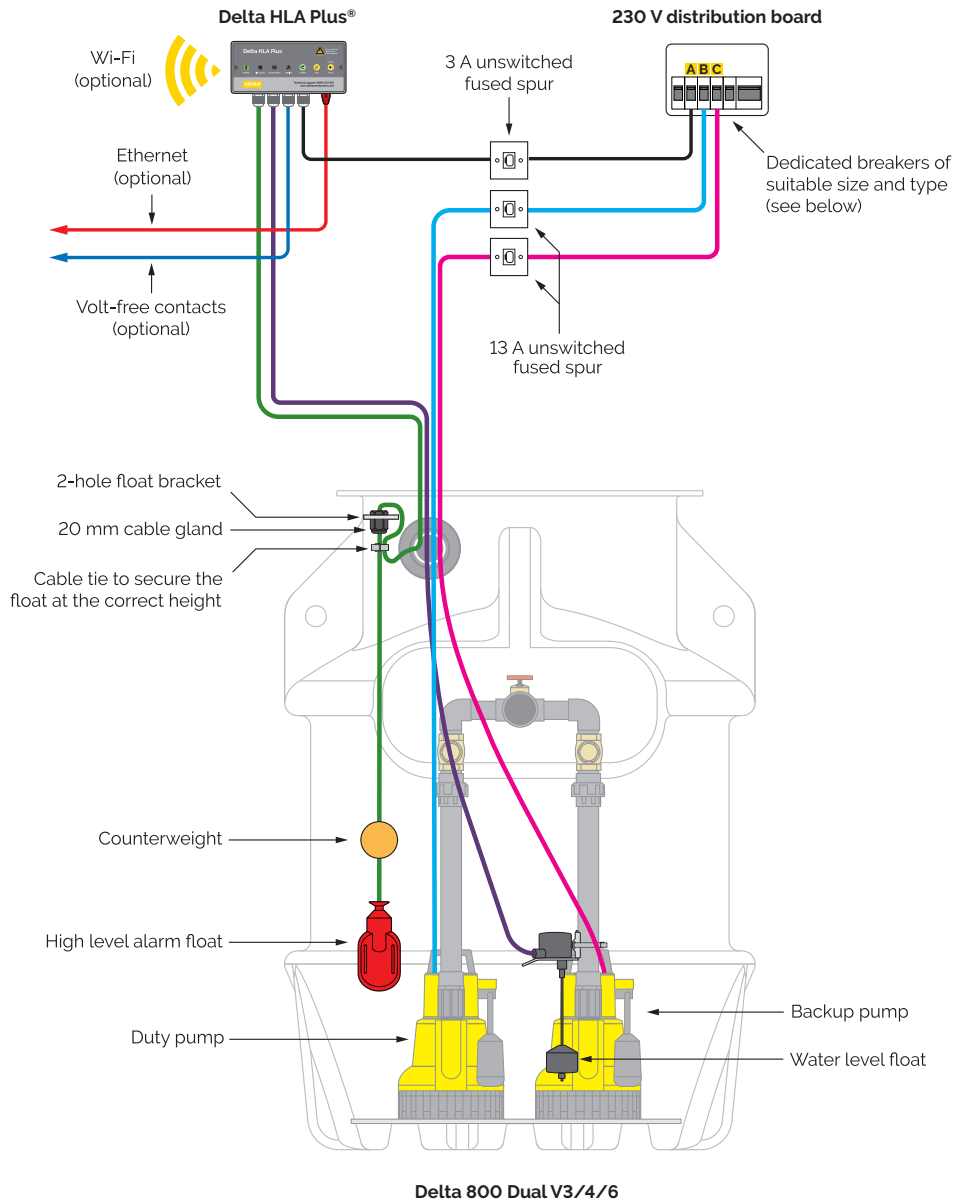
BREAKER SPECIFICATION

	Description	Device type	Rating
A	Delta HLA Plus	MCB	6 A
B	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A
C	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A

CABLE EXTENSIONS

If cable extensions are required for a pump power cable or the float cable, a qualified electrical contractor must make all electrical connections. Suitable cable extension kits are available to order from Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com

5.10.6 Delta HLA Plus Intelligent with Delta 800 Dual V3/4/6 Packaged Pumping Station



BREAKER SPECIFICATION

	Description	Device type	Rating
A	Delta HLA Plus	MCB	6 A
B	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A
C	Delta V3 pump	RCBO, Type C	6 A
	Delta V4/6 pump	RCBO, Type C	10 A

CABLE EXTENSIONS

If cable extensions are required for a pump power cable or the float cable, a qualified electrical contractor must make all electrical connections. Suitable cable extension kits are available to order from Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com

5. Site preparation and installation

5.11 Internal batteries

5.11.1 Delta HLA Plus Control Unit battery backup

The Delta HLA Plus Control Unit features a lithium-ion rechargeable battery (DMS 544) so that it can continue to monitor the pumping station during periods of mains power failure. Replace this battery every two years.

Only use replacement batteries recommended by Delta Membranes Systems Ltd. See Section 12 for more information.

The lithium-ion battery should be recycled separately at an appropriate collection point. The terminals of lithium-ion batteries should be taped up before disposal. The battery must not be allowed to get wet or damaged to prevent a risk of fire.



DANGER

Do not short circuit the battery or expose it to fire or heat. Do not allow it to get wet. If the battery becomes damaged replace it immediately.

5.11.2 Delta HLA Plus Clock Battery

The device also features a 3 V coin battery (DMS 543) which powers the internal clock. Replace this battery every two years. See Section 12 for more information.

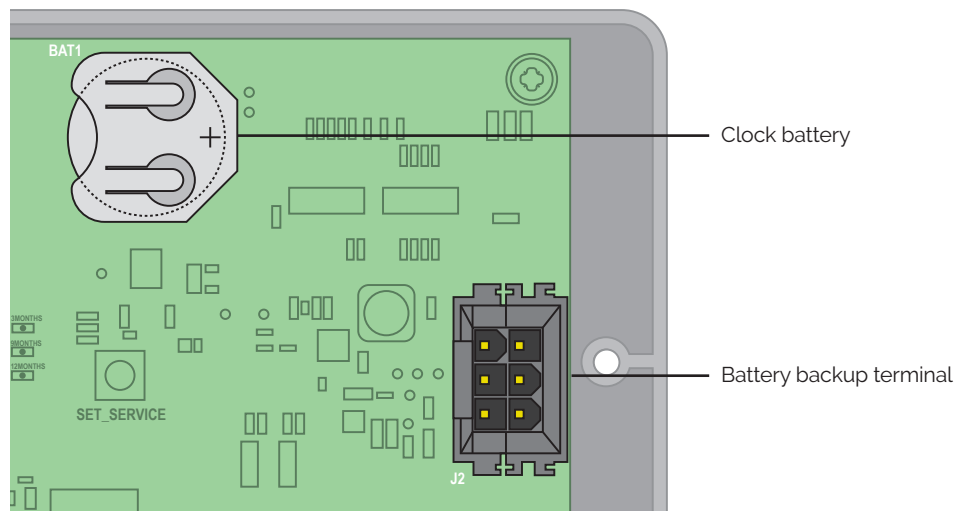


Figure 17. Internal batteries.

5.12 Switching on for the first time

5.12.1 Make physical connections

1. Remove the front fascia of the panel by unscrewing the cover and release the cable glands to obtain access to the inside of the panel.
2. Make high level alarm float connections as per Sections 5.5 (Delta Broken Finger Float) or 5.6 (Delta Pendant Float Switch).
3. Make the level float connection as per Sections 5.7 (if required).
4. Make volt-free contact connection (if required) as shown in Section 5.8.
5. Connect the internal battery to the PCB's battery backup terminal (see Figure 17).
6. Once the panel is connected it will run through its starting up sequence. The green POWER light will flash (and the unit will beep) until the mains power supply has been connected.
7. Replace panel fascia fixing screws and tighten the cable gland before switching on from the mains power.
8. Switch on mains electrical supply. The green POWER light will now be permanently lit and the system is ready to monitor.

5.12.2 Check the device is working

1. Remove power to the pumps and fill the chamber with water until the high-level float switch is activates. The Delta HLA Plus should register a High Level Alarm state. It should sound the audio alarm and the HIGH LEVEL light should flash red.
2. Press the MUTE button. The sounder should be silenced but the HIGH LEVEL visual indicator should remain lit.
3. Restore power to the pumps to empty the chamber. As the level drops the high level float switch will de-activate and the HIGH LEVEL light will switch off. The HL RECORDED visual indicator will flash amber to indicate a high level state has occurred but the system is now at a lower level.
4. Reset the High-Level Alarm Recorded state by following the procedure in Section 6.2.3.
5. Press the TEST button to simulate a high level alarm state. See Section 6.1.1.

5.12.3 Set up the network connection

Please refer to Section 7.

5.12.4 Register the device with the Delta Pump App online portal

Please refer to Section 7.7.

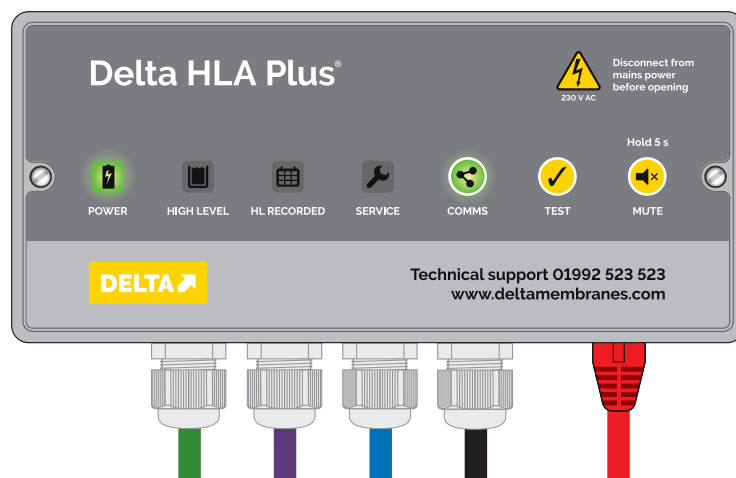


Figure 18. The device in normal operation with an active Internet connection and no alerts active.

5. Site preparation and installation

5.12.5 Set the Service Due Reminder interval

The Service Due Reminder interval is factory-set to 12 months. You can change the interval to 3 months or 6 months.

Changing the service interval via the Delta Pumps App

If the device is connected to the Internet and registered with the Delta Pumps App, you can change the Service Intervals online in Device Details.

Changing the service interval via the PCB board (Delta Registered Service Providers only)

If the device is operating in standalone mode you can change the Service Intervals directly on the PCB Board.

- Isolate the device from mains power and take steps to prevent the mains power from being inadvertently switched on. The device will operate under battery power.
- Carefully open the device enclosure
- Locate the yellow button on the PCB board labelled Set_Service. There are three LED's alongside. Note which LED is lit. This indicates the current setting.
- Press the yellow Set_Service button until the LED for the desired Service Interval is lit.
- Carefully close the device and fasten the facia to the backbox.
- Restore mains power.



DANGER

Before carrying out any maintenance work the system MUST be completely disconnected from the mains power supply, and measures should be taken to prevent the system from being inadvertently switched back on.

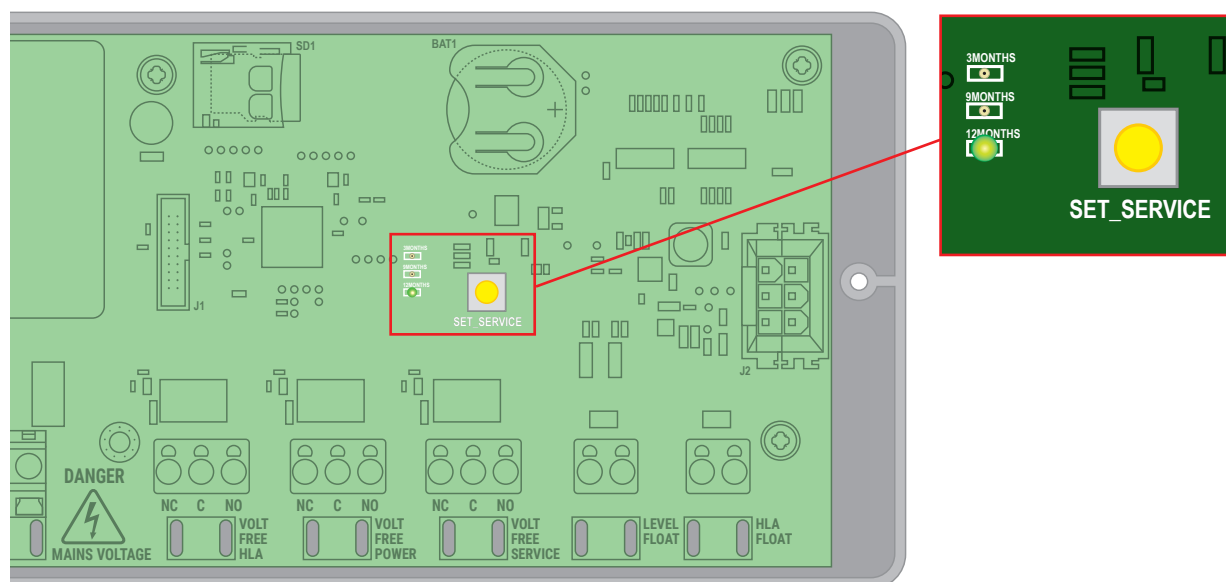


Figure 19. Location of the SET_SERVICE button and LED indicators on the PCB board

6. Operation

6.1 Buttons

6.1.1 Test button

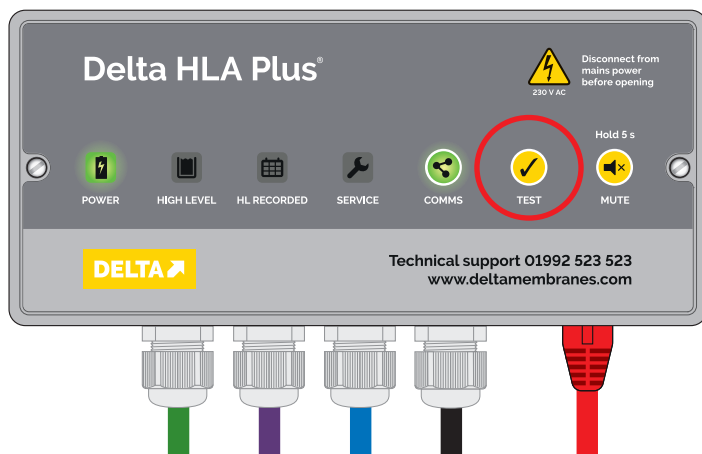


Figure 20. The test button.

- A short press (less than 2 seconds) of the TEST button will simulate a high level alarm.
- The audio sounder will beep three times and the HIGH LEVEL LED will flash once.
- This will override the high level alarm mute function if it has previously been activated.
- When the TEST button is released, the HL RECORDED LED will not start flashing (unlike a genuine high level alarm state).

Testing the Volt Free Contacts

- Pressing and holding the TEST button for 10 seconds will activate the Volt Free Contact relays (you may hear a quiet click).
- If your device is connected to a building management system, that system will receive an alarm signal from the device.
- The audio sounder will beep three times and the HIGH LEVEL LED will flash once.
- This will override the high level alarm mute function if it has previously been activated.
- When the TEST button is released, the HL RECORDED LED will not start flashing (unlike a genuine high level alarm state).
- Press and hold the Test button for 5 seconds to reset the relays.

6.1.2 Mute button

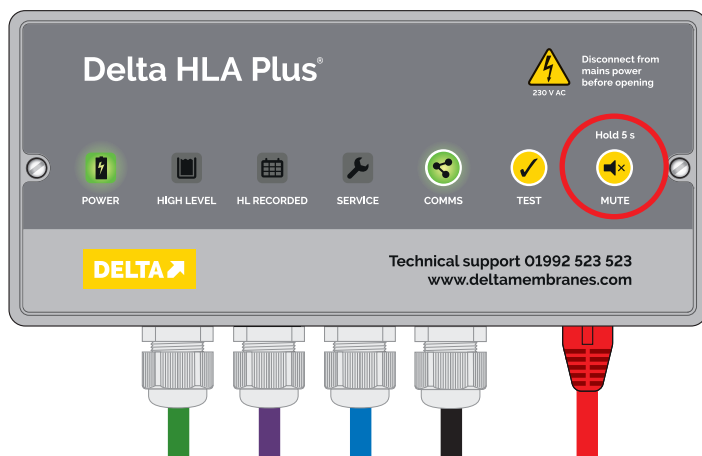


Figure 21. The mute button.

The audible alarm will be activated if:

- the test button is pressed,
- a high level state is detected,
- mains power fails,
- comms fails,
- a service is due.

To silence the audible alarm for 7 days, hold the MUTE button for 5 seconds – the sounder will beep confirm.

Should a new fault condition occur within the seven days the sounder will reactivate.

Each time the MUTE button is pressed the date and time will be logged.

Please note the POWER, HIGH LEVEL, HL RECORDED, COMMS and SERVICE LED alerts will continue until the system returns to its normal condition or the system is reset.

To unmute the system press and hold the MUTE button for 5 seconds,

6.1.3 Comms button

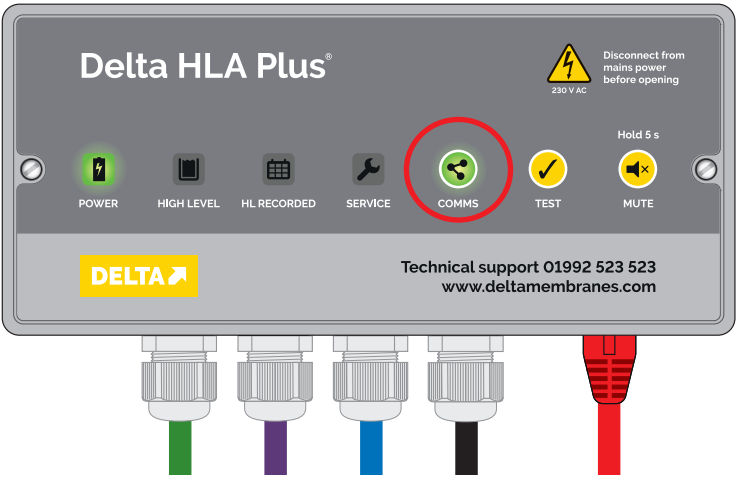


Figure 22a. The comms button.

Please refer to Section 4 for setting up the Ethernet / Wi-Fi connections.

To factory-reset the communications settings on the on the device hold the COMMS button for 10 seconds, then follow Section 7 to setup the Wi-Fi/Ethernet connection again.

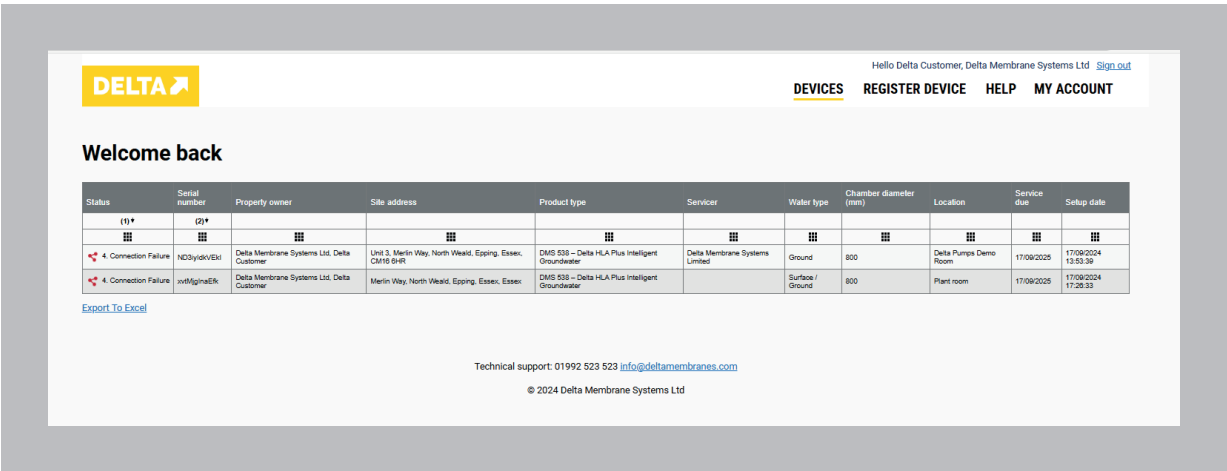


Figure 22b. Example of a dashboard showing a connection failure.

6.2 LED colours codes and sounds

6.2.1 Power LED

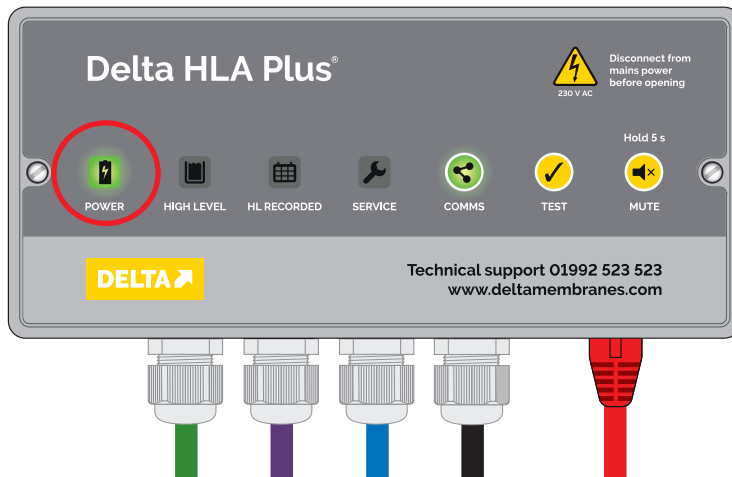


Figure 23a. The power indicator.

GREEN Mains power present

AMBER Loss of mains power running on backup battery. The lamp flashes amber every 2 seconds. The system will beep periodically.

RED Mains power absent and battery under 10%. The lamp flashes red every 2 seconds. The system will beep periodically. This will also occur if there is a battery fault.

If mains power is restored the beeps will stop automatically.

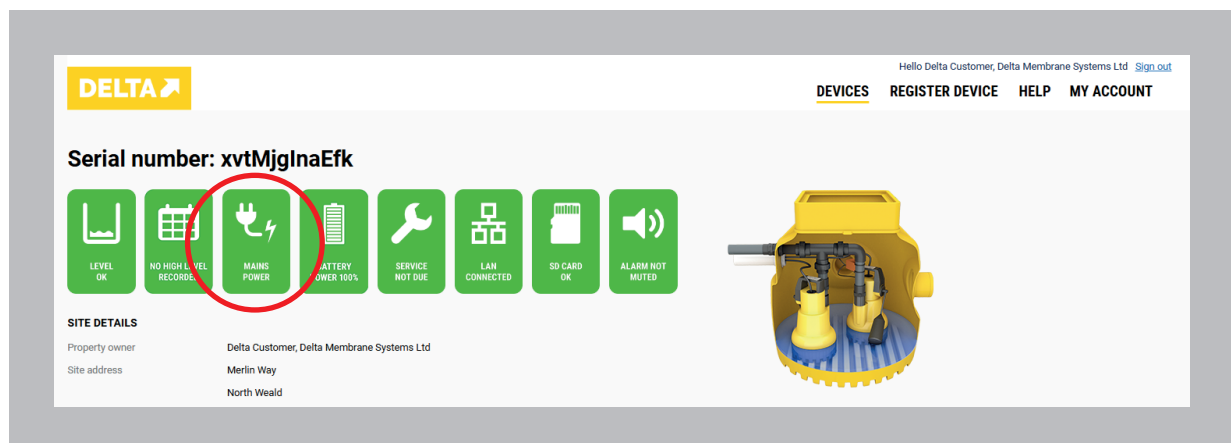


Figure 23b. An example of the Delta Pumps App dashboard showing mains power present.

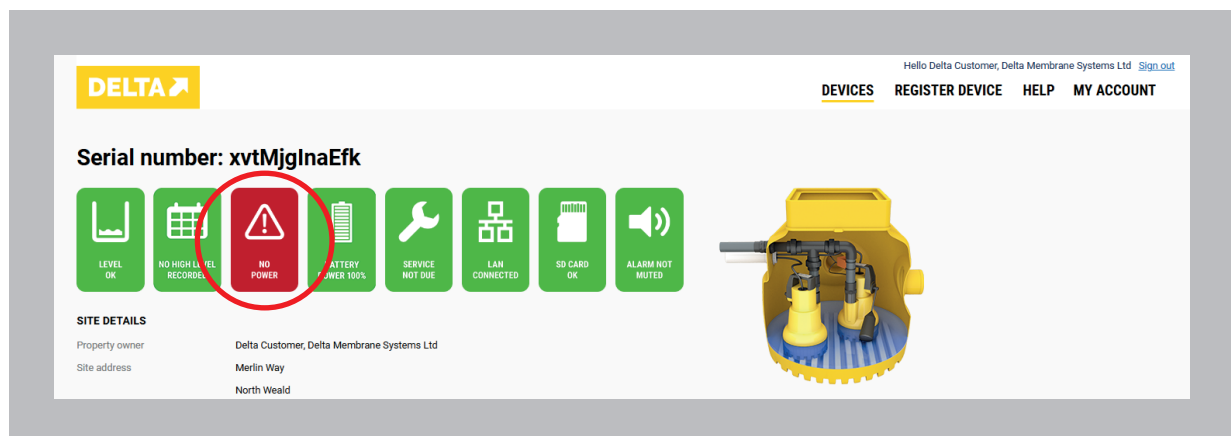


Figure 23c. An example of the Delta Pumps App dashboard showing a mains power failure.

6. Operation

Flat battery

If mains power is not restored, the battery will continue to discharge. If the battery charge falls below a critical threshold the device shuts down.

Once mains power is restored the Delta HLA Plus will automatically reboot. The time to next Service value will be retrieved.

Once the connection to the Delta Pumps App is restored, all locally-stored data will be synchronised.

Battery fault

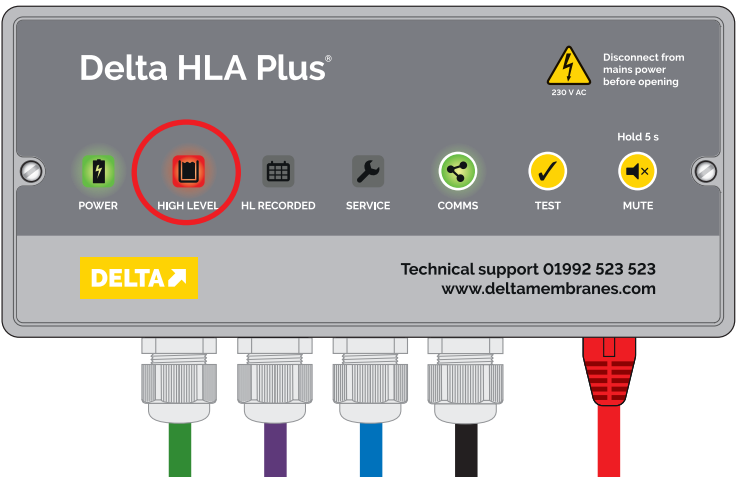
If there is a battery fault or the battery is disconnected the Power LED will flash constantly and the device will beep periodically.

Disconnect the device from mains power then open the panel and check the battery is connected to the PCB board (see Section 5.11.1). If the battery is connected, replace the battery (see Section 11).

Once mains power is restored the Delta HLA Plus will automatically reboot. The time to next Service value will be retrieved.

Once the connection to the Delta Pumps App is restored, all locally-stored data will be synchronised.

6.2.2 High level (red)



- When a high level state is detected in the chamber the HIGH LEVEL LED will light up red and the panel will beep.
- When the water level in the chamber falls below the deactivation level of the high level alarm float, the beeping will stop automatically and the LED will switch off.
- The HL RECORDED LED will then flash yellow to warn that a high level state has occurred.

Figure 24a. The high level alarm indicator.

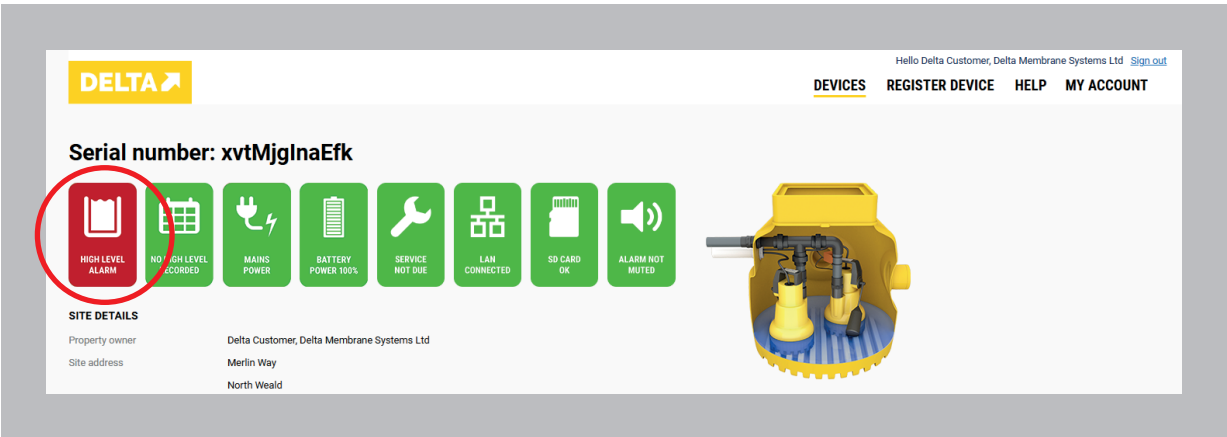
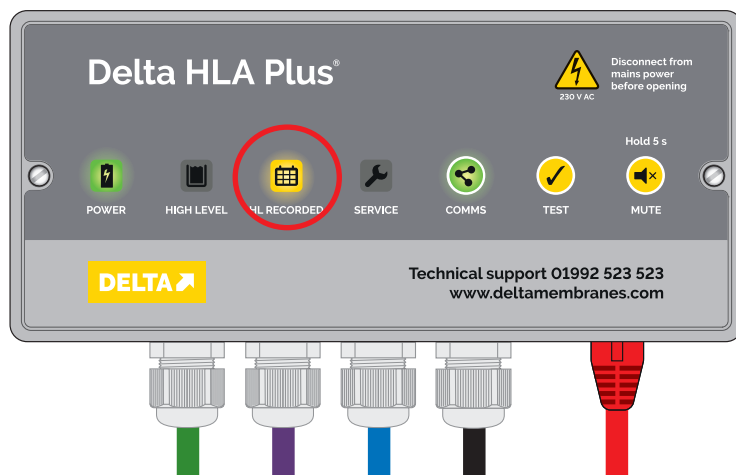


Figure 24b. An example of the Delta Pumps App dashboard showing a high level alarm.

6.2.3 High level (HL) recorded (yellow)



- The panel displays HL RECORDED after a high level condition has returned to normal for the first time.
- The HL RECORDED LED will flash every until reset.
- To reset the system hold the test button and mute button together for 10 seconds. After 10 seconds the sounder will beep 3 times and the HL RECORDED LED will stay lit, this acknowledges the command has been successfully completed.

Figure 25a. The High Level Alarm Recorded indicator.

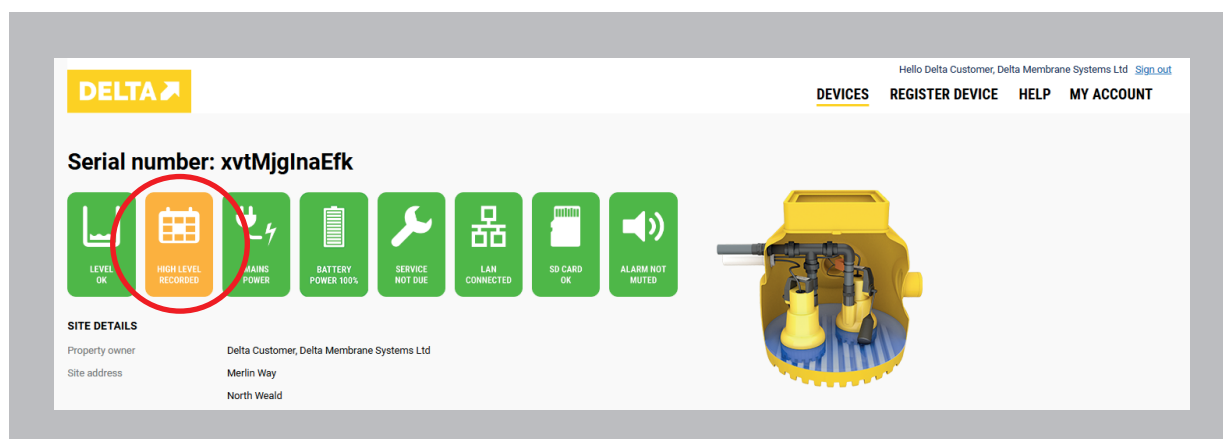


Figure 25b. An example of the Delta Pumps App dashboard indicating a high level condition has been recorded.

**WARNING – High Level Alarm Recorded**

Your pumping station may be at risk. High water levels can be a sign of a problem. Please check your monitoring system. If necessary, please contact your pump servicing provider for assistance.

6.2.4 Service due (red)

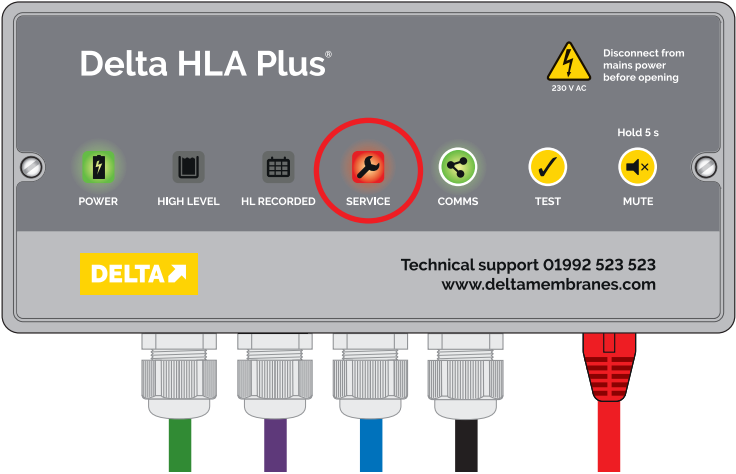
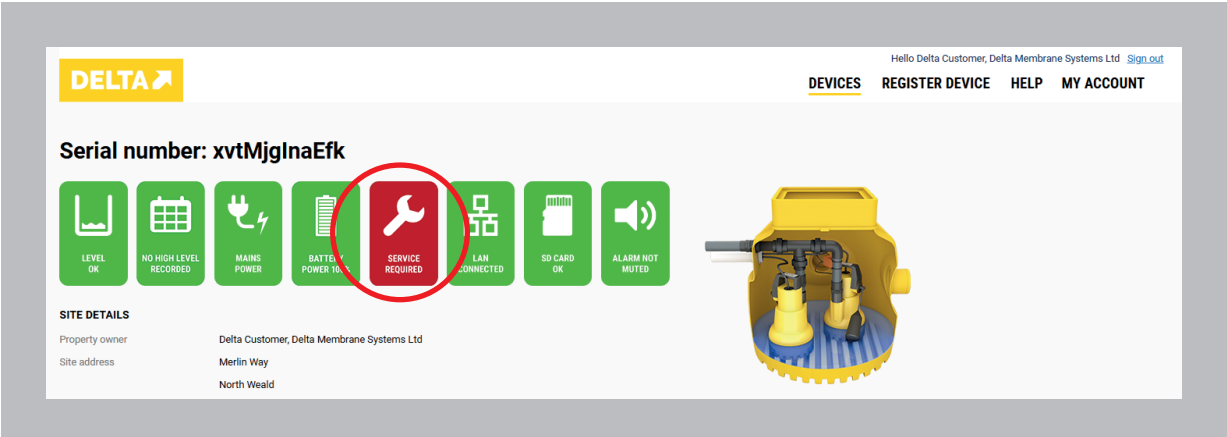


Figure 26. Service due indicator.

- If a service is due the system will light up solid red and beep every 2 seconds.
- To silence the audible alarm for seven days, press and hold the Mute button for five seconds. See Section 6.1.2.
- Only a Delta Registered Service Provider can change the Service Reminder Due interval. This is changed in the Delta Pumps App by editing the device details. service intervals can be set to 3, 6 or 12 months.



WARNING

Do not ignore. Your pumping station may be at risk. If your service is due, please contact your pump servicing provider.

6.2.5 Communications status



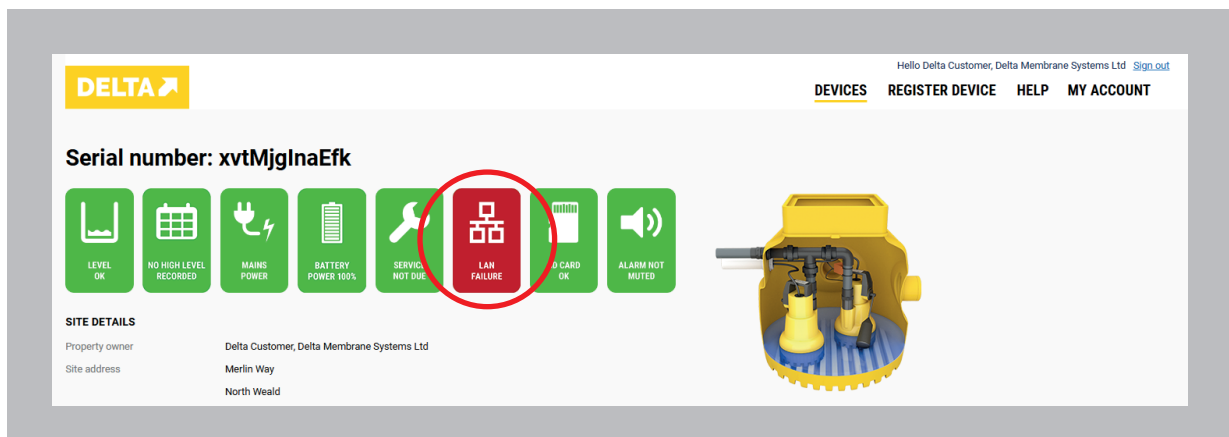
Figure 27. Comms failure.

If the Delta HLA Plus Control Unit is connected to Ethernet or Wi-Fi the COMMS button will glow green.

If it is unable to connect to the Internet, the Comms button will glow red. The date and time of the comms failure is logged.

Once the connection has been restored, the Comms button reverts to glowing green. The Delta HLA Plus Control Unit will synchronise with the Delta Pumps App.

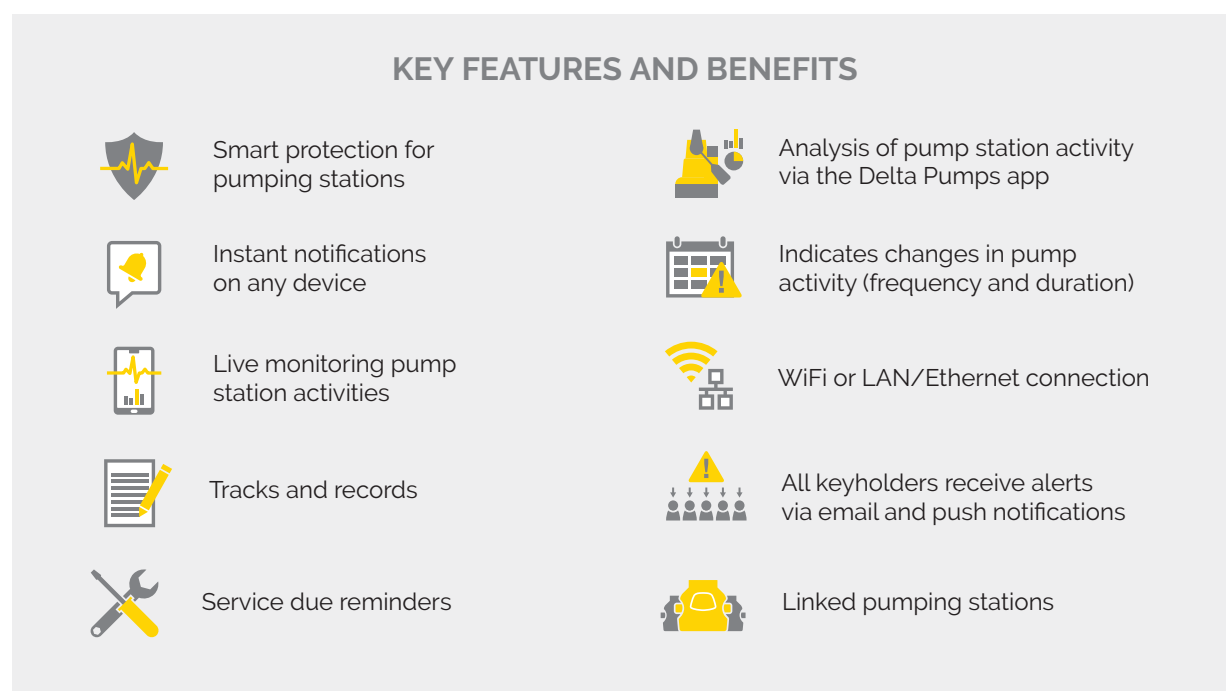
To set up or change your connection please refer to Section 7.



7. How to connect your Delta HLA Plus

7.1 The benefits of connecting to the Delta Pumps App

The Delta HLA Plus can work as a standalone device but you must set up an Internet connection to benefit from its advanced features list and the subscription-free Delta Pumps App.



You can connect your Delta HLA Plus to the Delta Pumps App in four simple steps.

1. Connect to the Delta HLA Plus's own Wi-Fi access point using a smartphone (or other Wi-Fi enabled device such as a laptop or tablet).
2. Connect your Delta HLA Plus to the Internet via either a wired Ethernet connection or Wi-Fi.
3. Create an account on the Delta Pumps App to allow you to monitor your system's status and much more.
4. Register your Delta HLA Plus on the Delta Pumps App.

7.2 Setting up the Delta HLA Plus's Internet connection

The Delta HLA Plus has its own Wi-Fi access point which is only active during setup.

1. To activate this mode press and hold the COMMS button for 10 seconds. When the access point is active the COMMS button will flash green continuously **1**.
2. Whilst adjacent to the Delta HLA Plus Control unit scan for Wi-Fi access points on your smartphone (or other Wi-Fi enabled device such as a laptop or tablet).
3. Connect to the Wi-Fi access point called **Delta HLA Plus** **2**.
4. Open a browser window and enter **192.168.4.1** in the address bar **3**.
5. If a no Internet connection has been previously set up you will see the screen opposite.
6. You can choose to connect the device to the Internet via Wi-Fi (Section 7.2) or Ethernet (Section 7.3).
7. You can also choose to operate the device in standalone mode without an Internet connection (Section 7.4)

Go to 7.3 for Wi-Fi connections or 4.4 for Ethernet connections >>



7. Setting up connections

7.3 Connecting your Delta HLA Plus to the Internet via Wi-Fi

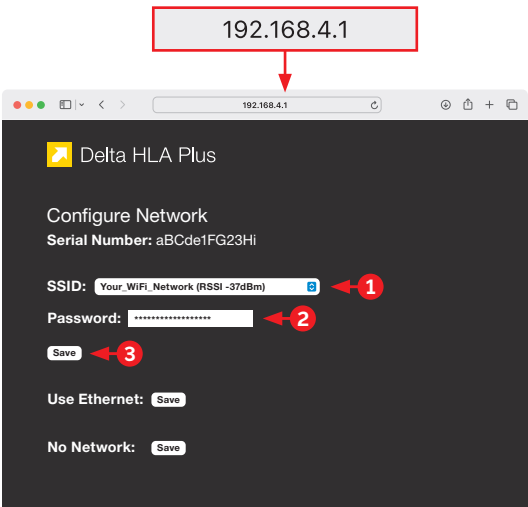
Only connect via Wi-Fi if the signal strength at the device's location is consistently strong.

- 1. Choose a Wi-Fi access point using the drop-down SSID menu 1. The signal strength (RSSI) is shown next to the name. For a good connection this should be between 0 and -60 dBm. The example below shows an RSSI of -37 dBm which is excellent.
- 2. Enter the password for the chosen Wi-Fi network 2 and press Save 3.
- 3. The Delta HLA Plus will reboot and connect automatically. The COMMS button on the front of the panel will glow solid green indicating an Internet connection is active.
- 4. Open a browser window and enter **deltahlaplus.local** in the address bar.

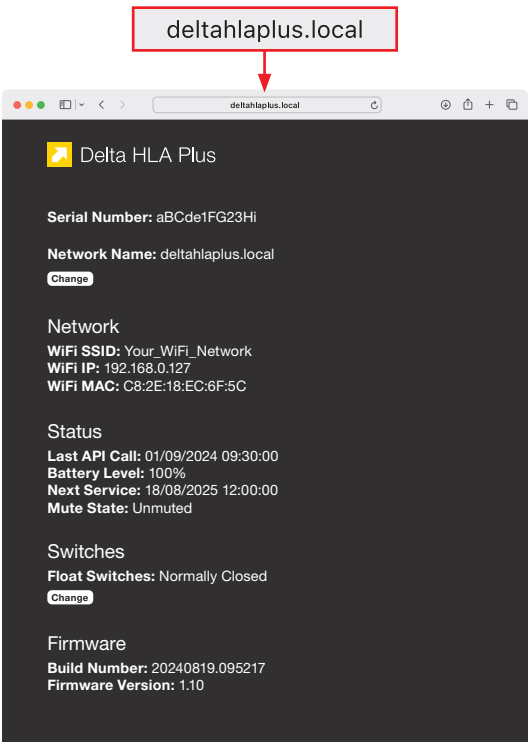
The Delta HLA Plus homepage now shows the device's status including Wi-Fi connection details and device parameters including battery level and the due date of the next service.

Go to Section 7.5 to create an account on Delta Pumps App >>

A. Connect to the device's own Wi-Fi access point (Delta HLA Plus) to configure its connection to the Internet via your Wi-Fi enabled router



B. After rebooting the device is connected to the Internet via Wi-Fi and accessible on your local network



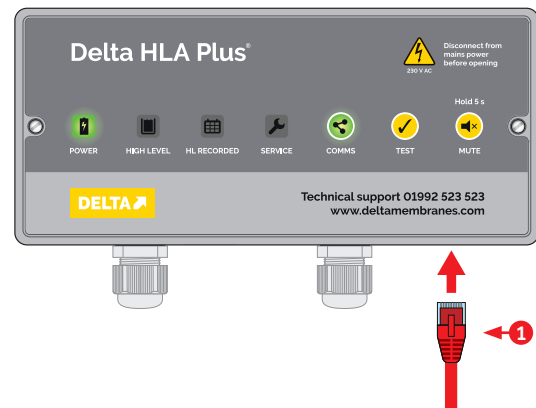
7.4 Connecting your Delta HLA Plus to the Internet via Ethernet

A wired connection via Ethernet cable is the preferred method especially where the Wi-Fi signal at the device's location is weak.

1. The Delta HLA Plus Control Unit features an Ethernet port for wired LAN connections. Connect the device to your router or multi-port network switch using a Cat5 or Cat6 Ethernet cable **1**.
2. Press the Save button next to Use Ethernet **2**.
3. The Delta HLA Plus will reboot. Your router should automatically connect the device to the internet using DHCP (Dynamic Host Configuration Protocol). The COMMS button will glow solid green indicating an Internet connection is active.
4. Open a browser window and enter **deltahlaplus.local** in the address bar.

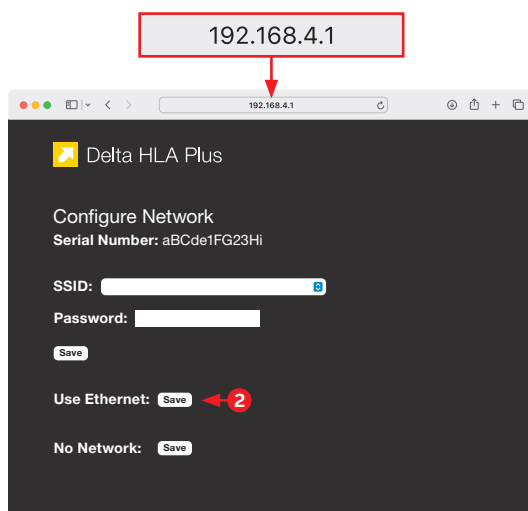
The Delta HLA Plus homepage now shows the device's status including Ethernet connection details and device parameters including battery level and the due date of the next service.

Go to Section 7.7 to create an account on Delta Pumps App >>

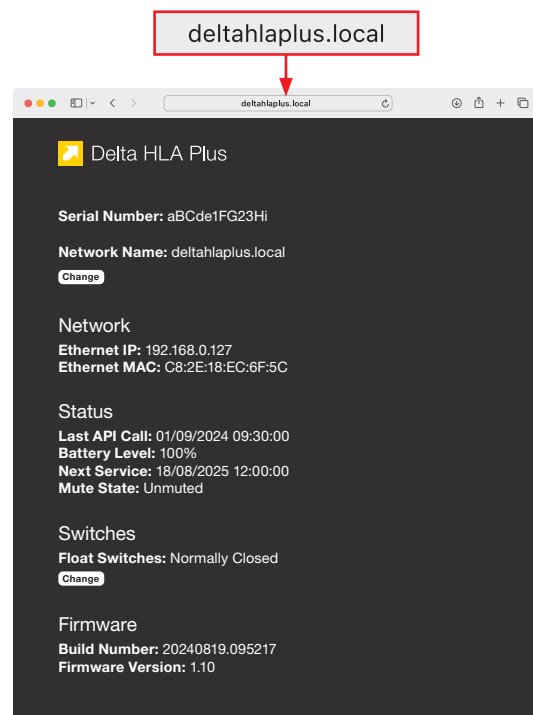


A. Connect the device to your router or network switch

B. Connect to the device's own Wi-Fi access point (**Delta HLA Plus**) and choose Ethernet



C. After rebooting the device is connected to the Internet via Ethernet and accessible on your local network



7. Setting up connections

7.5 Operate the device in standalone mode

If you do not want to connect your Delta HLA Plus to the Delta Pumps App the device can be configured to operate in standalone mode.

The device will provide audio and visual alerts:

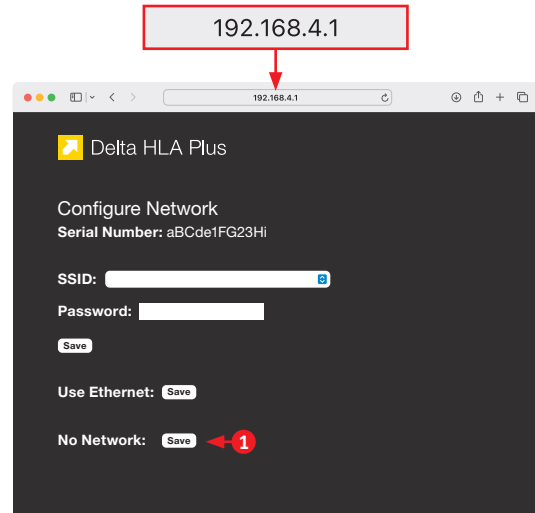
- when there is a High Level condition within the chamber
- if a High Level condition has been recorded
- if a service is due

Connect to the device using its own Wi-Fi access point (see Section 4.2) then choose **No Network** 1.

The device will reboot automatically and the COMMS button will glow red to indicate there is no Internet connection.

Only use this mode if the Delta HLA Plus is located where it can be seen and heard so you can be alerted of any fault conditions.

Any volt-free contact connections will function normally.



7.6 Changing the Delta HLA Plus communications settings

To change the method the device uses to communicate with the Internet, for example switch from Ethernet to Wi-Fi or change the Wi-Fi access point it uses, you must reset the device's communications settings.

Press and hold the COMMS button for 10 seconds. The COMMS button will flash green to indicate the **Delta HLA Plus** Wi-Fi access point is active. You can now choose to set up a Wi-Fi or Ethernet connection or operate the device in standalone mode.

7.7 Create your account on the Delta Pumps App

If you already have a Delta Pumps App account go to Step 7.8

1. Visit <https://pumps.deltapumpsapp.com/>
2. Select **Create an account**.
3. Add the following
 - email address,
 - set up a password
 - Your name and phone number

and confirm if the Account Type

- **Customer** – you have purchased the Delta HLA Plus device from Delta Membranes and have installed it as part of a Type-C Waterproofing System or with a standalone pumping station.
- **Servicing Partner** – you purchased the Delta HLA Plus device from Delta Membranes and/or you have been employed to service the pumping station.
- **Property Owner** – a Delta HLA Plus device is installed in your property or a property that you manage.

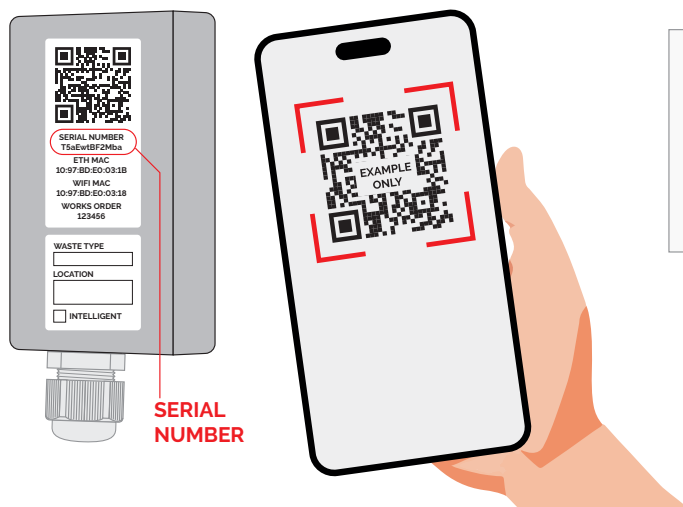
4. Click **Create my account**

Go to 7.8 Register your device >>

The screenshot shows the 'Create your account' page of the Delta Pumps App. It includes a Delta logo at the top left. The form has the following fields: Email address*, Password, Confirm password, Title*, First name*, Surname*, Phone*, Address lookup (with a search bar), Company, Address line 1*, Address line 2, Town*, County, Postcode*, and Country*. There are also links for 'Sign in' and 'Reset My Password'.

7.8 Register your device

1. Sign in to the Delta Pumps App.
2. Either scan the QR code on the side of the Delta HLA Plus Control Unit, or go to **Add Devices** and enter the device's Serial Number and press Continue.



The screenshot shows the 'Register Device' page of the Delta Pumps App. It includes a Delta logo at the top left. The form has a single field for 'Enter Serial number' and a 'Continue' button. At the bottom, there is technical support information and a copyright notice for Delta Membrane Systems Ltd.

8. Using the Delta Pumps App

8.1 Delta Customer dashboard

Once you log into your dashboard you will be able to see all the devices registered under your company.

DEVICESREGISTER DEVICEHELPMY ACCOUNT

Welcome back

Status	Serial number	Property owner	Site address	Product type	Service	Water type	Chamber diameter (mm)	Location	Service due	Setup date
4. Connection Failure	ND3yldkVEkl	Delta Membrane Systems Ltd. Delta Customer	Merlin Way, North Weald, Epping, Essex, Essex	DMS 538 – Delta HLA Plus Intelligent Groundwater	Delta Membrane Systems Limited	Surface / Ground	800	Plant room	17/09/2025	17/09/2024 17:28:33
9. OK	ND3yldkVEkl	Delta Membrane Systems Ltd. Delta Customer	Unit 3, Merlin Way, North Weald, Epping, Essex, CM16 6HR	DMS 538 – Delta HLA Plus Intelligent Groundwater	Delta Membrane Systems Limited	Ground	800	Delta Pumps Demo Room	17/09/2025	17/09/2024 13:53:59

Export To Excel

To view a device in more detail, click on the device. You can **Edit Details** or **Add Keyholders** from this screen

DEVICESREGISTER DEVICEHELPMY ACCOUNT

Serial number: ND3yldkVEkl

LEVEL OK

NO HIGH LEVEL RECORDED

MAINS POWER

BATTERY POWER 100%

SERVICE NOT DUE

LAN CONNECTED

SD CARD OK

ALARM NOT MUTED

SITE DETAILS

Property owner
Delta Customer, Delta Membrane Systems Ltd
Site address
Unit 3, Merlin Way
North Weald
Epping
County
Essex
Postcode
CM16 6HR
Phone
-
Email
-

PUMPING STATION

Product type
DMS 538 – Delta HLA Plus Intelligent Groundwater
Water type
Ground
Chamber diameter (mm)
800
Pump single/twin
Twin
Pump 1 serial number
V30001
Pump 2 serial number
V30002
Battery backup unit
No
Pump station type
V3
Location
Delta Pumps Demo Room

ALARM SYSTEM

Serial number
ND3yldkVEkl
Delta customer
Kevin Dodds
Delta servicing partner
Not set
Service interval
12
Last service
-
Service due
17/09/2025

KEYHOLDER 1

Keyholder name
General Manager
Email address
Manager@deltamembranes.com
Mobile phone
01992523523

KEYHOLDER 2

Keyholder name
-
Email address
-
Mobile phone
-

KEYHOLDER 3

CURRENT ALERTS

Last updated: 25/09/2024 15:58:26
None

INTELLIGENT DATA

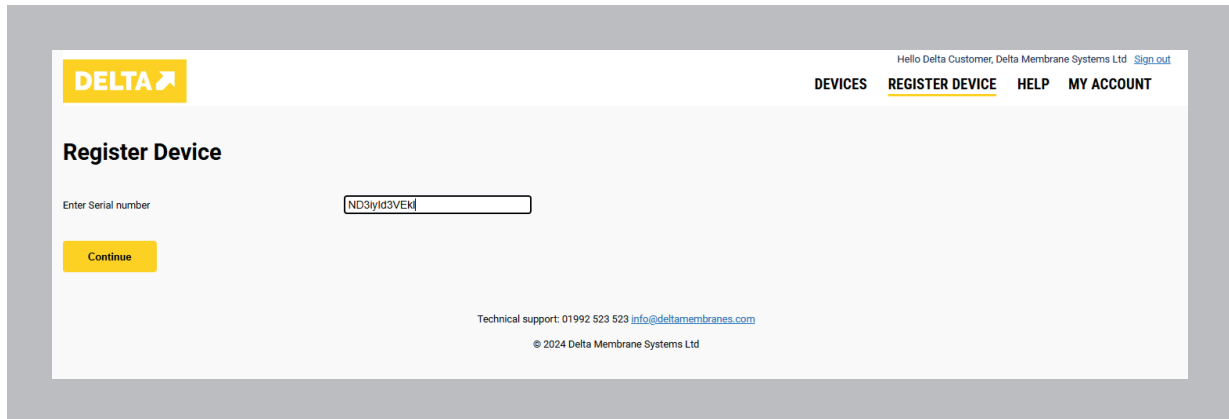
No pump activations have been logged to date. Intelligent data is only applicable if you have a secondary float switch fitted. Please contact your service company if you would like these features.

ALERT HISTORY

Alert type	Date / Start	Duration
6. Battery Level 100%	25/09/2024 15:24:09	
9. Battery Temperature OK	24/09/2024 11:08:52	
4. Connection Failure	17/09/2024 19:12:02	
3. Power Failure	17/09/2024 19:01:53	
6. Battery Level 20%	17/09/2024 19:01:07	
1. High Level Alarm	17/09/2024 16:59:20	192h 41m 50s
1. High Level Alarm	17/09/2024 16:59:15	0h 00m 00s
1. High Level Alarm	17/09/2024 16:59:13	0h 00m 01s
1. High Level Alarm	17/09/2024 16:52:53	0h 00m 18s
1. High Level Alarm	17/09/2024 16:52:51	0h 00m 02s
1. High Level Alarm	17/09/2024 16:52:48	
1. High Level Alarm	17/09/2024 16:52:07	
1. High Level Alarm	17/09/2024 16:52:06	
1. High Level Alarm	17/09/2024 16:52:02	0h 00m 03s
1. High Level Alarm	17/09/2024 16:52:01	0h 00m 01s
1. High Level Alarm	17/09/2024 16:52:38	0h 00m 03s
1. High Level Alarm	17/09/2024 16:52:28	0h 00m 01s
1. High Level Alarm	17/09/2024 16:51:51	0h 00m 01s
1. High Level Alarm	17/09/2024 16:51:49	0h 00m 01s
6. SD Card Failure	17/09/2024 16:44:01	0h 00m 14s
4. Connection Failure	17/09/2024 16:09:10	
6. Mute Button Pressed	17/09/2024 16:30:56	
1. High Level Alarm	17/09/2024 16:30:02	0h 01m 23s
3. Power Failure	17/09/2024 16:28:53	0h 00m 08s
6. Battery Level 100%	17/09/2024 16:27:08	
1. High Level Alarm	17/09/2024 16:23:51	0h 00m 18s
1. High Level Alarm	17/09/2024 16:23:19	0h 00m 02s
1. High Level Alarm	17/09/2024 16:23:11	0h 00m 08s

8.1.1 Register a new device

To add a new device to your account press **Register a device**. Type the serial number from the device or the card in the box.



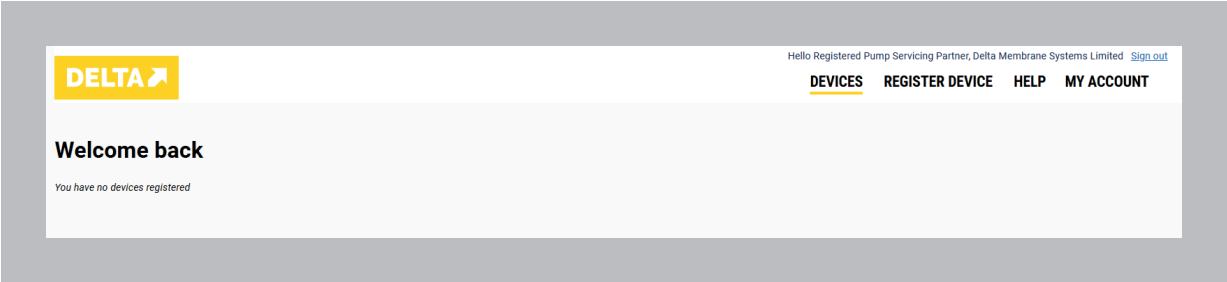
The screenshot shows the 'Register Device' screen of the Delta Pumps App. At the top left is the Delta logo. At the top right, it says 'Hello Delta Customer, Delta Membrane Systems Ltd' with a 'Sign out' link. Below this is a navigation bar with 'DEVICES', 'REGISTER DEVICE' (highlighted), 'HELP', and 'MY ACCOUNT'. The main heading is 'Register Device'. Below it, there is a label 'Enter Serial number' and a text input field containing 'ND3lyd3VEK'. A yellow 'Continue' button is positioned below the input field. At the bottom, there is technical support information: 'Technical support: 01992 523 523 info@deltamembranes.com' and a copyright notice '© 2024 Delta Membrane Systems Ltd'.

If any personal details change they can be amended in **My Account**.

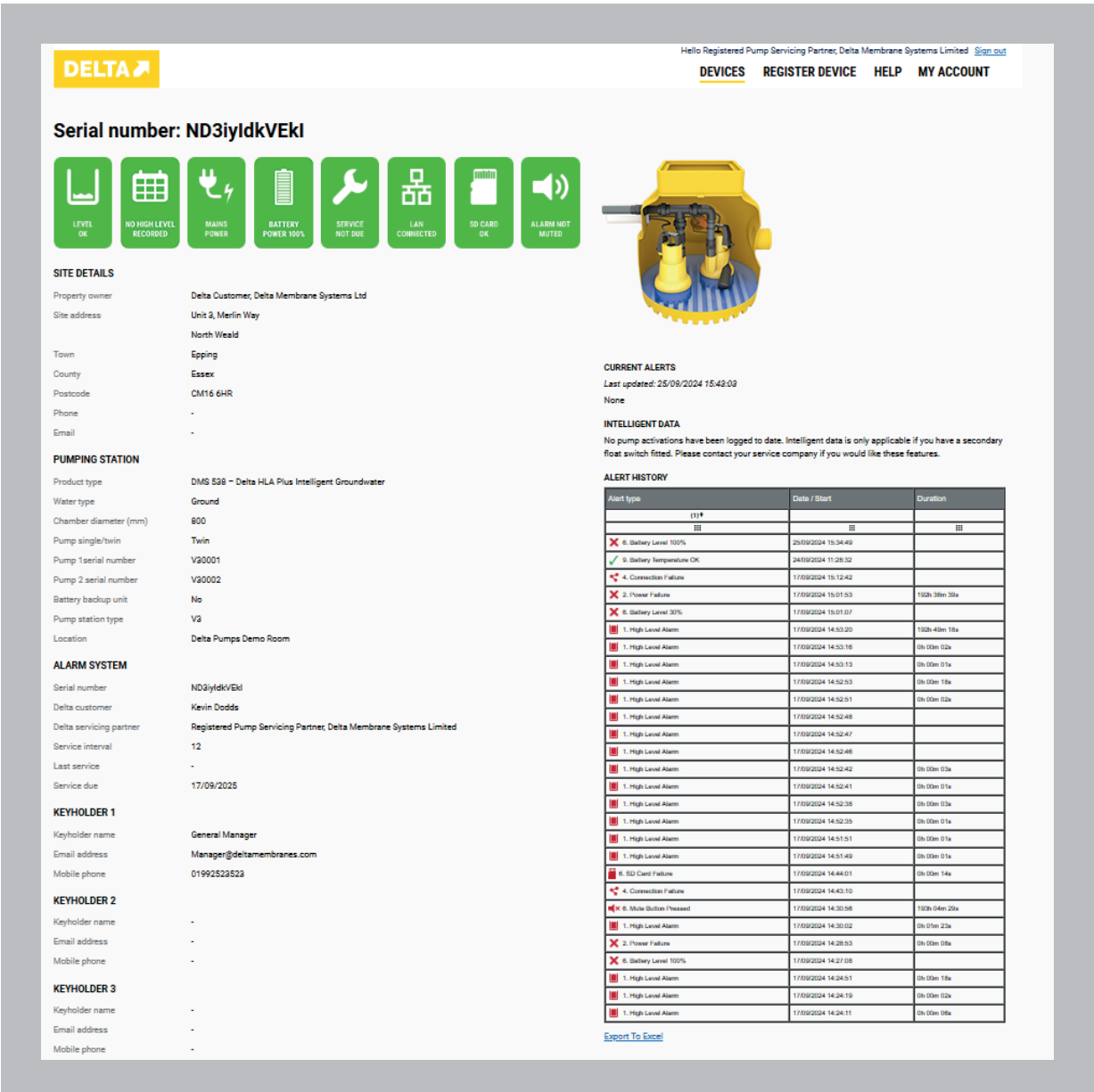
8. Using the Delta Pumps App

8.2 Service Partner dashboard

Once you log into your dashboard you will be able to see all the devices registered under your company.

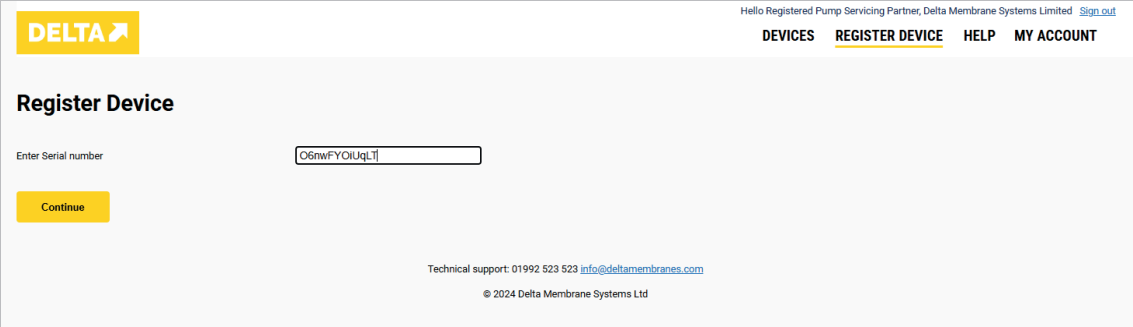


To view a device in more detail, click on the device. You can **Edit Details** or **Add Keyholders** from this screen



8.2.1 Register a new device

To add a new device to your account press **Register a device**. Type the serial number from the device.



DELTA

Hello Registered Pump Servicing Partner, Delta Membrane Systems Limited [Sign out](#)

DEVICES **REGISTER DEVICE** HELP MY ACCOUNT

Register Device

Enter Serial number

Continue

Technical support: 01992 523 523 info@deltamembranes.com

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8.2.2 Updating the device details

As a registered Service partner, you are able to make some setup changes to the device in Update My Device Details.

You are able to update the following device details:

- Product type (if the pumping station monitored by the Delta HLA Plus changes)
- Water type (if the pumping station monitored by the Delta HLA Plus changes)
- Whether it is a twin or single pump in the system
- Change the pumps' serial numbers if the pumps are replaced
- Whether a battery back-up system is connected to the pumping station

8.2.3 If the end-user changes the service partner

If the end-user change service partner from you to another company, you will receive an email informing you of the change.

A confirmation email will also be sent to the holder of the device's warranty and the end-user.

If you think this change has been made in error please contact the end-user. Once this move is completed you will no longer have access to the device on your dashboard.

8. Using the Delta Pumps App

8.3 End-user dashboard

Once you log into your dashboard you will be able to see all the devices registered in your name.

DELTA

Hello Homeowner/property Owner/ Facilities Manager [Sign out](#)

DEVICESREGISTER DEVICEHELPMY ACCOUNT

Welcome back

Status	Serial number	Property owner	Site address	Product type	Service	Water type	Chamber diameter (mm)	Location	Service due	Setup date
(1) *	(2) *									
4. Connection Failure	ND3iyldkVEk	Delta Membrane Systems Ltd, Delta Customer	Merlin Way, North Weald, Epping, Essex, Essex	DMS 538 – Delta HLA Plus Intelligent Groundwater	Delta Membrane Systems Limited	Surface / Ground	800	Plant room	17/09/2025	17/09/2024 17:29:33
7. Battery Restored	ND3iyldkVEk	Delta Membrane Systems Ltd, Delta Customer	Unit 3, Merlin Way, North Weald, Epping, Essex, CM16 6HR	DMS 538 – Delta HLA Plus Intelligent Groundwater	Delta Membrane Systems Limited	Ground	800	Delta Pumps Demo Room	17/09/2025	17/09/2024 13:53:39

[Export To Excel](#)

To view a device in more detail, click on the device. You can **Edit Details** or **Add Keyholders** from this screen. Please note Keyholders will also get alerts when there is a problem.

DELTA

Hello Homeowner/Property Owner/Facilities Manager [Sign out](#)

DEVICESREGISTER DEVICEHELPMY ACCOUNT

Serial number: ND3iyldkVEk

LEVEL OK

NO HIGH LEVEL RECORDED

MAINS POWER

BATTERY POWER 100%

SERVICE NOT DUE

LAN CONNECTED

SD CARD OK

ALARM NOT MUTED

SITE DETAILS

Property owner
Delta Customer, Delta Membrane Systems Ltd

Site address
Unit 3, Merlin Way
North Weald

Town
Epping

County
Essex

Postcode
CM16 6HR

Phone
-

Email
-

PUMPING STATION

Product type
DMS 538 – Delta HLA Plus Intelligent Groundwater

Water type
Ground

Chamber diameter (mm)
800

Pump single/twin
Twin

Pump 1 serial number
V90001

Pump 2 serial number
V90002

Battery backup unit
No

Pump station type
V8

Location
Delta Pumps Demo Room

ALARM SYSTEM

Serial number
ND3iyldkVEk

Delta customer
Kevin Dodds

Delta servicing partner
Registered Pump Servicing Partner, Delta Membrane Systems Limited

Service interval
12

Last service
-

Service due
17/09/2025

KEYHOLDER 1

Keyholder name
General Manager

Email address
Manager@deltamembranes.com

Mobile phone
01992523523

KEYHOLDER 2

Keyholder name
-

Email address
-

CURRENT ALERTS

Last updated: 25/09/2024 15:42:03

None

INTELLIGENT DATA

No pump activations have been logged to date. Intelligent data is only applicable if you have a secondary float switch fitted. Please contact your service company if you would like these features.

ALERT HISTORY

Alert type	(1) *	Date / Start	Duration
6. Battery Level 100%		25/09/2024 15:34:49	
5. Battery Temperature OK		24/09/2024 11:28:32	
4. Connection Failure		17/09/2024 15:12:42	
2. Power Failure		17/09/2024 15:01:53	150s 38m 39s
6. Battery Level 30%		17/09/2024 15:01:07	
1. High Level Alarm		17/09/2024 14:53:20	150s 49m 19s
1. High Level Alarm		17/09/2024 14:53:16	0h 00m 02s
1. High Level Alarm		17/09/2024 14:53:13	0h 00m 01s
1. High Level Alarm		17/09/2024 14:52:53	0h 00m 18s
1. High Level Alarm		17/09/2024 14:52:51	0h 00m 02s
1. High Level Alarm		17/09/2024 14:52:48	
1. High Level Alarm		17/09/2024 14:52:47	
1. High Level Alarm		17/09/2024 14:52:46	
1. High Level Alarm		17/09/2024 14:52:42	0h 00m 03s
1. High Level Alarm		17/09/2024 14:52:41	0h 00m 01s
1. High Level Alarm		17/09/2024 14:52:38	0h 00m 03s
1. High Level Alarm		17/09/2024 14:52:35	0h 00m 01s
1. High Level Alarm		17/09/2024 14:51:51	0h 00m 01s
1. High Level Alarm		17/09/2024 14:51:49	0h 00m 01s
6. SD Card Failure		17/09/2024 14:44:01	0h 00m 14s
4. Connection Failure		17/09/2024 14:43:10	
6. Mute Button Pressed		17/09/2024 14:30:58	150s 04m 25s
1. High Level Alarm		17/09/2024 14:30:02	0h 01m 23s
2. Power Failure		17/09/2024 14:28:53	0h 00m 08s

48

Delta HLA Plus

DMS_IG_HLAP 0525.1

8.3.1 Register a new device

To add a new device to your account press **Register a device**. Type the serial number from the box.

DELTA

Hello Homeowner/property Owner/ Facilities Manager [Sign out](#)

DEVICES **REGISTER DEVICE** BOOK VISIT CONTACT HELP MY ACCOUNT

Register Device

Enter Serial number

ND8iyIDKvEK

Continue

Technical support: 01992 523 523 info@deltamembranes.com

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8.3.2 Book a visit

You can **Book a visit** for a service or a non-urgent callout. All contact details for the service company are available in the portal.

DELTA

Hello Homeowner/property Owner/ Facilities Manager [Sign out](#)

DEVICES REGISTER DEVICE **BOOK VISIT** CONTACT HELP MY ACCOUNT

Book a visit

Serial number

Visit type ☐ Service ☐ Non-urgent callout

Preferred date*

Preferred time*

Contact name

Homeowner/property Owner/ Facilities Manager

Contact telephone

01992 523 523

Contact email

Delta HLA Owner @ Delta Pumps

Comments

Service Company

You must select a service partner

Book visit

Technical support: 01992 523 523 info@deltamembranes.com

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8. Using the Delta Pumps App

8.3.3 Contact your Service Partner

DELTA

DEVICESREGISTER DEVICEBOOK VISITCONTACTHELPMY ACCOUNT

Hello Homeowner/property Owner/ Facilities Manager [Sign out](#)

Contact Us

Contact name

Homeowner/property Owner/ Facilities Manager

Contact telephone

01992 523 523

Contact email

HLAPlus

Message

Send message

You must select a service company for your device before proceeding

Telephone:

E-mail:

Office hours: Monday to Friday 8.30am – 5.30pm

Technical support: 01992 523 523 info@deltamembranes.com

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8.3.4 Account changes

You can make any changes to keyholders, passwords, email and phone numbers.

DELTA

DEVICESREGISTER DEVICEBOOK VISITCONTACTHELPMY ACCOUNT

Hello Homeowner/property Owner/ Facilities Manager [Sign out](#)

Update personal details

Update device details

Update personal details

Email address*

HLAPlus Homeowner @ gmail.com

Password

Confirm password

Title*

Mr

First name*

Homeowner/property Owner/Facilities Manager

Surname*

Phone*

01992 523 523

Address lookup

Enter postcode or any part of address to search...

Company

Address line 1*

Unit 6, Merlin Way

Address line 2

North Weald

Town*

Epping

County

Essex

Postcode*

Essex

Country*

United Kingdom

Update personal details

8.3.5 Changing a service partner

If you decide to change your service partner, you will need to log onto your account. Click on the request change of service partner.

The screenshot shows the 'MY ACCOUNT' page in the Delta Pumps App. The page is divided into two main sections: 'PUMPING STATION' and 'ALARM SYSTEM'. The 'PUMPING STATION' section includes fields for Product type (Delta - DMS 538 - Delta HLA Plus Intelligent Groundwater), Water type (Surface / Ground), Chamber diameter (mm) (800), Pump single/twin (Twin), Pump 1 serial number (V3000013), Pump 2 serial number (V3000014), Battery backup unit (Yes / No), Pump station type (V3), and Location (Plant room). The 'ALARM SYSTEM' section includes fields for Serial number (xvTMjgnaEfK), Delta customer (Delta Customer, Delta Membrane Systems Ltd), Delta servicing partner (Delta Customer, Delta Membrane Systems Ltd), Service interval (12 Months), Last service, and Service due (17/09/2025). A red arrow points to the 'Delta servicing partner' dropdown menu, which is currently set to 'Delta Customer, Delta Membrane Systems Ltd'.

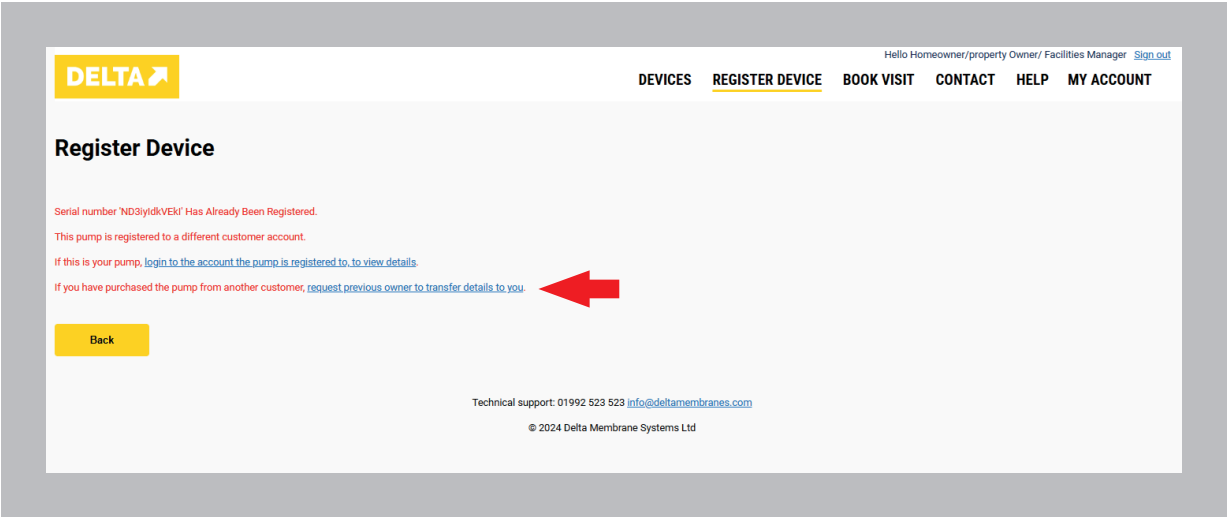
Please select the registered service partner from the list of options. If they are not on the list, we will review your requested partner. Please note regular servicing of your device is part of the Warranty agreement.

- Your old service partner will be told you have selected a new partner.
- The new partner will also be notified.
- The installing contractor will also be notified as they issue the warranty for the pump station.

8. Using the Delta Pumps App

8.3.6 Moving house

When moving house, you will need to get the new homeowner to set up an account. Once this is set-up, they need to add the serial number to their account. They will then get the following message.



Click on the link: **Request previous owner to transfer details to you.**

The transfer process will then be started, and you will need to accept the transfer of device. This will be sent in an email. Once you have approved the request the device will be removed from your dashboard and you will no longer have access to it.

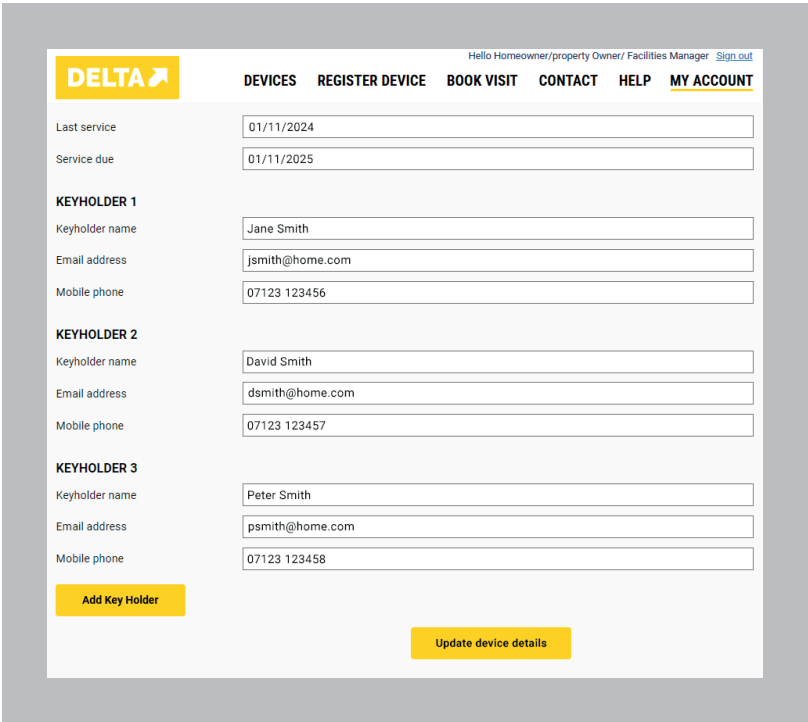
8.3.7 Adding or changing key holders

All key holders will receive email alerts when fault conditions are detected by the Delta HLA Plus.

To add a new key holder, click **Add Key Holder** and enter their details, then press **Update device details**.

To change an existing key holder's details, edit the appropriate fields and click **Update device details**.

Key holders do not have access to the Delta Pumps App dashboard.



9. Maintenance



DANGER

Do not open this unit if not qualified to do so. To reduce the risk of electric shock, do not remove cover. No user-serviceable parts inside.



WARNING

All maintenance works (inspections and services) **MUST** be undertaken by a technically qualified/competent company/engineer with specific training on the device.



DANGER

Before carrying out any maintenance work the system **MUST** be completely disconnected from the mains power supply, and measures should be taken to prevent the system from being inadvertently switched back on.



WARNING

When undertaking works within the chamber/sump suitable measures **MUST** be taken to ensure safe access in accordance with current safety regulations.

9.1 Servicing guide

The product should be inspected quarterly.

Perform the following:

- Operate the TEST button (see Section 6.1.1.)
- Check HLA float switch – manually trigger the float switch to test the functionality of the high level alarm.
- Inspect all cables for signs of wear and tear.

When installed in conjunction with a pump system, please refer to the product installation and operating guidelines for pump station maintenance requirements.

In addition to the above it is important that the product undergoes a full service at a minimum frequency of once yearly (increased servicing frequency is subject to site and product specific details. Where a product is serving more than a single residential dwelling and/or there is a risk of flooding as a result of product failure the servicing frequency should be increased accordingly).

To arrange a service please contact Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com for more information.

Delta Membrane Systems Ltd recommends all pumps, alarms and associated products are serviced by a Delta Registered Pump Service Provider.

Please replace both the internal batteries every two years.

9.2 Cleaning the device

Clean the device with a dry non-abrasive cloth. Do not allow the device to become wet. Do not use solvent cleaners.

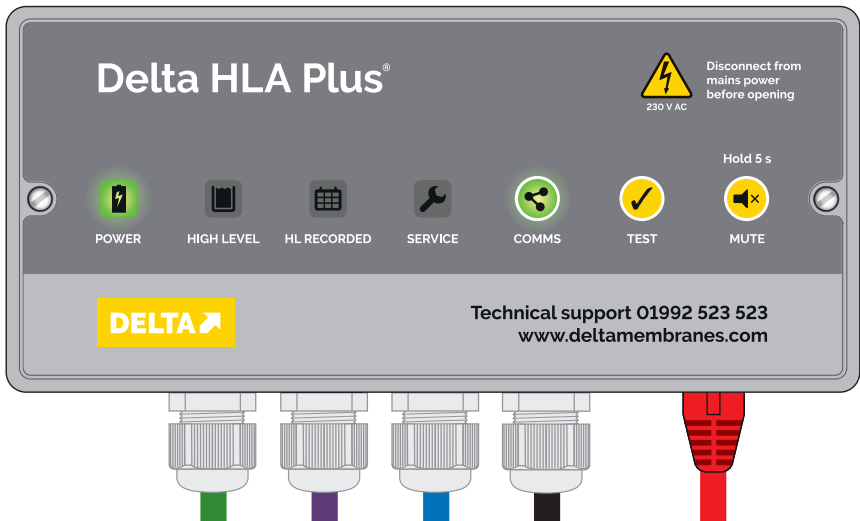
10. Fault finding

Problem	Cause	Solution
High Level Alarm is constantly sounding	Damaged float cable	Repair float cable
High Level Alarm is constantly sounding	Faulty float switch	Replace float switch
High Level Alarm is constantly sounding	Incorrect wiring	Check that the correct core colours are wired in.
High Level Alarm is constantly sounding	Pump has failed and station is at high level	Contact Delta Membranes on 01992 523 523 for further assistance
High Level Alarm is sounding before the pump activates	Float level set incorrectly	Raise the height of the HLA float switch so it activates higher than the activation point of the primary pump
No volt free output to external devices	Signal cable is connected to the incorrect NO/NC contact	Move signal cable to the correct contact
No power LED lit	No mains power to the system and the battery not connected	Check the mains power supply in from the distribution board and connect the battery
Power LED flashes red continuously	There is a battery fault or the battery is not connected	Disconnect from mains then open the panel and connect the battery to the PCB board. If the battery is connected, replace the battery. Contact Delta Membranes on 01992 523 523 for further assistance.
COMMS button is red	Your device has been set up to work as a standalone device without connection to the Delta Pumps App	If this is correct take no action. If you would like to connect to the Internet see Section 4.
COMMS button is red	Your property's Internet connection has failed	Check your property's Internet connection. Once your property's Internet connection has been restored, the device will auto-reconnect.
COMMS button is red	Your local Wi-Fi or Ethernet details have changed.	Reset the device's Internet connection. See Section 4.

If you continue to experience problems, please contact Delta Membranes on 01992 523 523 between 8am and 5pm, Monday to Friday or by email at info@deltamembranes.com for more information.

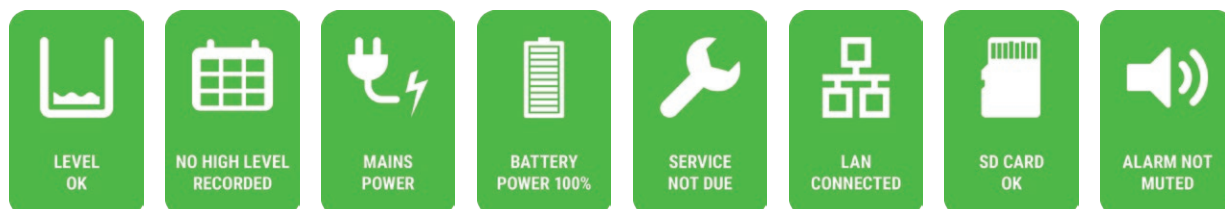
11. Quick guides

11.1 Delta HLA Plus Control Panel icons



Icon	Function	Green	Amber	Red
	Power	Mains power connected	The Delta HLA Plus device is currently running on backup battery due to loss of mains power. The LED flashes every 2 seconds, and the device will beep periodically.	Backup battery under 10%. LED flashes every 2 seconds. The HLA Plus device will beep periodically. A backup battery fault will trigger the same response.
	Internal Battery	—	LED flashes every 2 seconds. The device will beep periodically.	Backup battery under 10%. LED flashes every 2 seconds. The device will beep periodically. A backup battery fault will trigger the same response.
	High Level	—	—	LED flashes red and the device will beep periodically.
	HL Recorded	—	Flashes until reset	—
	Service	—	—	LED solid red and device beeps periodically.
	Comms	Glows – Connected to WiFi or LAN Flashes – Accessing Access Point	—	Not connected or loss of connection to WiFi or LAN the LED for 'Service' flashes red.
—	SD Card	—	—	—
—	Alarm Muted	—	—	—
	Internal Coin Battery	—	—	Internal coin battery failure LED for 'Service' flashes red.

11.2 Delta Pumps App icons



Icon	Function	Grey	Green	Amber	Red
	Power	Communications failure and/or simultaneous mains power and battery backup failure.	Mains power connected	—	No mains power connected
	Internal Battery	Communications failure and/or simultaneous mains power and battery backup failure.	Charged to 100% – 90%	Charged to 20% - 90%	Backup battery is at 10% or less. The battery may be faulty or not connected.
	High Level	Communications failure and/or simultaneous mains power and battery backup failure.	No High Level Recorded	High Level Recorded	High Level
	HL Recorded	—	—	High Level Recorded	—
	Service	—	No service required	—	Service required
	Comms	Communications failure and/or simultaneous mains power and battery backup failure.	Connected	—	Not connected
	SD Card	Communications failure and/or simultaneous mains power and battery backup failure.	SD Card OK	—	—
	Alarm Muted	Communications failure and/or simultaneous mains power and battery backup failure.	Alarm is not muted	—	Alarm is muted

12. Ancillaries

Only use Delta Membranes System Ltd approved replacement parts and ancillaries..

Delta HLA Plus Battery, 3.6 V, 7Ah



544

Delta HLA Plus Clock Battery 3 V



543

Delta Broken Finger Float with 10 metre cable



E276

Delta Pendant Float Switch with 10 metre cable



E158

Level Float Switch with 10 metre cable



E536

Counterweight



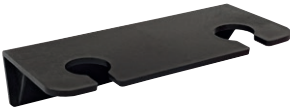
E215

Delta Float Shroud



E277

2-hole sump float bracket, GRP



E234

13. Warranty



13.1 Standard 12-month component warranty

The Delta HLA Plus is offered with a 12-month component warranty from the date of invoice.

Standard Delta Membrane Systems Limited conditions apply.

This warranty does not cover defects caused by incorrect installation, installation/installer error, abnormal working conditions, misuse, or neglect.

Any defects or malfunctions should be reported to Delta Membrane Systems Limited within of seven days when defect becomes apparent. All broken components should be returned to Delta Membrane Systems Limited at customer cost.

To make a Warranty Claim, please email pumps@deltamembranes.com. Forms are available from www.deltamembranes.com.

In no event shall Delta Membrane Systems Limited be liable for any consequential damage, penalties, loss, or expenses howsoever arising, out of or in connection with incorrect installations or misuse, including, without limitation, direct or indirect loss, consequential loss or damage, loss of profit or goodwill, loss arising from any errors or omissions in the pump chamber as a result of, incorrect installation, installation/installer error, abnormal working conditions, misuse, or neglect.

Delta Membrane Systems Limited shall not accept liability if the product fails due to being incorrectly specified by any third parties not employed by Delta Membrane Systems Limited.

13.2 Warranty from date of commissioning

When the Delta HLA Plus is commissioned by a Delta Registered Pump Service Provider, the 12-month warranty period shall start from date of commissioning, provided:

- all services and associated systems are ready to enable commissioning to take place;
- the Delta HLA Plus is commissioned within 12 months from the date of invoice;
- the Delta HLA Plus is commissioned by a Delta Registered Pump Service Provider;
- the Delta Registered Pump Service Provider has logged Commissioning details of the Delta HLA Plus with Delta Membrane Systems Limited;
- the Delta HLA Plus is serviced by a Delta Registered Pump Service Provider with a minimum of a yearly Service (within 12 months from the date of commissioning/last service) depending on site specifications.

14. Mounting plate template

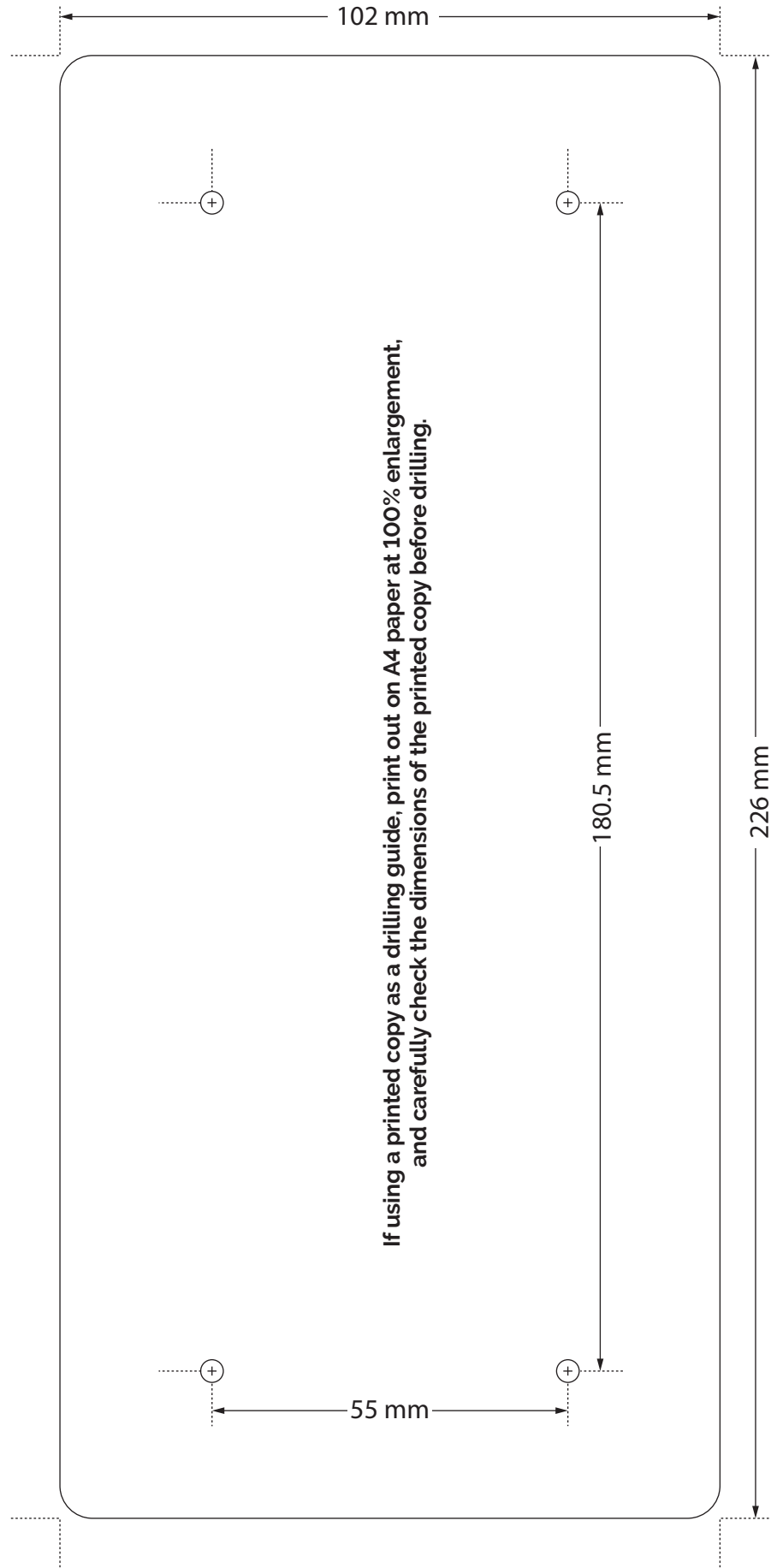


Figure 26. Mounting template.

15. Commissioning details

Property address	Commissioning engineers

Customer contact details	
Contact name	
Contact telephone	

Installation details	
Equipment installed	
Delta Registered Pump Service Provider	
Date of commissioning	
Commissioning engineer	
Signature of engineer	

Servicing plans

Sump pumps must be maintained. We recommend a qualified engineer examines and services equipment every year. Pumps running frequently due to higher water table, water drainage, or weather conditions should be examined more frequently, we recommend every 6 months. Sump pumps, being mechanical devices, may fail if not maintained which could lead to a flooded basement and costly repairs. Regular servicing of sump pumps will increase efficiency and extend the life of the pump. All Delta Membrane pump systems can be maintained and serviced by our recommended service companies or installing contractor.

Commissioning

All sump pumps require commissioning. Commissioning provides peace of mind, knowing that the system is installed correctly and in compliance with warranty conditions. All Delta Membrane pump systems can be commissioned by our recommended service companies or installing contractor.

16. Service record

[illegible]

16. Service record

[illegible]

[illegible]

Delta Membrane Systems Ltd, Delta House, Merlin Way, North Weald, Epping, Essex, CM16 6HR.

01992 523 523 info@deltamembranes.com www.deltamembranes.com

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