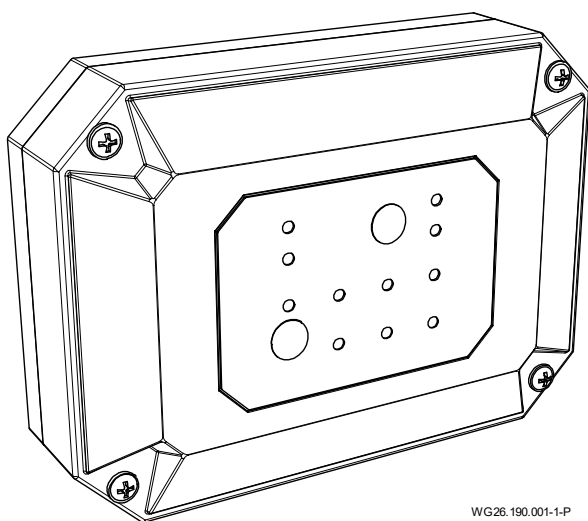




EN Translation of original operation manual

BADU® netLink



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SPECK Pumpen Verkaufsgesellschaft GmbH

Hauptstraße 3
91233 Neunkirchen am Sand, Germany
Phone +49 9123 949-0
Fax +49 9123 949-260
info@speck-pumps.com
www.speck-pumps.com

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UKCA: Comply Express Ltd, Unit C2 Coalport House, Stafford Park 1, Telford, TF3 3BD, UK

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1 About this document

1.1 Using this manual

This manual is a component of the pump/unit. The pump/unit was manufactured and tested according to the generally accepted rules of technology. However, if the pump/unit is used incorrectly, not serviced enough or tampered with, danger to life and limb or material damage could result.

- ➔ Read the manual carefully before use.
- ➔ Keep the manual during the service life of the product.
- ➔ Provide access to the manual for operating and service personnel at all times.
- ➔ Pass the manual on to any future owners or operators of the product.

1.2 Target group

This manual is aimed both at qualified specialists and the end customer. Descriptions aimed only at qualified specialists are indicated accordingly (qualified specialist). This indication applies to the whole point. All other points are universally valid.

1.3 Other applicable documents

- Packing list

1.3.1 Symbols and means of representation

Warnings are used in this manual to warn you of personal injury.

- ➔ Always read and observe warnings.

 DANGER

Danger for people.
Non-observance results in death or serious injury.

 WARNING

Danger for people.
Non-observance can result in death or serious injury.

 CAUTION

Danger for people.
Non-observance can result in light to moderate injury.

NOTICE

Notes to prevent material damage, for better understanding or to optimise the workflow.

Important information and technical notes are specially marked to explain correct operation.

Symbol	Meaning
➔	Instructions for a one-step action.
1. 2.	Directions for a multi-step action. ➔ Observe the order of the steps.

2 Safety

2.1 Intended use

BADU netLink contains a control system for filter pumps (VS pumps) with speed control which are already installed in order to make these smart. The control actuates via the “BADU Connect” app in the basic function. Switching times can be specified for filter times in this manner.

It is possible to actuate VS pumps that are controlled via potential-free contacts or the RS485 interface. Manual specifications for the speed can also be achieved. An optional input for water detection is available.

Observing the following information is vital for intended use:

- This manual

Any other use or use exceeding this is **not** an intended use and must first be authorised by the manufacturer/supplier.

2.2 Personnel qualification

This unit can be used by **children** aged 8 and over as well as by persons with limited physical, sensory or mental capacity or by people with a lack of experience or knowledge, provided that they are supervised or have been instructed in the safe use of the unit and understand the resulting dangers.

Children may not play with the unit. Cleaning and **user maintenance** may not be carried out by **children** without supervision.

- ➔ Ensure that the following work is only performed by trained professionals with the following qualifications:
 - For mechanical work, for example replacing ball bearings or mechanical seals: qualified mechanics.
 - For work on the electric system: electricians.
- ➔ Ensure that the following requirements are fulfilled:
 - Personnel who do not yet have the appropriate qualifications must receive the required training before being allowed to work on the system.
 - The personnell's responsibilities, for example working on the product, electric equipment or hydraulic systems, are set based on their qualifications and the job description.
 - The personnel have read this manual and understand the necessary working steps.

2.3 Safety regulations

The operator of the system is responsible for the adherence to all relevant statutory regulations and guidelines.

- ➔ Observe the following regulations when using the pump/unit:
 - This manual
 - Warning and information signs on the product
 - The valid national regulations for accident prevention
 - The internal occupational, operational and safety regulations of the operator

2.4 Structural modifications and spare parts

Alterations or modifications can affect operational safety.

- ➔ Never modify or alter the unit without the manufacturer's permission.
- ➔ Only use original spare parts and accessories authorised by the manufacturer.

2.5 Signs

- ➔ Ensure that all the signs on the complete unit remain legible.

2.6 Residual risk

2.6.1 Rotating parts

There is a risk of shearing and crushing due to exposed rotating parts.

- ➔ Only perform servicing when the unit is not in operation.
- ➔ Immediately after finishing servicing, reattach or reactivate all protective equipment.

2.6.2 Electrical energy

There is an increased risk of electric shock when working on the electrical system due to the humid environment.

Electrical protective earth conductors which were not installed correctly can also result in electric shocks, for example due to oxidation or cable breakage.

- ➔ Observe VDE and utility company regulations.
- ➔ Build swimming pools and their protection according to DIN VDE 0100-702.
- ➔ Before working on the electrical system, take the following measures:
 - Disconnect system from the power supply.
 - Attach a warning sign: "Do not switch on! The system is being worked on."
 - Ensure that the system is free of voltage.
- ➔ Check the electrical system regularly to ensure it is in proper working condition.

2.6.3 Hazardous materials

- ➔ Ensure that leaks of dangerous pumped fluids/gases are led away without endangering people or the environment.
- ➔ Decontaminate the pump completely during disassembly.

2.7 Faults

- ➔ In case of a fault, immediately switch the pump off and remove it from operation.
- ➔ Have all faults repaired immediately.

2.8 Preventing material damage

2.8.1 Leakage and pipe breakage

Vibrations and thermal expansion can cause pipes to break.

If the pipe forces are exceeded, leaks can occur at the screwed connection or the pump itself.

- ➔ Do not use the valve as a fixed point for the pipe line.
- ➔ Connect pipes free of load and mount them elastically. Install compensators if necessary.
- ➔ If the unit leaks, the unit may not be operated and must be disconnected from the mains power supply.

2.8.2 Leak drainage

Insufficient leak drainage can damage the control.

- ➔ Do not block or seal the leak drainage between the valve lid and the lower section of the actuator.

3 Description

3.1.1 Buttons

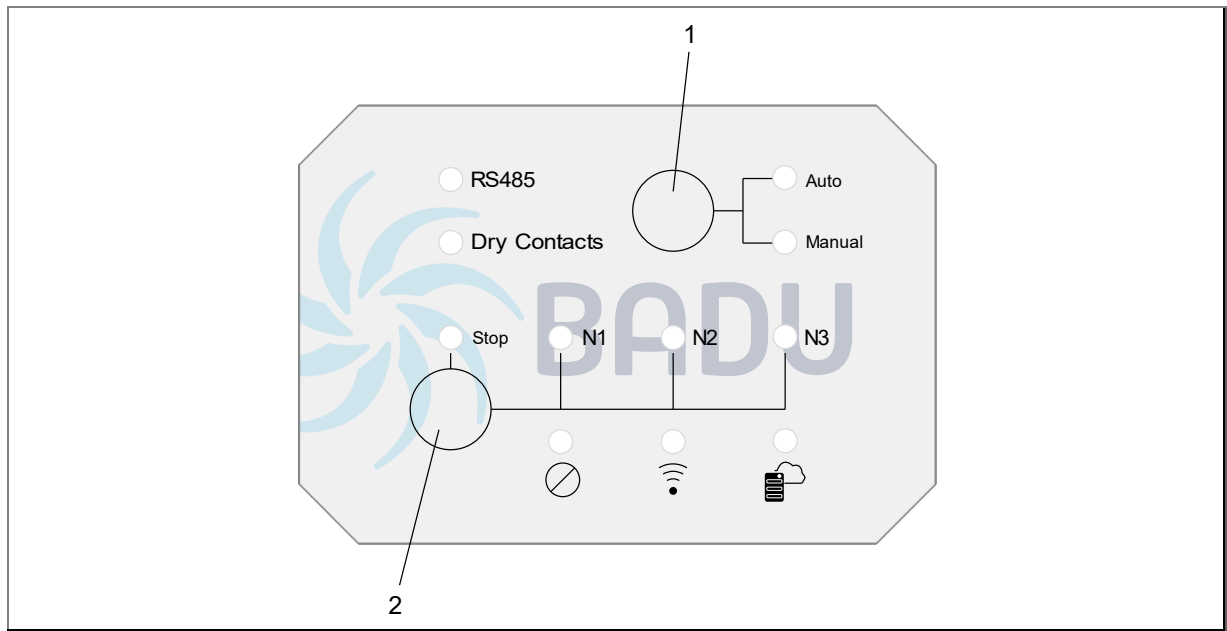


Abb. 1

Button 1: Button for direct selection of “Automatic” or “Manual” mode on the device (automatic means that the program is running or running via a program).

Button 2: Button for direct selection of the speed on the device (Stop)

NOTE

Pressing the buttons on the device also changes the settings in the app.

Pressing buttons 1 and 2 for 5 seconds: Network settings are reset

Pressing buttons 1 and 2 for 10 seconds: The device starts anew and resets the settings

Pressing button 1 for 10 seconds: Disables the NetLink device (activating and deactivating)

3.1.2 Possible button combinations and their effect

“Potential-free” mode

Program with N2 speed

Auto N2 - Button 1 - Manual N2 - Button 1 - Auto N2
 Auto N2 - Button 1 - Manual N2 - Button 2 - Manual N3
 Auto N2 - Button 2 - Manual stop - Button 1 - Auto N2
 Auto N2 - Button 2 - Manual stop - Button 2 - Manual N1

Program with N2 speed

Manual stop - Button 1 - Auto N2 - Button 1 - Manual N2
 Manual stop - Button 1 - Auto N2 - Button 2 - Manual stop
 Manual stop - Button 2 - Manual N1 - Button 1 - Auto N2
 Manual stop - Button 2 - Manual N1 - Button 2 - Manual N2
 Manual stop - Button 2 - Manual N1 - Button 2 - Manual N2 - Button 2 - Manual N3 - Button 2 - Manual stop

No program

Manual stop - Button 1 - Auto stop - Button 1 - Manual stop
 Manual stop - Button 1 - Auto stop - Button 2 - Manual stop
 Manual stop - Button 2 - Manual N1 - Button 1 - Auto stop
 Manual stop - Button 2 - Manual N1 - Button 2 - Manual N2
 Manual stop - Button 2 - Manual N1 - Button 2 - Manual N2 - Button 2 - Manual N3 - Button 2 - Manual stop

“Modbus” mode**Program with 900 rpm speed**

Auto 900 rpm	-	Button 1	-	Auto 900 rpm	-	Button 1	-	Auto 900 rpm
Auto 900 rpm	-	Button 1	-	Auto 900 rpm	-	Button 2	-	Manual stop
Auto 900 rpm	-	Button 2	-	Manual stop	-	Button 1	-	Auto 900 rpm
Auto 900 rpm	-	Button 2	-	Manual stop	-	Button 2	-	Auto 900 rpm
Auto 800 rpm	-	Button 1	-	Auto 900 rpm	-	Button 1	-	Auto 900 rpm
Auto 800 rpm	-	Button 1	-	Auto 900 rpm	-	Button 2	-	Manual stop
Auto 800 rpm	-	Button 2	-	Manual stop	-	Button 1	-	Auto 900 rpm
Auto 800 rpm	-	Button 2	-	Manual stop	-	Button 2	-	Auto 800 rpm

No program

Manual 800 rpm	-	Button 1	-	Auto stop	-	Button 1	-	Manual stop
Manual 800 rpm	-	Button 1	-	Auto stop	-	Button 1	-	Manual stop - Button 1 - Manual with standard speed
Manual 800 rpm	-	Button 1	-	Auto stop	-	Button 2	-	Manual stop
Manual 800 rpm	-	Button 2	-	Manual stop	-	Button 1	-	Auto stop
Manual 800 rpm	-	Button 2	-	Manual stop	-	Button 2	-	Manual 800 rpm

3.2 Control**3.2.1 Main operating modes**

The main BADU NetLink operating modes are

- Automatic (runs in the program)
- Manual

This can be identified through the respective LED light.

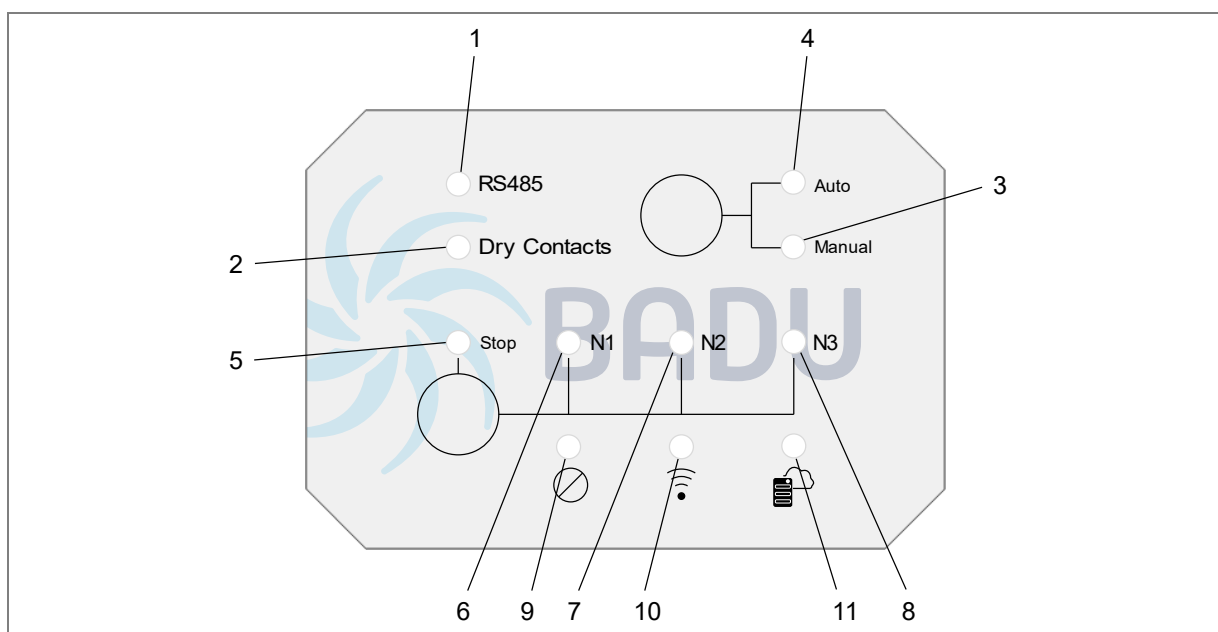
3.2.2 Lighting behaviour of LEDs

Abb. 2

1	Modubus (RS485)	7	N2 speed
2	Dry contacts	8	N3 speed
3	Manual mode	9	Disable/Deactivate
4	Auto mode (program)	10	WIFI
5	Stop	11	Cloud
6	N1 speed		

- ✓ LED illuminates permanently
- * LED is permanently off
- LED flashes continuously

- 1□ LED flashes once
- 2□ LED flashes twice
- 3□ LED flashes three times

Connections/Malfunctions

Description	1	2	3	4	5	6	7	8	9	10	11
Device is off	x	x	x	x	x	x	x	x	x	x	x
Device waiting for WIFI connection to network	x	x	x	x	x	x	x	x	x	1□	x
Device waiting on onboarding to server (cloud)	x	x	x	x	x	x	x	x	x	✓	1□
No WIFI connection to router possible	x	x	x	x	x	x	x	x	x	2□	x
Device is connected to WIFI, but not to the cloud (or cannot connect to the server)	x	x	x	x	x	x	x	x	x	✓	2□
Device realises an OTA update (OTA = over the air)	x	x	x	x	x	x	x	x	x	✓	3□
Device is connected to the cloud	x	x	x	x	x	x	x	x	x	✓	✓

Device control via dry contact

Description	1	2	3	4	5	6	7	8	9	10	11
Device is in the "Dry Contact" control	x	✓	x	x	x	x	x	x	x	✓	✓
Device is deactivated (pump stops)	x	✓	x	x	x	x	x	x	✓	✓	✓
Device is in the "Dry Contact" control mode and in manual mode and stopped	x	✓	✓	x	✓	x	x	x	x	✓	✓
Device is in the "Dry Contact" control mode and in manual mode and N1 speed	x	✓	✓	x	x	✓	x	x	x	✓	✓
Device is in the "Dry Contact" control mode and in manual mode and N2 speed	x	✓	✓	x	x	x	✓	x	x	✓	✓
Device is in the "Dry Contact" control mode and in manual mode and N3 speed	x	✓	✓	x	x	x	x	✓	x	✓	✓
Device is in "Dry Contact" and stopped in auto mode (waits for program)	x	✓	x	✓	✓	x	x	x	x	✓	✓
Device is in the "Dry Contact" control mode and in automatic mode and N1 speed	x	✓	x	✓	x	✓	x	x	x	✓	✓
Device is in the "Dry Contact" control mode and in automatic mode and N2 speed	x	✓	x	✓	x	x	✓	x	x	✓	✓
Device is in the "Dry Contact" control mode and in automatic mode and N3 speed	x	✓	x	✓	x	x	x	✓	x	✓	✓

Device control via "Modbus"

Description	1	2	3	4	5	6	7	8	9	10	11
Device has an error in the "Modbus" control (no data cable signal)	□	x	x	x	x	x	x	x	x	✓	✓
Device is in manual mode and stopped	✓	x	✓	x	✓	x	x	x	x	✓	✓
Device starts in manual mode	✓	x	✓	x	x	□	□	□	x	✓	✓
Device starts in automatic mode	✓	x	x	✓	x	□	□	□	x	✓	✓
Device is deactivated (pump stops)	✓	x	x	x	✓	x	x	x	✓	✓	✓

4 Transport and intermediate storage

NOTICE

Corrosion is possible due to storage in humid conditions with fluctuating temperatures!

Condensation can corrode windings and metal parts.

➔ Store the unit in a dry environment at a temperature which is as constant as possible.

5 Installation

5.1 Installation site

5.1.1 Installation

- The installation site of the control must be dry and clean. Installation outdoors is not permitted.
- The control should be installed horizontally. Other installation positions are not intended and must be cleared by the manufacturer.

5.1.2 Temperature differences

Adverse effects (e.g. condensation) can occur if cold water is pumped in a warm installation site.

➔ Avoid greater temperature differences in the environment of the backwash valve.

5.1.3 There must be ground drainage

- ➔ Calculate the size of the ground drain according to the following criteria:
- Size of the swimming pool.
 - Circulation flow rate.

5.1.4 Ventilation and aeration

- ➔ Ensure sufficient ventilation and aeration. The ventilation and aeration must ensure the following conditions:
- Prevention of condensation.
 - Limitation of the ambient temperature to maximum 40 °C.

5.1.5 Space requirements

- ➔ Leave enough space for easy removal of the top part of the control.

5.1.6 Cable laying/line laying

- ➔ Voltage potentials must be separated as shown in the following drawing.
- ➔ Use line/cable laying as shown in the following drawing.

NOTICE

It is imperative that the operating instructions for the pump be read and observed for correct connection of the pump.

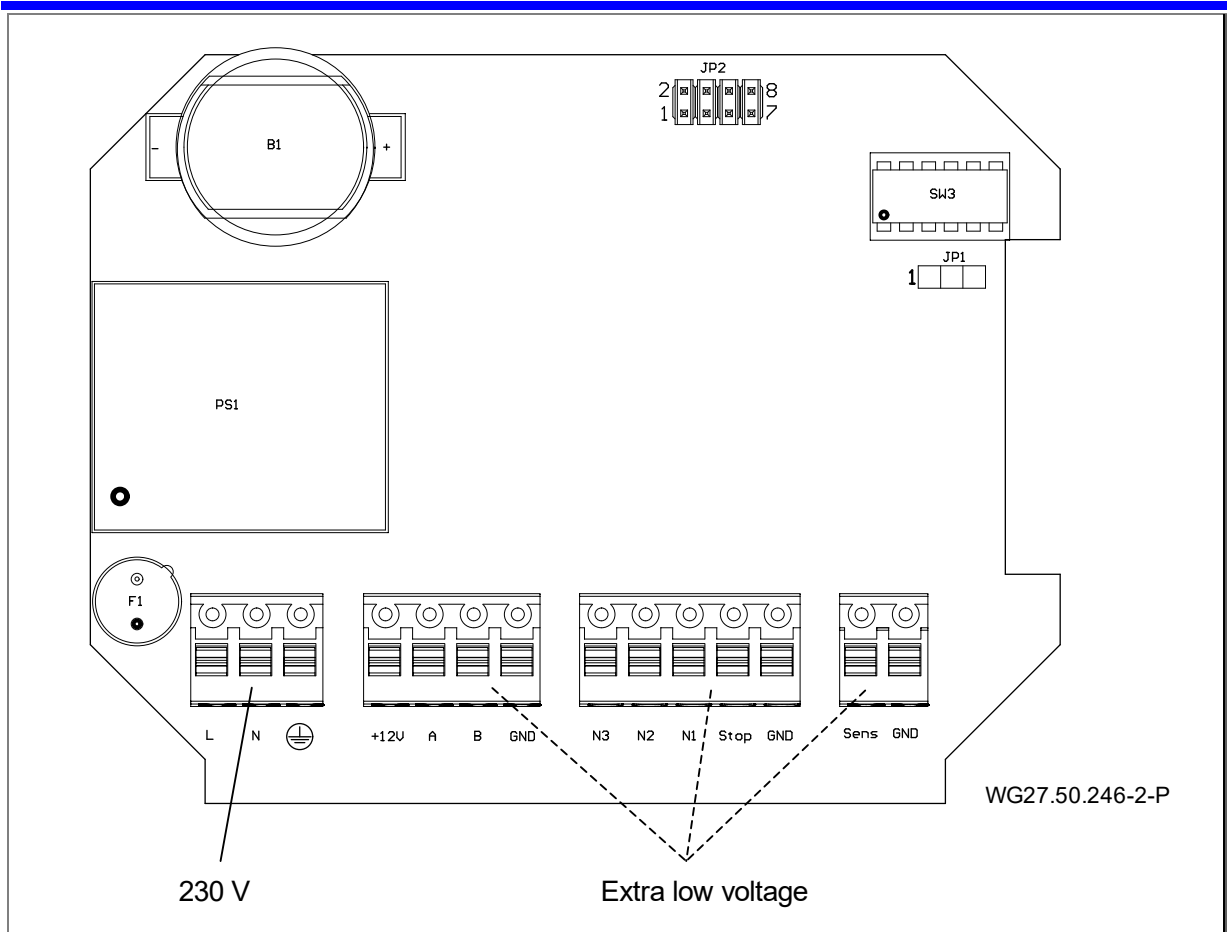


Fig. 3

5.2 Installation

The control is fixed to the wall using the screw holes provided. This should always occur in a protected operating room or a garden arbor. A package with screws and dowels is included.

NOTICE

Read Chapter "Preparation for initial commissioning" prior to mounting the housing on the wall.

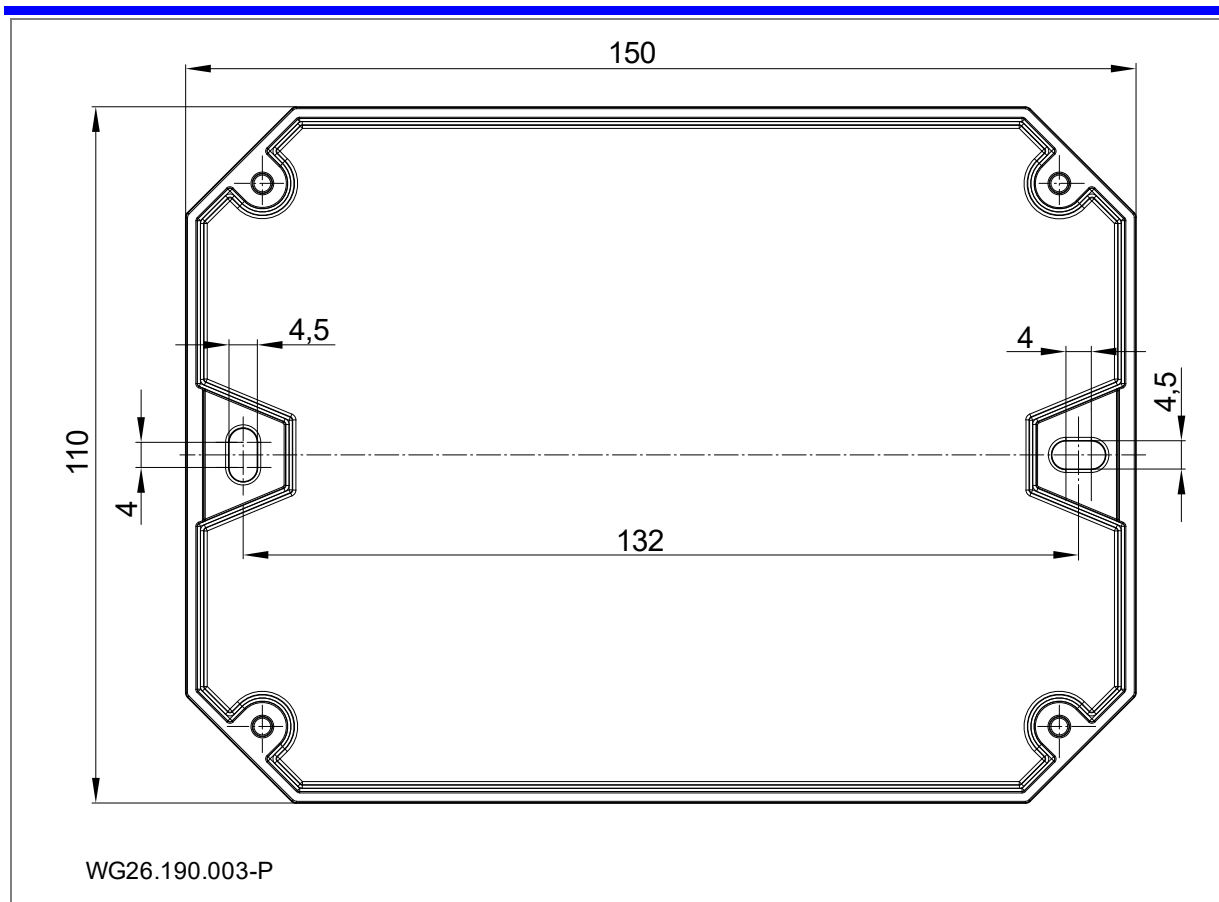


Fig. 4

5.3 Network topography

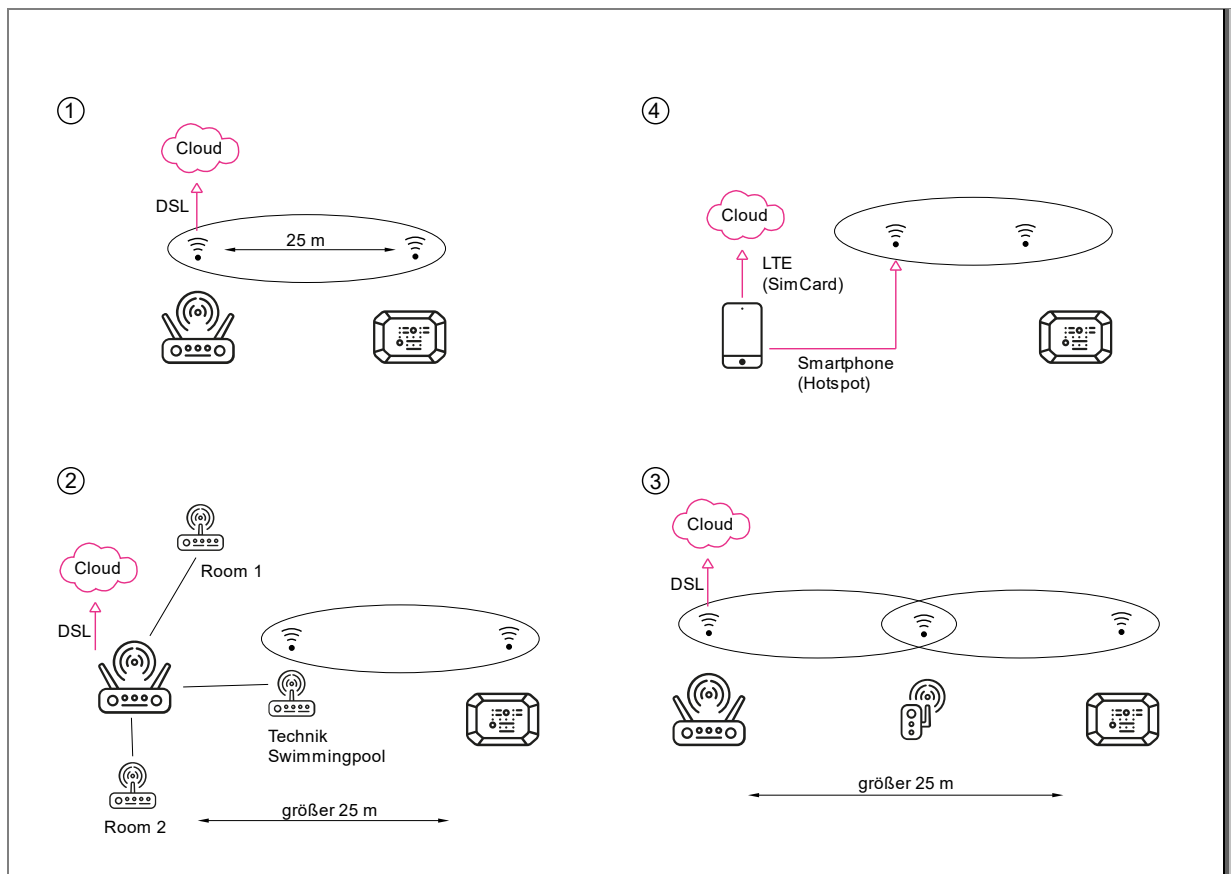


Fig. 5

- 1) Standard connection
- 2) / 3) A good solution for bridging longer distances. The connection must be established by a skilled member of personnel trained in IT.
- 4) Can be used to identify either incorrect W-LAN settings or a defect on the device (BADU NetLink) if a connection with the cloud cannot be established via the router. It is normally possible to discern in this manner whether the error is on the device or in the network setting. If a secure connection can be established via a hotspot, the error is in the router network setting and the device is not defective.

5.4 Electrical connection (Qualified specialist)

⚠ WARNING

Risk of electric shock due to incomplete assembly!

→ Only apply power when the housing is closed with the transparent lid.

⚠ WARNING

Risk of electric shock due to incorrect connections!

- Electrical connections must always be carried out by authorised specialists.
- Observe VDE and utility company regulations.
- Install pumps for swimming pools and their protection according to DIN VDE 0100-702.
- Observe DIN EN 60730 part 1.
- Install a disconnecting device with at least a 3 mm contact gap per pole to interrupt the power supply.
- Protect power supply with a ground fault circuit interrupter, nominal residual current $I_{FN} \leq 30 \text{ mA}$.
- Only use suitable pipe types according to regional regulations.
- Adjust minimum diameter of the electrical pipes to accommodate the motor output and pipe length.
- If hazardous situations can occur, provide an emergency off switch according to DIN EN 809. The builder/operator must make a decision according to this standard.
- Connection by customer:
 - Fuse protection 1 phase 230 V/3 phase 400 V safety fuse 10 A time delay
 - Rated short circuit breaking capacity $I_{cw} \leq 6 \text{ kA}$
- Black plug terminals and pins carry voltages up to 230 V. Green plug terminals and pins may only be connected potential-free.
- Before voltage is connected to the control, all pin strips must be occupied by the appropriate plug terminals.
- Mains power supply (L,N) 230 V, 50/60 Hz (continuous voltage)

5.4.1 Replacing fuses

A 1 AT plug fuse is integrated in the device. This has the order number 2716700121.

→ Only use the fuse type specified by us.

5.4.2 Battery replacement

A CR 2032 battery is integrated in the device. The battery is necessary to maintain the current time.

5.4.3 Water detector (optional)

A water detector can be connected as an optional accessory. This has the order number 2716605018 (cable length 10 m).

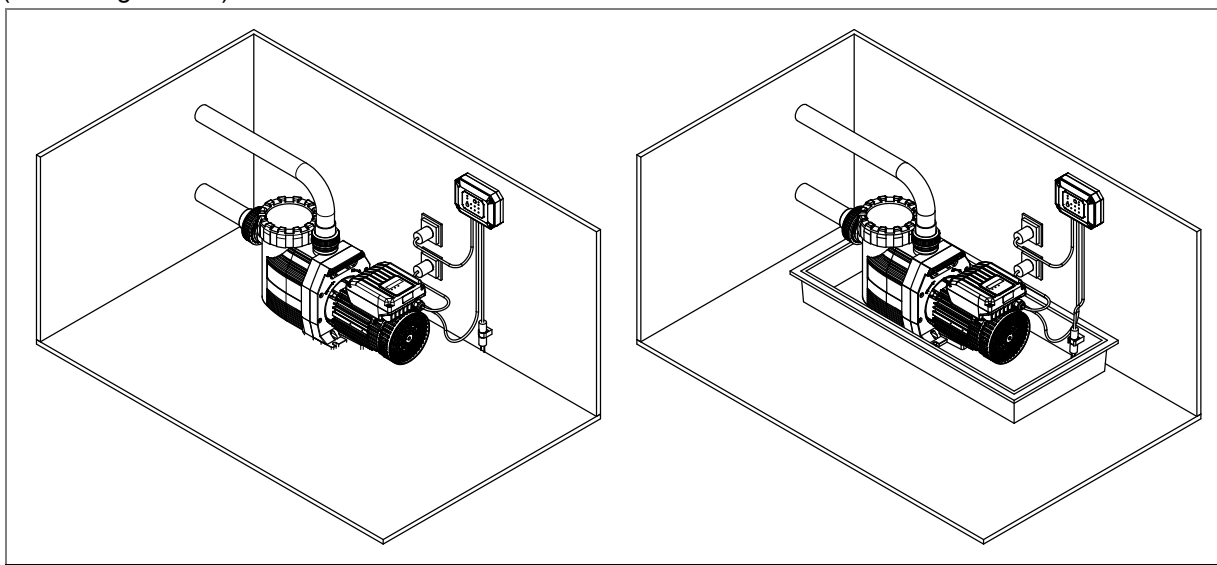


Fig. 6

5.4.4 Terminal connection table

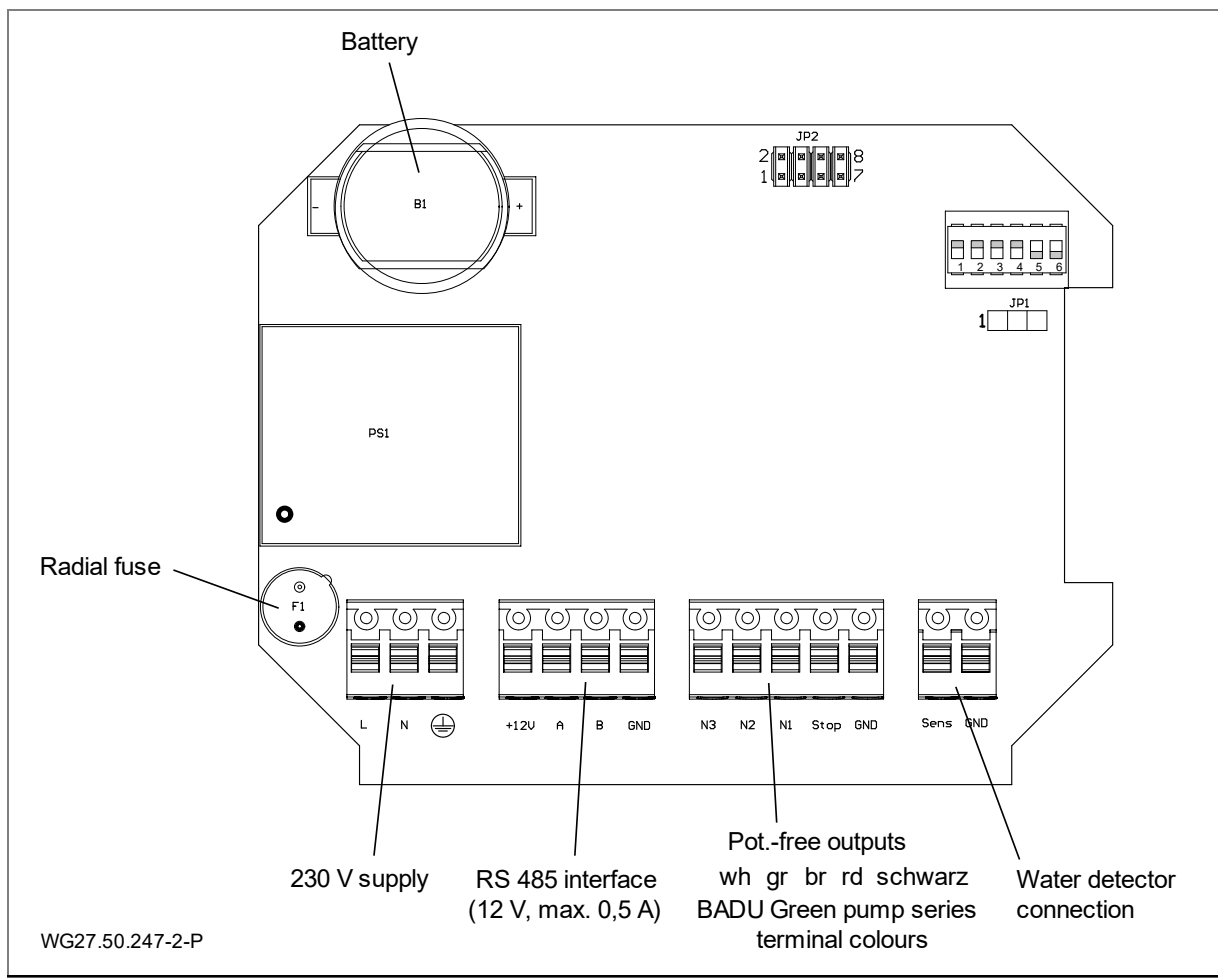


Fig. 7

To connect the cables, first pull the plug off the pin header upwards. The wires with press-fit wire end ferrules can therefore be inserted conveniently under the orange opening points without tools.

5.4.5 Mains power supply

As an alternative to use of the power cable provided, fixed wiring of the supply voltage can also be established via the rear panel. The same applies to the pump control cable. A visually appealing installation can be achieved as a result.

Preconfigured cut-out markings are provided in the rear housing panel for this purpose. These can be pushed through or drilled out.

➔ Wires are recommend instead of a rigid cable for connection via the rear panel. See point 11 on page 49

5.4.6 DIP switches

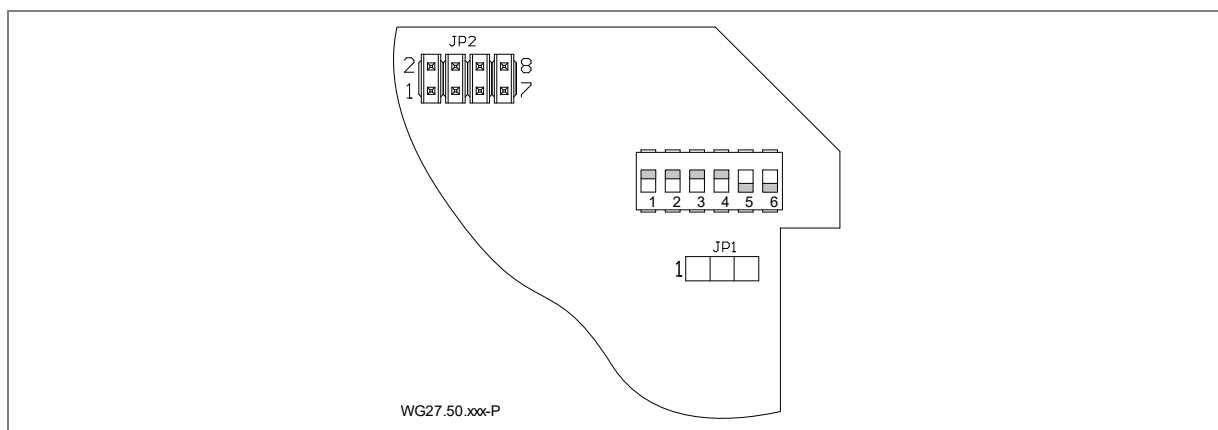


Abb. 8

DIP switches 1-4 should always be positioned upwards. Switches 5-6 should be positioned downwards.

6 Commissioning/Decommissioning

6.1 Preparation for initial commissioning

The following sequence is recommended for trouble-free initial commissioning:

1. Mounting the rear of the housing on the wall (cover not mounted).
2. Insert the cable into the cover and wire according to Chapter “Electrical connection”.
3. Download the BADU Connect app from the app store and install it on the device.
4. Realising initial configuration of the device. See point 6.2 on page 17
 - If the cover has not yet been fitted, both the QR code and type plate can be scanned or read without difficulty.
5. Place the cover on the rear of the device and tighten with the screws.

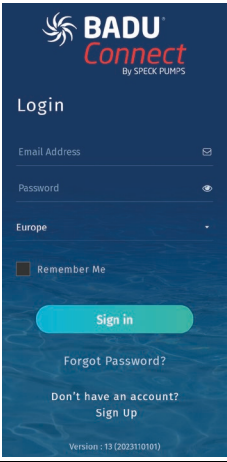
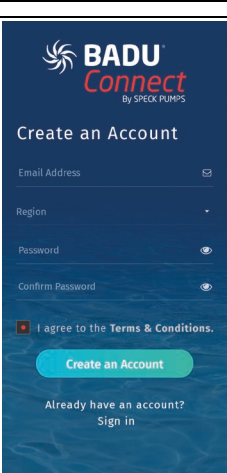
6.2 Initial configuration of the device

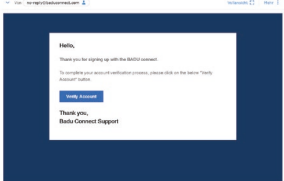
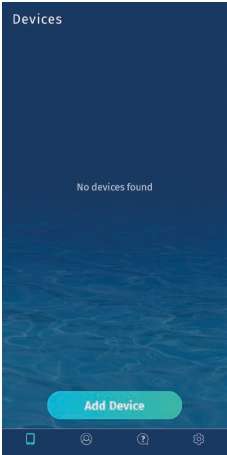
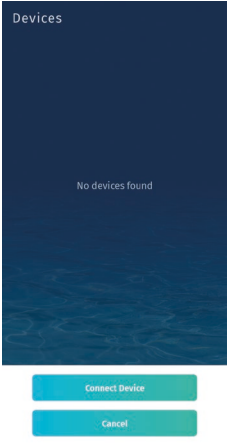
Proceed as described in the following steps for initial configuration of the device.

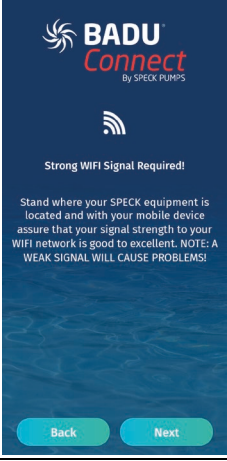
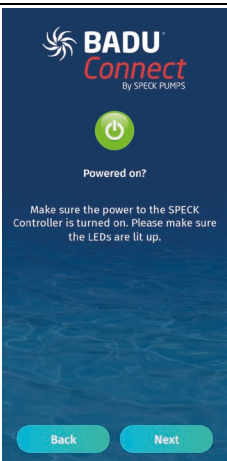
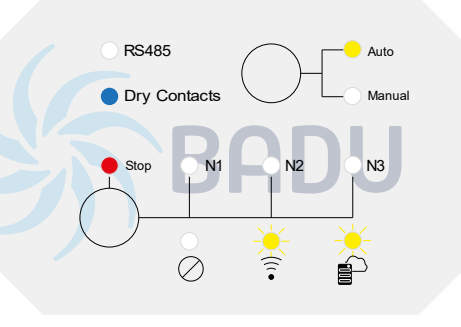
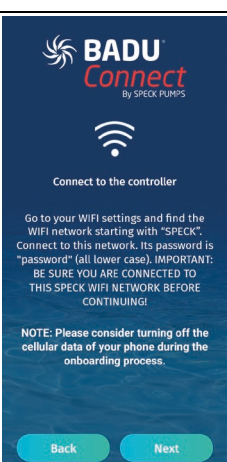
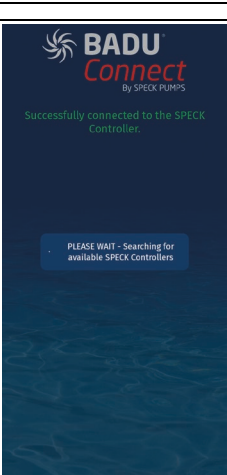
1. Download the “BADU Connect” app from the app store.

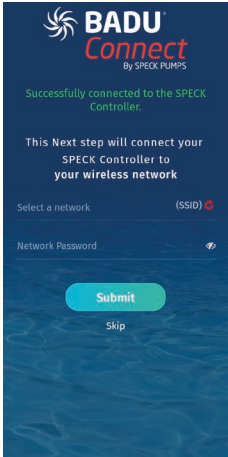
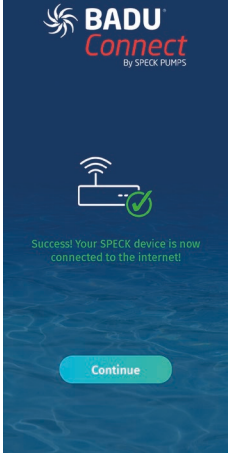
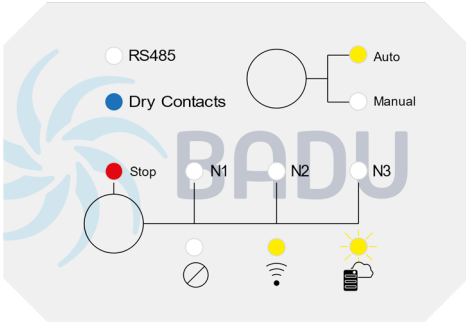
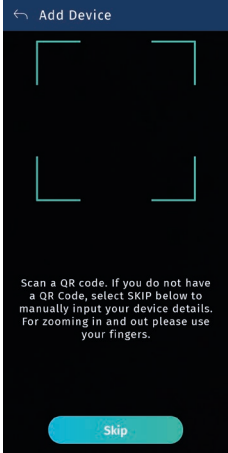
	QR code for Apple Store
	QR code for Play Store

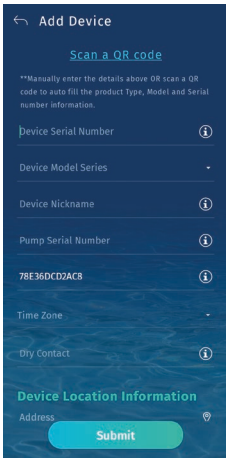
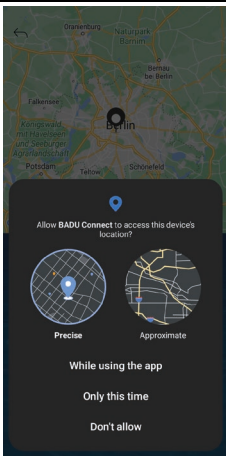
2. Open the “BADU Connect” app.

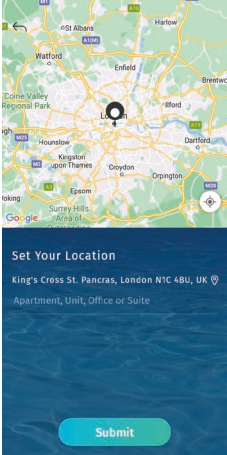
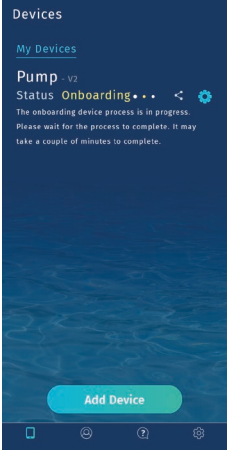
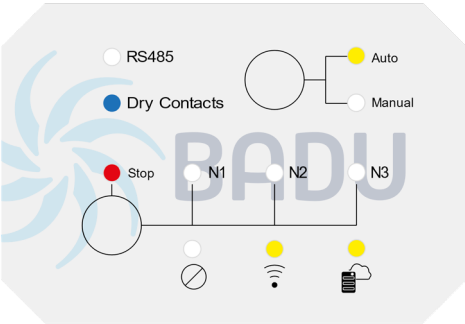
	The login window appears. If you are already registered, you will need to enter your email address and password here. Then press Sign in. Click “Forgot Password” if you have forgotten your password. If you have not yet created an account, click “No Account? Register”.
	The following information must be input to create a new account. • Email address • Region (North America or Europe), depending on where the device is used. • Password (min. 8 characters) • Confirm password • T&Cs must be accepted. The account can then be created Create an Account.

	A message is received indicating that an email was sent. Open the email and create the user.
	Click Add Device to show a new device in the app.
	Click the Connect Device button.
	Read the following notices on the screen and confirm these with Next.

 Strong WIFI Signal Required! Stand where your SPECK equipment is located and with your mobile device assure that your signal strength to your WIFI network is good to excellent. NOTE: A WEAK SIGNAL WILL CAUSE PROBLEMS! Back Next	It is important that the device used to configure the app has a strong WIFI signal. Errors can otherwise occur when trying to establish a connection.
 Powered on? Make sure the power to the SPECK Controller is turned on. Please make sure the LEDs are lit up. Back Next	The BADU NetLink must be activated and the two LEDs (WIFI and Cloud) must flash on the device. 
 Connect to the controller Go to your WIFI settings and find the WIFI network starting with "SPECK". Connect to this network. Its password is "password" (all lower case). IMPORTANT: BE SURE YOU ARE CONNECTED TO THIS SPECK WIFI NETWORK BEFORE CONTINUING! NOTE: Please consider turning off the cellular data of your phone during the onboarding process. Back Next	The WLAN should be changed in the next step. Go into the settings on the device for this purpose and select the WLAN of BADU NetLink (SPECK_...). ➔ The password for the connection with the network is: password Return to the "BADU Connect" app and confirm the step with Next. Tip: Deactivate the mobile telephony data on the device while BADU NetLink is connected.
 Successfully connected to the SPECK Controller. PLEASE WAIT - Searching for available SPECK Controllers	A search is initiated for the available controller (BADU NetLink).

	If this is found, the home network must be configured in the app. Select your own network for this purpose and enter the password. Confirm with Submit.
	This display appears if the link is successful. This should be confirmed with Next. 
	The QR on the rear of the PCB can be scanned to configure the device in the app. However, data can also be entered manually. Proceed with Skip for this purpose.

	The fields should be filled out so as to continue from the mask. • Device serial number: The number fills itself out automatically if the QR code on the rear of the PCB is scanned. This can be found on the rear of the PCB when it comes to filling out the serial number manually. • The existing pump should be selected for the device model series. Different pumps are displayed when the field is clicked. See point 0 on page 23. • The device nickname can be freely selected. This name is displayed later in the app. • The pump serial number can be found on the SPECK type plate on the pump type plate. • The MAC address is filled out automatically if the device is connected with WLAN. • Select the correct zone for the "Time Zone" (for Germany: Europe/Berlin/Germany). • The location information is optional information. This can be retrieved directly if the location is indicated. Confirm with  when everything is filled out. The device is now connected and displayed in the overview.
	Time zone selection.
	The app wants to retrieve the device location (address). It is possible to select between "exact" and "approximate" here. Use of the location can also be restricted or blocked. The device location is an optional detail and not absolutely essential.

	The location can also be indicated with the address input. Following entry, click Submit . The location is an optional detail and not absolutely essential.
	Submission of all data is followed by device onboarding. If this is concluded, either a new device can be added or work can continue with the device created. 

6.2.1 Selection of the pump type (model ID) and the type of control

Following scanning of the QR code, the pump type and, consequently, the type of control can be selected under “Device Model Series”.

Device control via “Dry Contact”



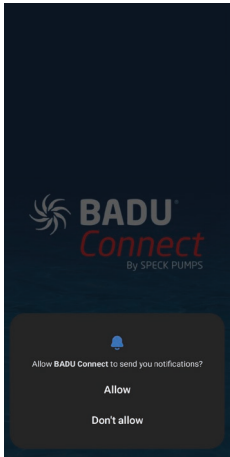
Abb. 9

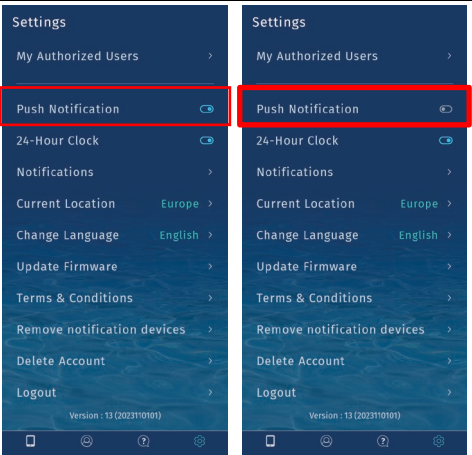
Control via “Dry Contact” and “Modbus”

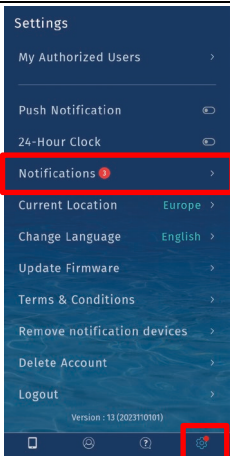


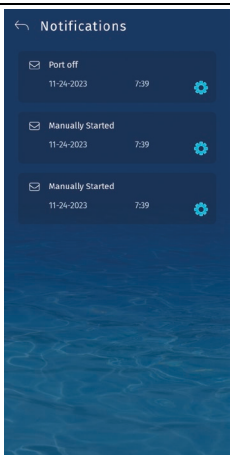
Abb. 10

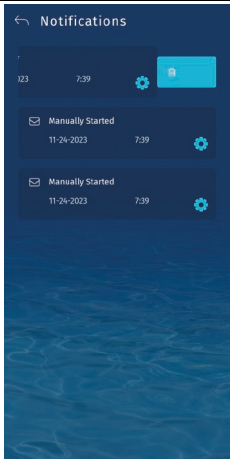
6.2.2 Notifications

	It is possible to configure in the app whether push notifications should be permitted or not. Push notifications will be received in the account if they are approved. The notifications should also be activated on the mobile device, otherwise the push notifications will be blocked.
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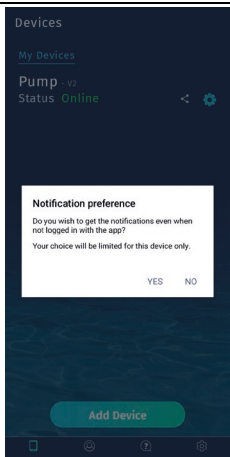
	Should the decision be subsequently changed, this can be realised in the settings. Set the push notification button at On or Off for this purpose.
--	---

	The notifications are displayed in the app. A red dot appears in the settings. ➔ Click “Settings”. The number of notifications is displayed after “Notifications”.
---	---

	➔ Click “Notifications”. The notifications are displayed.
---	---

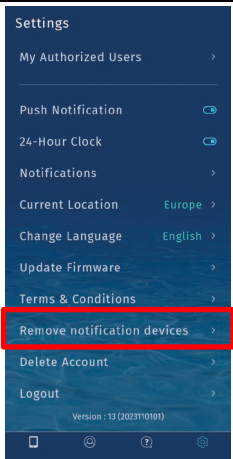
	➔ To delete these, either push the notification to the left or click the gearwheel. A query is received as to whether the notification should be deleted.
---	---

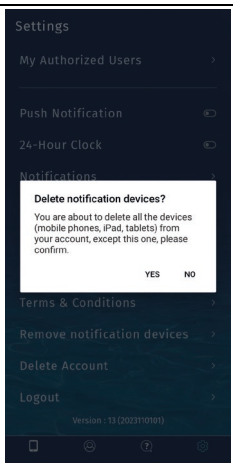
6.2.3 Notification in the case of logged out devices

	If the receipt of notifications is configured on the device, these are also displayed if the device is logged out.
--	---

6.2.4 Delete notification devices

If notifications are configured on several devices, these devices can be deleted again in the settings (except for the device being currently used).

	Click “Remove notification devices” in the settings.
---	--

	Deletion should be confirmed in a separate window. Only the device currently being used remains active. All other notification devices are deleted.
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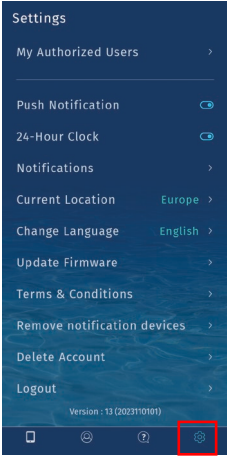
NOTICE

“Log out” should also be clicked if the device currently being used should also not receive any more notifications. A query is received as to whether the notification device should be deleted. A tick should be placed to confirm this. If the tick has been placed, the device that is currently being used is also removed.

7 Operation

7.1 Settings in the app

Different settings can be configured in the app. The settings display can be accessed in the app via the gearwheel at the bottom right.



My authorised users: Further users of this device are listed here. These users are created via “Share Access”. See point 0 on page 30

Push notifications: Push notifications can be activated or deactivated. See point 0 on page 24

24-hour clock: It is possible to switch between the 12 and 24-hour clock.

Notifications: All notifications generated by the app are displayed here.

Current location: The location indicated when logging into the app is displayed here. This cannot be altered any more.

Change language: The app language can be changed here.

Update firmware. Whether the firmware is updated for all connected devices or an OTA update is pending is displayed here.

Personal data report: The report on personal data (according to Art. 13/14 Data Protection) is opened here by clicking. “Done” allows the user to return to the app.

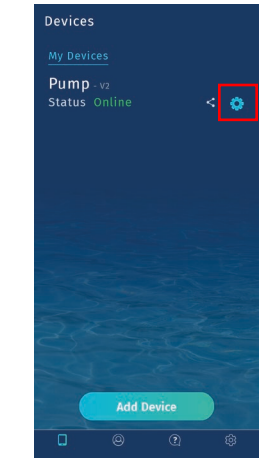
Terms & Conditions: The Terms & Conditions of SPECK Pumpen are stored here. The user can return to the app via the cross at the top right.

Remove notification devices: Connected devices such as mobile phones, tablets, etc. that receive app notifications when logged out can be removed again here. This should be additionally confirmed. All devices are deleted, except the device currently being used.

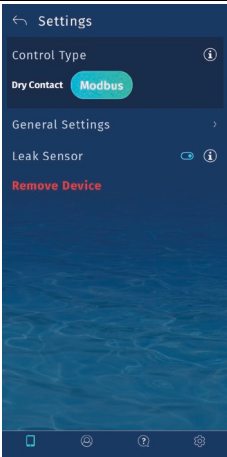
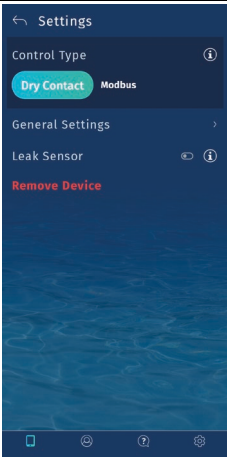
Delete account: The account can then be deleted here. Deletion must be confirmed. All personal data is deleted.

Logout: Logout from the app occurs. It is possible to log in again the next time the app is opened.

7.2 Changing device settings

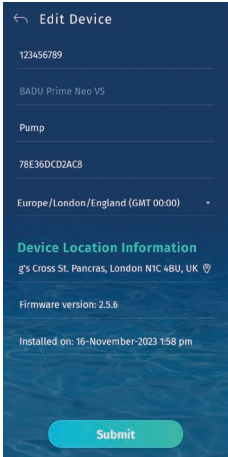
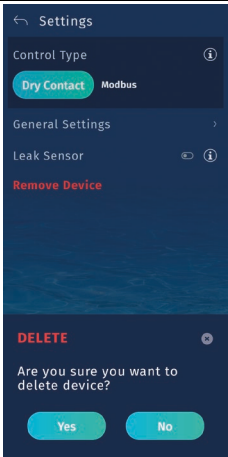


1. Enter the device overview to edit the device settings.
2. Click on the gearwheel next to the device.

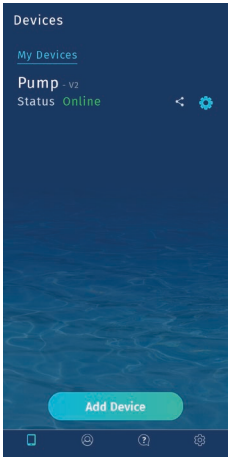
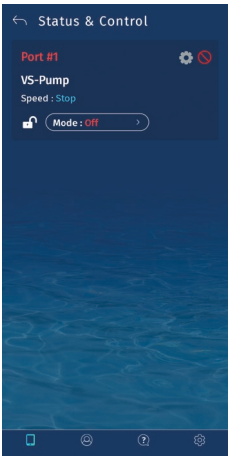


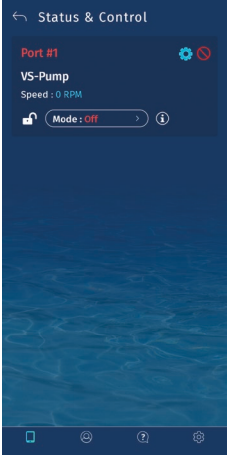
The following settings can be realised here:

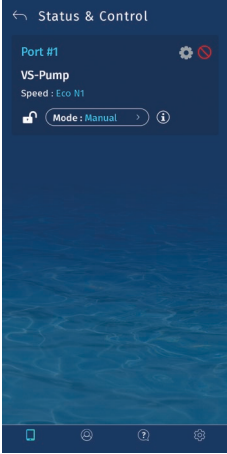
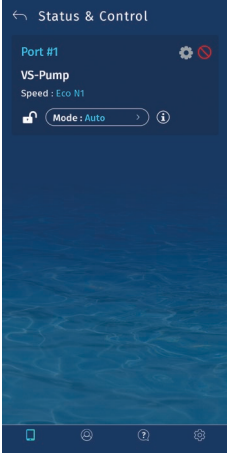
Control type: Depending on the model ID, it is possible to change between **Dry Contact** and **Modbus** in “Control Type”. The active control type is highlighted in turquoise. If the other control type is clicked, a short delay may occur until the setting changes. The other control type is then highlighted in turquoise.

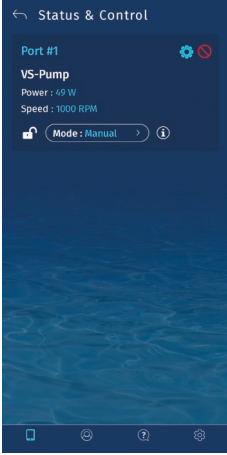
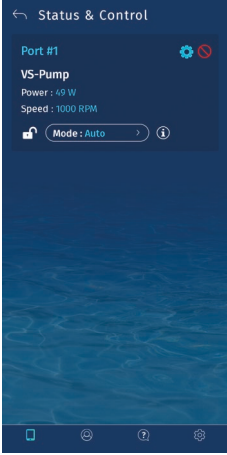
	General settings: Details from the device setup can be changed here. Only the device model series cannot be changed. The device should be removed from the app and then newly created if an incorrect pump (model ID) is selected. Confirm device changes with Submit .
	Leak sensor: The “Leak Sensor” connection can be activated and deactivated. Depending on whether a leak sensor is used or not. Push notifications should also be activated. See point 0 on page 24 Remove device: “Remove Device” removes the device from the list of devices. Clicking is followed by a confirmation request as to whether the device should really be deleted. This should be confirmed with Yes .

7.2.1 Pump settings

	The pump in the overview of devices should be clicked to access the pump and its settings. The “Status & Control” display appears.
	If the “Potential-free” control type is selected, either “Stop” or the speed N1, N2 or N3 is indicated as the speed.

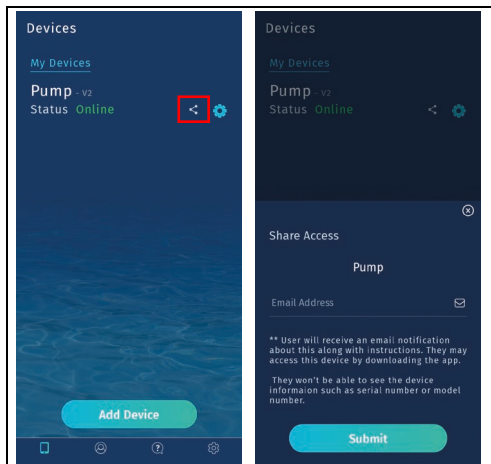
	If the “Modbus” control type is selected, either “Stop” or the selected speed in rpm is indicated as the speed. The performance is also indicated on the display.
---	---

		“Potential-free” control type If the pump is activated either through manual mode or automatic mode and running, the depiction on the “Status & Control” display is blue and the mode is displayed. The current speed is also indicated in the speed level (N1 N2 or N3).
--	--	--

		“Modbus” control type If the pump is activated either through manual mode or automatic mode and running, the depiction on the “Status & Control” display is blue and the mode is displayed. The current speed is also displayed.
---	---	---

7.3 Share access

It is possible to share access to the device with other users. The device itself can only be created with an email address. The user must be appropriately created to grant access to several people in a household. The shared user receives an email.

	1. Click the three dots next to the Online status. 2. Enter the email address and click .
---	--

3. Open the email and create the account.
4. Verify the email.
5. Install the app on the second device and log in there with the shared access.

NOTICE

Settings actuated by the main user are also changed by the user of the shared access. If the main user configures a key lock, editing in the case of shared access is blocked. The key lock cannot be cancelled here. This must be realised by the main user.

NOTICE

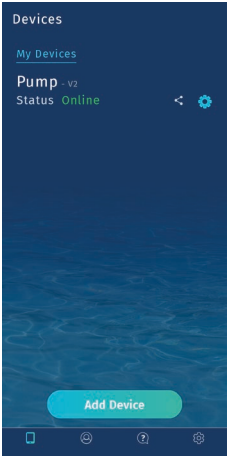
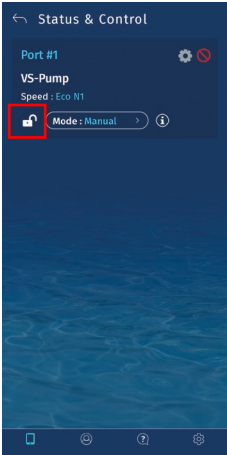
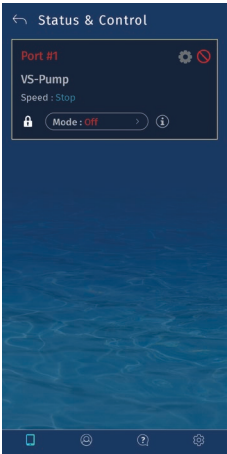
All settings actuated through shared users generate a notification on the access of the main user. The push notification must be activated in the device for this purpose. See point 0 on page 24

7.4 Key lock

A key lock can be activated to prevent inadvertent changes on the device. Shared devices also have a key lock and cannot be changed.

NOTICE

The pump continues to function in the previous setting while the key lock is active. Changes to the settings can only be realised if no key lock is present.

	Select the desired device (pump) to activate the key lock.
	The lock can be closed at the port in the new "Status & Control" window.
	A yellow frame appears around the display. Click the lock again to remove the key lock once again. The yellow frame disappears.

7.5 Deactivate/activate the program/port

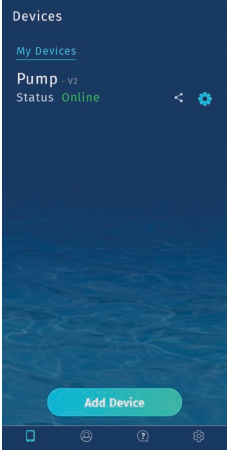
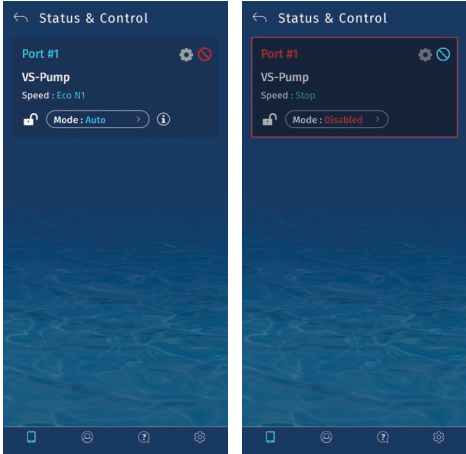
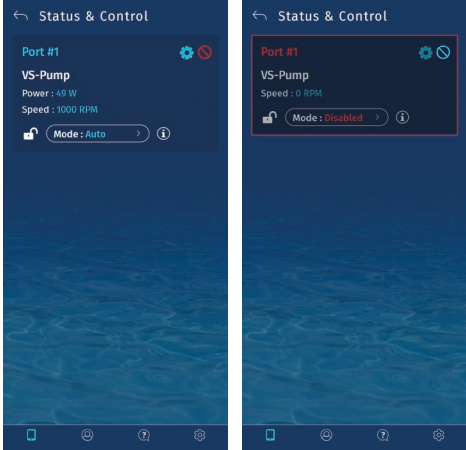
The device port can be deactivated to prevent inadvertent activation of the pump. No changes can be made on the pump while the port is deactivated. This can be practical (e.g. over the winter, during a holiday or for servicing).

There are two options for realising this. Either press the button (button 1 for 10 seconds) on the device or directly in the app.

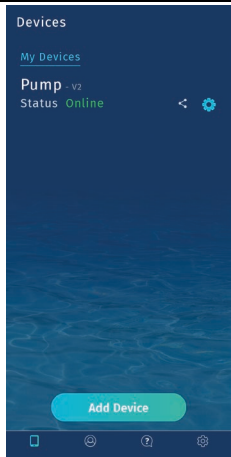
The pump is in manual mode and runs at the configured speed. If the port is deactivated, the pump stops long enough until the deactivation can be cancelled. The device then switches to automatic mode, but only reactivates again if a program is active. If the program ends, the pump stops. The pump stops if the pump starts outside the program runtime.

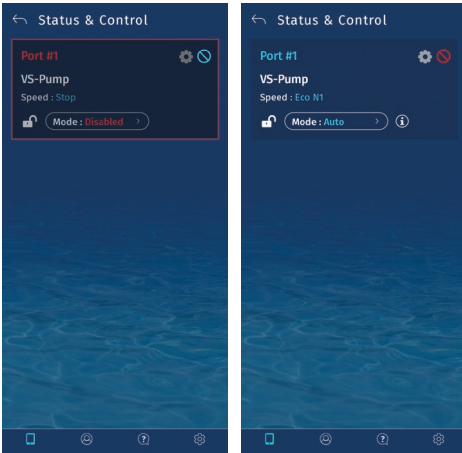
The pump is in automatic mode and runs at the configured speed. If the port is deactivated, the pump stops long enough until the deactivation can be cancelled. The pump then restarts at the speed configured in the program and runs until the program ends. If the program ends, the pump stops. The pump stops if the pump starts outside the program runtime.

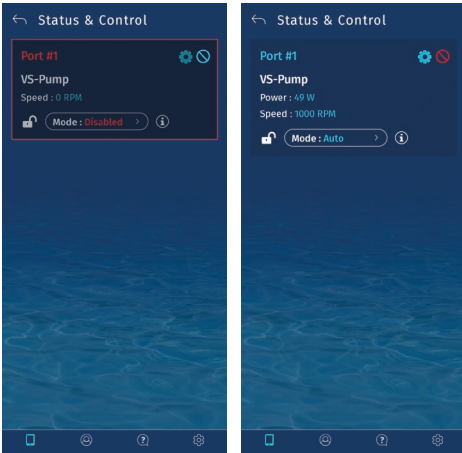
7.5.1 Deactivation of the program/port in the app

	Select the desired device by clicking it.
	“Potential-free” control type Click the crossed out circle at the top right in the new “Status & Control” window. A red frame appears around the port display. The speed of the pump changes to “Stop” and the mode is set to “Deactivated”.
	“Modbus” control type Click the crossed out circle at the top right in the new “Status & Control” window. A red frame appears around the port display. The speed of the pump changes to “0 RPM” and the mode is set to “Deactivated”.

7.5.2 Activation of the program/port in the app

	Select the desired device by clicking it.
---	--

	“Potential-free” control type Click the crossed out circle at the top right in the new “Status & Control” window. The red frame around the port display disappears. The speed of the pump changes accordingly and the mode is set to “Off” or “Auto” (programme running).
--	---

	“Modbus” control type Click the crossed out circle at the top right in the new “Status & Control” window. The red frame around the port display disappears. The speed of the pump changes accordingly and the mode is set to “0 RPM” or “1000 RPM” (programme running).
---	---

7.5.3 Deactivation of the program/port on the device through the buttons

1. Hold button 1 on the device depressed for 10 seconds.
2. All the LEDs illuminate in the lower strip. The LED for the selected speed extinguishes. The pump stops.

NOTICE

Changes realised directly on the device are also imported correspondingly into the app and displayed there.

7.5.4 Activation of the program/port on the device

The port must first be deactivated in order to activate it on the device. All 3 LEDs illuminate in the lower strip.

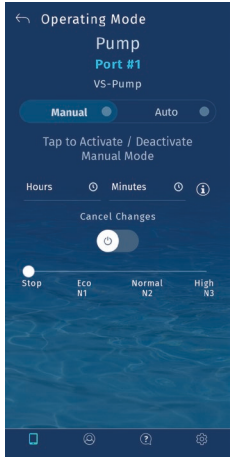
- 1. Hold button 1 on the device depressed for 10 seconds.
- 2. The left LED in the lower strip extinguishes, and only two speeds are still illuminated. The device starts again in automatic mode.

NOTICE

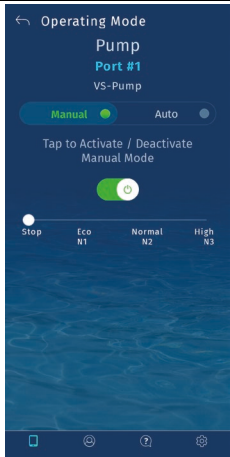
Changes realised directly on the device are also imported correspondingly into the app and displayed there.

7.6 Settings in the “Potential-free” control mode

7.6.1 “Manual” operating mode

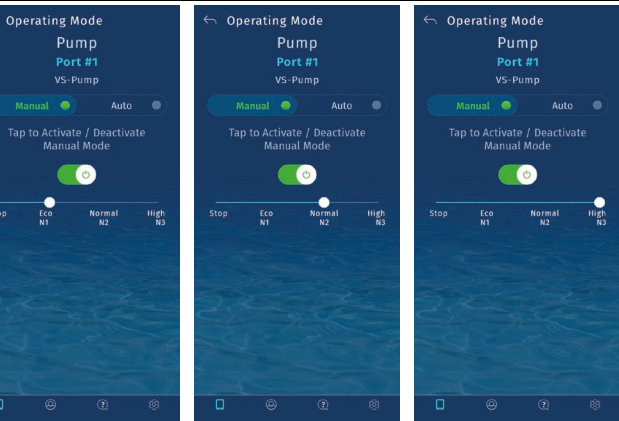


The selected mode is highlighted in blue, and the round button is not illuminated. The “Manual” font and the round button only turn green when the mode is activated. The appropriate LED on the BADU NetLink also illuminates.



Click the On button to activate the pump. The “Manual” font and the round button illuminate green.

Three seconds are counted down, then the mode is activated.



The pump can change to the following speed levels via the bar:

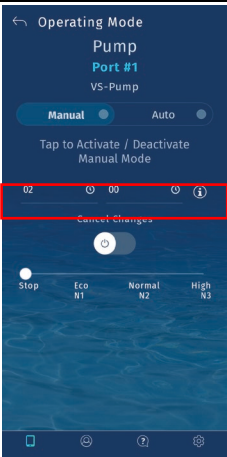
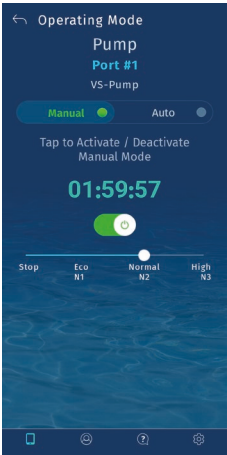
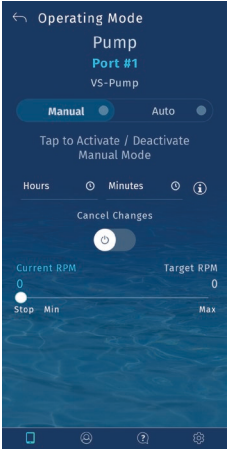
- Stop
- Eco (N1)
- Normal (N2)
- High (N3).

Pull the button to the desired level for this purpose.

NOTICE

Only the direct speed level can be selected. A more accurate selection or another speed is not possible. Hardware priming should be configured in the pump. Observe the pump instructions in this respective.

7.6.2 Timer in “Manual” operating mode

	Manual mode can be started and stopped with a timer. Configure a time for the timer (hour, minute) prior to activating the mode. Select the desired speed level.
	Click the On/Off button to start the timer. The pump starts after three seconds for the configured time and at the selected speed level.
	The pump switches off again after the timer runs out, and manual mode is terminated. The display switches to automatic mode. The pump starts if a program is active, otherwise the pump stops. The timer can be deactivated early by clicking the On/Off button.

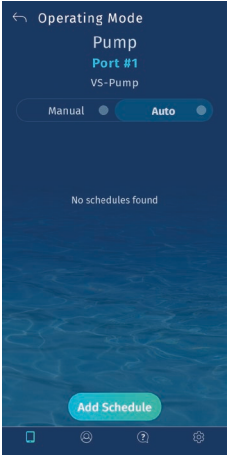
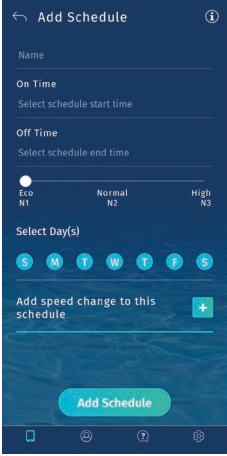
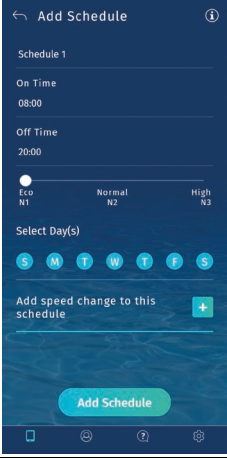
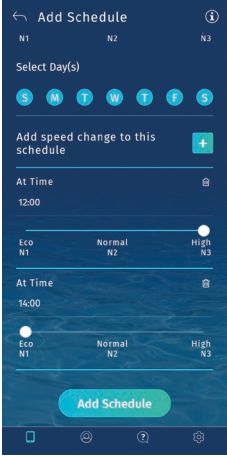
NOTICE

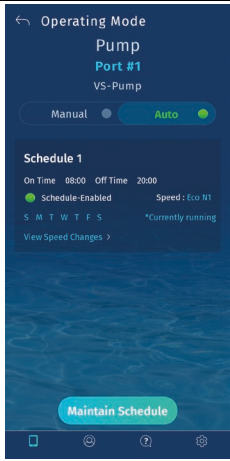
The speed can be changed while the timer is running. The buttons on the device can also be used to change the speed.

7.6.3 Automatic mode

Programs can be stored in automatic mode so that the pump runs in the configured time.

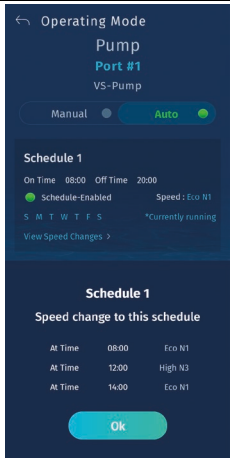
7.6.4 Creating a program

	Click the  button.
	Enter a name for the program. Enter the start and end time (On time, Off time) for the program.
	Select the speed level. Push the button to the desired speed for this purpose. A more accurate selection or another speed is not possible. The appropriate day should be selected. All days are selected in the basic settings. If the program should not run on certain days, click these days to deselect them.
	Click the plus sign for this purpose and select a time. Select the new speed level. Click  to save the program. Up to 32 programs and speed changes can be stored and entered. Note: Note that “Start”, “Stop” and a “Speed Change” are 3 programs from the 32 available slots.



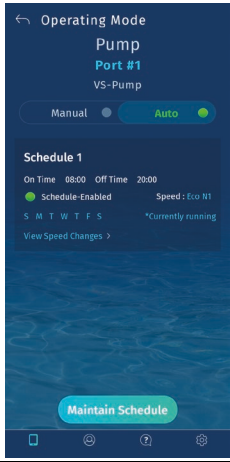
The round button illuminates green and the word “Auto” is also green if the program is active and running.

The configured programs are shown on the display. The information “*Currently running” is displayed if a program is active.

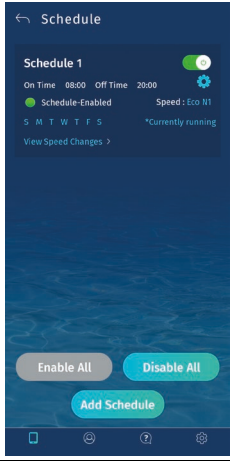


Any speed changes stored in the program can be displayed with “View Speed Changes”. A new window opens which can be closed again with **No**.

7.6.5 Program maintenance

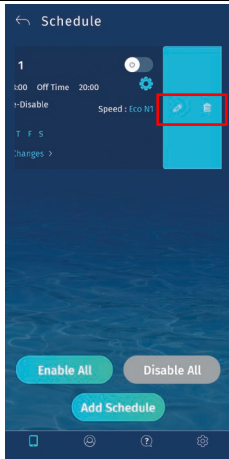


Click **Maintain Schedule** to change or delete created programs or add new programs.



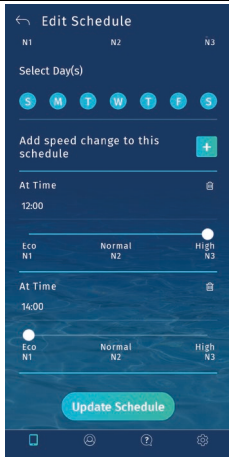
It is possible here to activate or deactivate all programs. A button is greyed out in each case. The option is then blocked and cannot be selected.

Click **Add Schedule** to add a new program. Then proceed as described in Chapter “Creating a program”. See point 7.6.4 on page 36



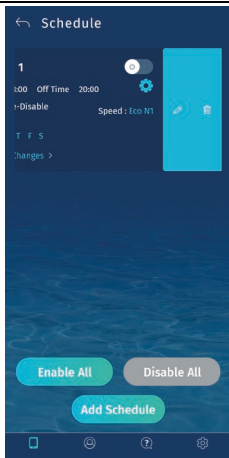
The following steps are necessary to change an existing program:

- ➔ In the case of the program to be changed, click the gearwheel on the right-hand side or push the display to the left.
- ➔ A bar opens on the right-hand side with a pen and a waste basket.
- ➔ Click the pen.

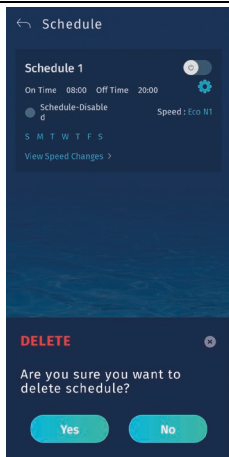


- ➔ Realise the changes in the program.
- ➔ The changes are saved with Update Schedule and one returns to the overview again.

The following steps are necessary to delete an existing program.



- ➔ In the case of the program to be changed, click the gearwheel on the right-hand side or push the display to the left.
- ➔ A bar opens on the right-hand side with a pen and a waste basket.
- ➔ Click the waste basket.



- ➔ Confirm the message with "Yes" if the program is really to be deleted.

7.7 Settings in the “Modbus” control mode

NOTICE

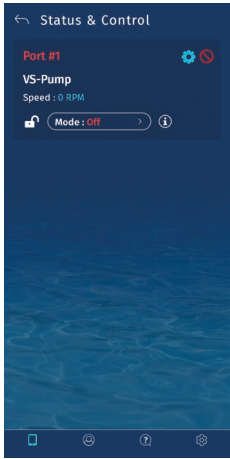
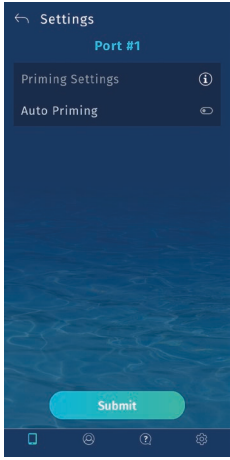
- It is imperative that a device be connected to the BADU NetLink for a stable Modbus connection. The app will otherwise not run stably and produce errors.
- The RS485 LED must illuminate.
 - If the LED flashes, it is an indication that an unstable RS485 connection exists.

7.7.1 Priming settings

A priming duration/priming speed can be configured in the “Modbus” control mode.

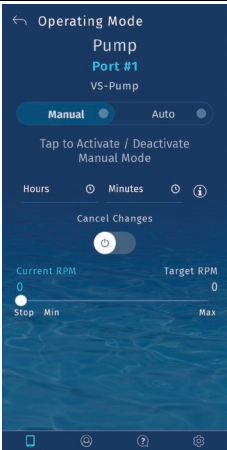
NOTICE

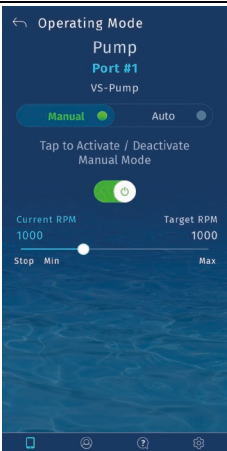
Priming should only be deactivated if the pump that is not self-priming is mounted below the water level. This ensures that the pipe of the pump is always filled with water. (Hardware: Default 5 min. at 3000 rpm)

	Click the blue gearwheel next to port #1 in the “Status & Control” display.
	Automatic priming can be activated or deactivated.
	Indicate the priming duration in minutes and the priming speed in rpm. Changes can be confirmed with  . Priming duration: 1 – 15 minutes Priming speed: 600 – 3000 rpm

7.7.2 “Manual” operating mode

The selected mode is highlighted in blue, and the round button is not illuminated. The “Manual” font and the round button only turn green when the mode is activated. The appropriate LEDs on the BADU NetLink illuminate.

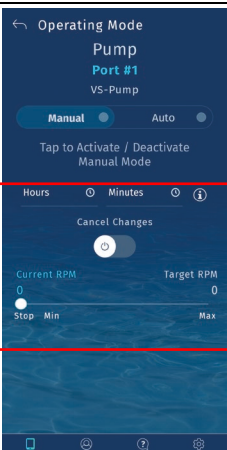
	Click the On button to activate the pump. Three seconds are counted down, then the mode is activated.
---	---

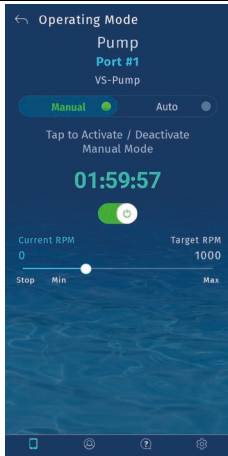
	The speed of the pump can be determined on the beam: • The speed can be defined between 0 (Off) and 2850 rpm or 3000 rpm (depending on the model). • The speed can be increased or reduced in steps of 10 rpm. Push the button on the beam to the desired speed for this purpose. The On button remains orange until the change to the level occurs. A delay of a few seconds is normal.
--	--

7.7.3 Timer in “Manual” operating mode

NOTICE

The speed can be changed while the timer is running.

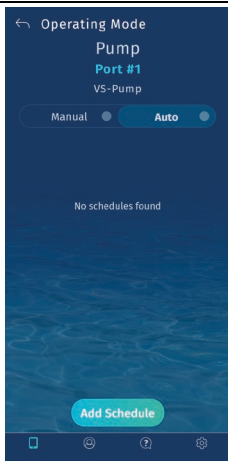
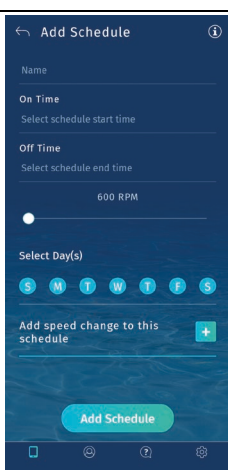
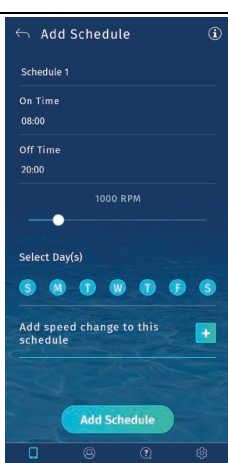
	➔ Manual mode can be started and stopped with a timer. ➔ Configure a time for the timer (hour, minute) prior to activating the mode. ➔ Select the desired speed. ➔ Click the On button to start the timer.
---	---

	The pump starts after three seconds for the configured time and at the selected speed. The button remains orange until the timer is activated. The pump switches off again after the timer runs out, and manual mode is terminated. The display switches back to automatic mode. If a program is active, the pump runs on in this program. The timer can be deactivated early by clicking the On button. The speed can be adapted while the timer is running. Simply move the dot on the beam to the left or right for this purpose.
---	--

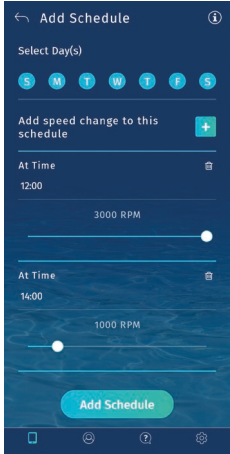
7.7.4 Automatic mode

Programs can be stored in automatic mode so that the pump runs in the configured time.

7.7.5 Creating a program

	Click the Add Schedule button.
	Enter a name for the program. Enter the start and end time (On time, Off time) for the program.
	Select a speed. Push the button to the desired speed for this purpose. 600 rpm are preconfigured as the minimum speed. The appropriate day should be selected. All days are selected in the basic settings. If the program should not run on certain days, click these days to deselect them.

A change of speed can be stored in the program.



Click the plus sign for this purpose and select a time.

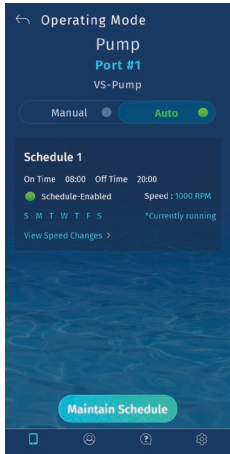
Select the new speed.

Click **Add Schedule** to save the program.

Up to 32 programs and speed changes can be stored and entered.

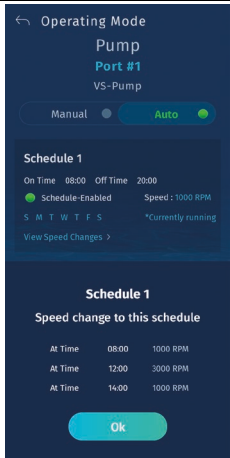
Note:

Note that “Start”, “Stop” and a “Speed Change” are 3 programs from the 32 available slots.



The round button illuminates green and the word “Auto” is also green if the program is active and running.

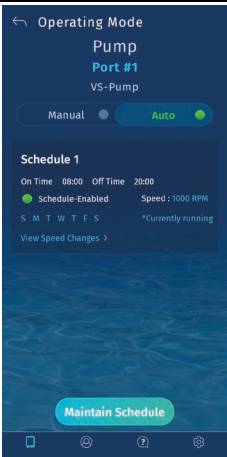
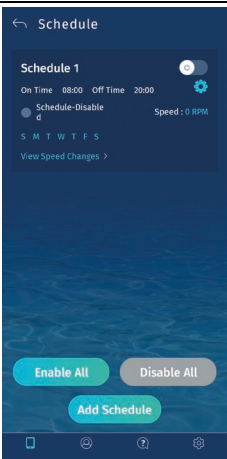
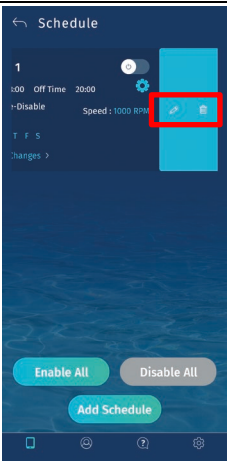
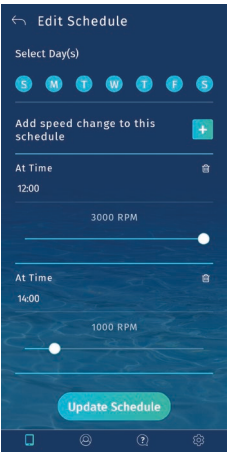
The configured programs are shown on the display. The information “*Currently running” is displayed if a program is active.



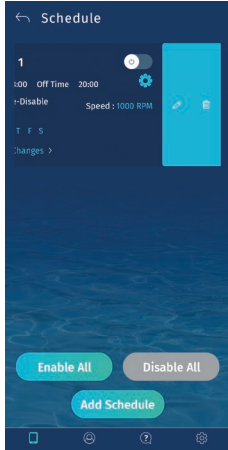
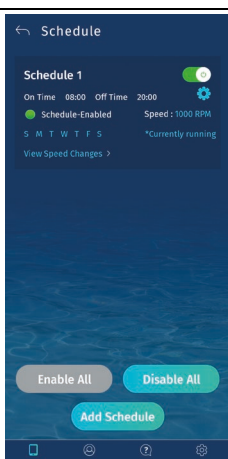
At Time	08:00	1000 RPM
At Time	12:00	3000 RPM
At Time	14:00	1000 RPM

Any speed changes stored in the program can be displayed with “View Speed Changes”. A new window opens which can be closed again with “Okay”.

7.7.6 Program maintenance

	Click Maintain Schedule to change or delete created programs or add new programs.
	It is possible here to activate or deactivate all programs. A button is greyed out in each case. The option is then blocked and cannot be selected. Click Add Schedule to add a new program. Then proceed as described in Chapter "Creating a program". See point 7.7.5 on page 41
	The following steps are necessary to change an existing program: ➔ In the case of the program to be changed, click the gearwheel on the right-hand side or push the display to the left. ➔ A bar opens on the left-hand side with a pen and a waste basket. ➔ Click the pen.
	➔ Realise the changes in the program. ➔ The changes are saved with Update Schedule and one returns to the overview again.

The following steps are necessary to delete an existing program.

	➔ In the case of the program to be changed, click the gearwheel on the right-hand side or push the display to the left. ➔ A bar opens on the left-hand side with a pen and a waste basket. ➔ Click the waste basket.
	➔ Confirm the message with "Yes" if the program is really to be deleted.

8 Faults/troubleshooting

8.1 LED flashing behaviour

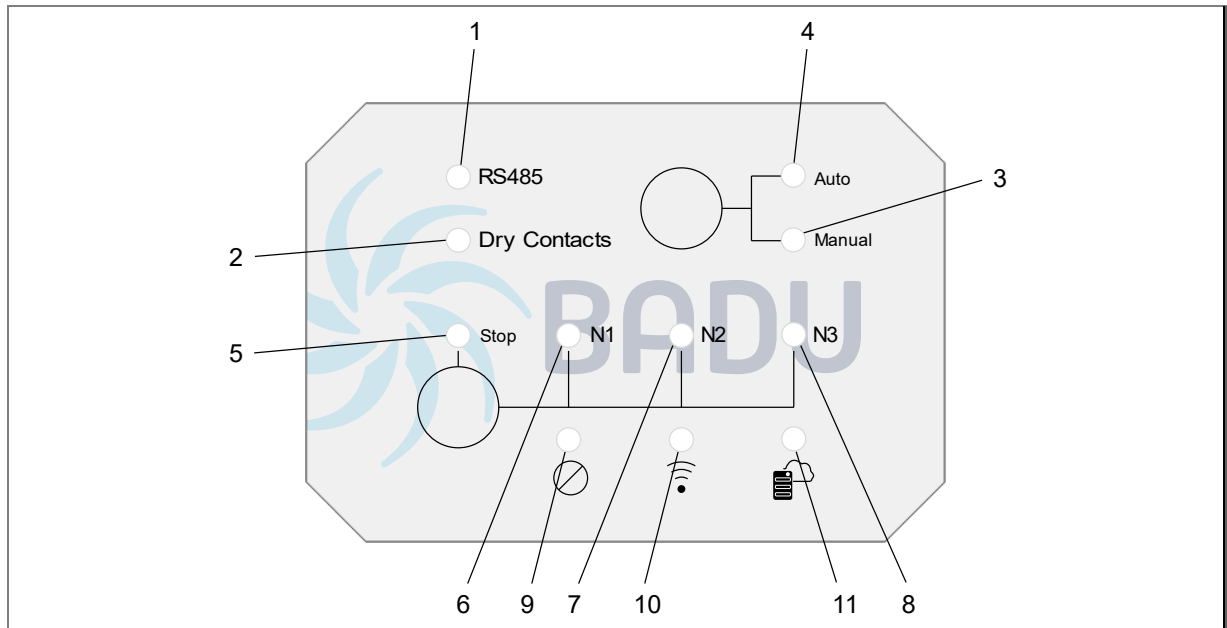


Abb. 11

1	Modbus (RS485)	7	N2 speed
2	Dry contacts	8	N3 speed
3	Manual mode	9	Disable/Deactivate
4	Auto mode (program)	10	WIFI
5	Stop	11	Cloud
6	N1 speed		

- | | |
|-------------------------------|----------------------------|
| ✓ LED illuminates permanently | 1▣ LED flashes once |
| * LED is permanently off | 2▣ LED flashes twice |
| ▣ LED flashes continuously | 3▣ LED flashes three times |

Some LED scenarios in “Modbus” mode

Description	1	2	3	4	5	6	7	8	9	10	11
Device waiting for WIFI connection to network	✓	x	x	✓	x	x	x	x	x	1▣	✓
Device waiting on onboarding to server (cloud)	✓	x	x	✓	x	x	x	x	x	✓	1▣
No WIFI connection to router possible	✓	x	x	✓	x	x	x	x	x	2▣	✓
Device is connected to WIFI, but not to the cloud (or cannot connect to the server)	✓	x	x	✓	x	x	x	x	x	✓	2▣
Device realises an OTA update (OTA = over the air)	✓	x	x	✓	x	x	x	x	✓	✓	3▣
Device is connected to the cloud	✓	x	x	✓	x	x	x	x	✓	✓	✓
Device has a fault in the “Modbus” control and stops	▣	x	x	✓	x	x	x	x	✓	✓	✓
Device is in “Modbus” control and stops	✓	x	x	✓	x	x	x	x	✓	✓	✓
Device starts with 0 rpm in manual mode	✓	x	✓	x	x	x	x	x	✓	✓	✓
Device starts with 1,000 rpm in manual mode	✓	x	✓	x	x	✓	✓	✓	✓	✓	✓
Device starts with 0 rpm in automatic mode	✓	x	x	✓	x	x	x	x	✓	✓	✓
Device starts with 1,000 rpm in automatic mode	✓	x	x	✓	x	✓	✓	✓	✓	✓	✓
Device connection is deactivated	✓	x	x	✓	x	x	x	x	✓	✓	✓

Some LED scenarios in “Dry Contact” mode

Description	1	2	3	4	5	6	7	8	9	10	11
Device waiting for WIFI connection to network	x	✓	x	x	x	x	x	x	x	1□	✓
Device waiting on onboarding to server (cloud)	x	✓	x	x	x	x	x	x	x	✓	1□
No WIFI connection to router possible	x	✓	x	x	x	x	x	x	x	2□	✓
Device is connected to WIFI, but not to the cloud (or cannot connect to the server)	x	✓	x	x	x	x	x	x	x	✓	2□
Device realises an OTA update (OTA = over the air)	x	✓	x	✓	x	x	x	x	✓	✓	3□
Device is connected to the cloud	x	✓	x	✓	x	x	x	x	✓	✓	✓
Device is in the “Dry Contact” control	x	✓	x	✓	x	x	x	x	✓	✓	✓
Device is in the “Dry Contact” control mode and in manual mode and stopped	x	✓	✓	x	✓	x	x	x	✓	✓	✓
Device is in the “Dry Contact” control mode and in manual mode and N1 speed	x	✓	✓	x	x	✓	x	x	✓	✓	✓
Device is in the “Dry Contact” control mode and in manual mode and N2 speed	x	✓	✓	x	x	x	✓	x	✓	✓	✓
Device is in the “Dry Contact” control mode and in manual mode and N3 speed	x	✓	✓	x	x	x	x	✓	✓	✓	✓
Device is in the “Dry Contact” control mode and in automatic mode and N1 speed	x	✓	x	✓	x	✓	x	x	✓	✓	✓
Device is in the “Dry Contact” control mode and in automatic mode and N2 speed	x	✓	x	✓	x	x	✓	x	✓	✓	✓
Device is in the “Dry Contact” control mode and in automatic mode and N3 speed	x	✓	x	✓	x	x	x	✓	✓	✓	✓
Device connection is deactivated	x	✓	x	✓	x	x	x	x	✓	✓	✓

9 Maintenance

When?	What?
Regularly	➔ Check the display and clock through the transparent lid.
With danger of frost	➔ Drain the unit completely.

9.1 Warranty

The warranty includes the devices delivered and all components. However natural wear and tear (DIN 3151/DIN-EN 13306) on all turning and dynamically loaded components, including electronic components under tension, is not covered under the warranty.

Failure to comply with the safety instructions may void the warranty.

9.2 Service addresses

Service addresses can be found on our website

www.speck-pumps.com.

9.2.1 Exclusion of liability

Speck Pumpen Verkaufsgesellschaft GmbH will assume no costs for loss of water caused by malfunctions and/or handling errors involving the control system.

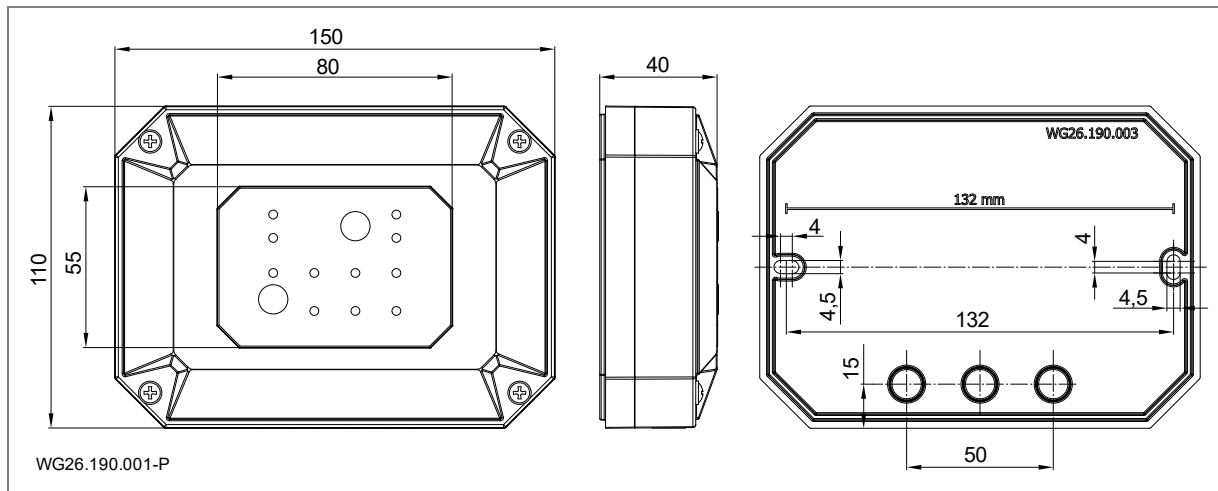
10 Disposal

- ➔ Collect harmful media and dispose of it according to the regulations.
- ➔ At the end of its service life, the pump/unit or individual components must be disposed of correctly. Disposal in the household waste is not permitted!
- ➔ Dispose of the packaging materials in the household waste in accordance with the local regulations.

11 Technical data

Circuit board	microprocessor controlled
Operating voltage	1~ 230 V, 50/60 Hz
Fuse, Circuit board	12 V, 1 A delay, 250 V

11.1 Dimensional drawing



11.2 Version overview

Firmware delivery	

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