User's Manual

Pool Pump with Variable Rotation Speed

63908–63910

Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!
Illustrations, functional steps, and technical data may deviate insignificantly due to continuous further developments.

Updating the documentation
If you have suggestions for improvement or have found any irregularities, please contact us.

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Send us an e-mail to:

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Introduction

Thank you for choosing to purchase this quality product. To minimise the risk of injury, we ask you to always take some basic safety precautions when using this product. Please read this operating manual carefully and make sure that you understand it.
Keep these operation instructions in a safe place.

Product features

This HPP-series intelligent pump with variable frequency is a pump that can record pump frequency and performance changes. It is characterised by simple troubleshooting and high starting torque.

This technical description contains important operating instructions and precise explanations of the setting values and parameters. Before using the pump for the first time (installation, operation, maintenance, and inspection, etc.), carefully and completely read the instructions.

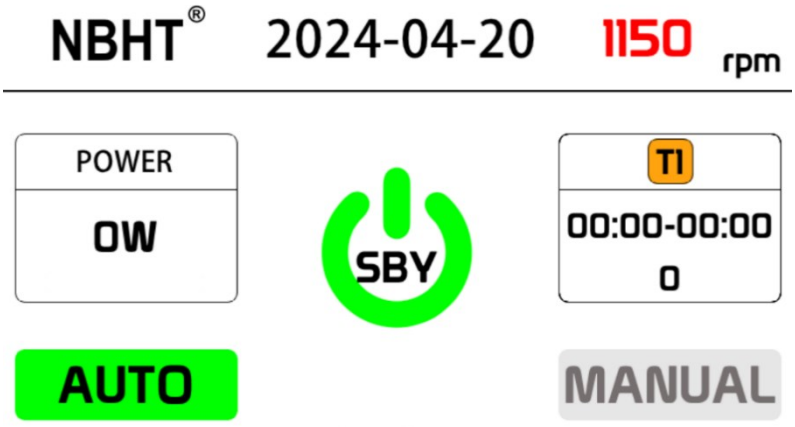
The pump has the following features:

- Data inquiry – Review current power, frequency, and other data
- Convenient speed control – Three dials for quick speed control and up and down buttons for fine speed adjustment
- Low water protection – Automatically shuts off when the pump detects a lack of water in the supply line
- Start-up after water supply – The pump recognises whether there is still water after it has been switched off due to lack of water and can then be put into normal operation after water supply
- Power fail memory – The pump can automatically record percentage of rotation speed and on/off status

Safety instructions

- The pump must be operated in a clean and dry place with good ventilation.
- Water ingress into the control box and too low or too high temperatures can damage the pump.
- Users must observe the safety rules for using electricity.
- The pump must never be operated with wet hands.
- If there is no fan, it must be ensured that the fan at the end of the motor can blow through the cooling fins to avoid high temperatures.
- The water pump motor is a three-phase induction motor, and the pump is delta-earthed. Please ensure safe and correct earthing.
- Whenever you use the pump, install the frequency converter according to the instructions.
- Always and only operate the pump in accordance with the instructions.

Control panel



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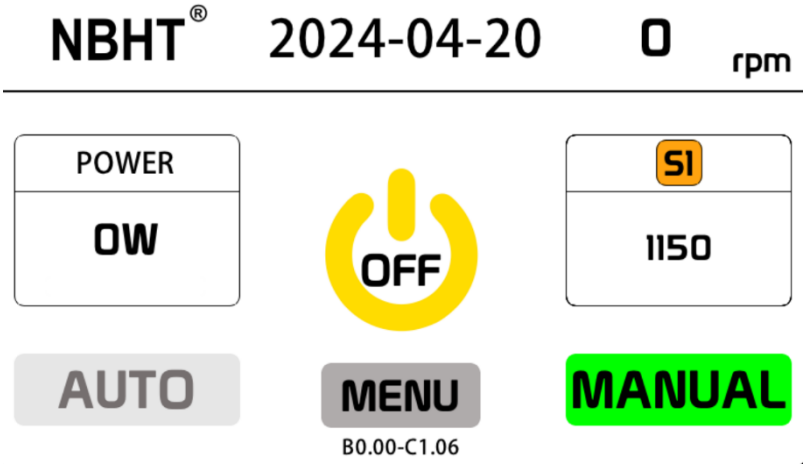
Setup Process	Description
Power-On and Menu Display	• Turn on the device – the main screen will light up. • By default, the device is in automatic mode (off). • Touch the screen to display the menu and the alarm page..
Time Setting	• Press the time area on top of the motor to activate the time setting. • The current time is shown in 24-hour format.
Setting of Automatic Modes T1/T2/T3/T4	• Default ON and OFF times: 00:00. • Default speed: 0 RPM. • Press and hold one of the time period buttons for 2 s to activate the setting mode. • Up to four time periods (T1–T4) can be programmed individually: set ON time, OFF time, and speed. • The system checks for overlapping time periods and warns the user if conflicts are detected. • During operation, the screen displays the currently active time period (T1–T4). • If the device is idle, “---:---” is displayed and the corresponding switch appears as “ON.” • After settings have been confirmed, the device will start and stop automatically according to the programmed schedule. • Review time settings: pressing the T1–T4 buttons briefly displays the stored values without interrupting the program.
Speed Range	• 50-Hz mode: 1150–3000 RPM • 60-Hz mode: 1150–3600 RPM
Manual Control (S1, S2, S3, S4)	The manual mode offers four pre-set speed levels: • 50-Hz mode: S1 = 1150 RPM, S2 = 1700 RPM, S3 = 2100 RPM, S4 = 2850 RPM • 60-Hz mode: S1 = 1700 RPM, S2 = 2500 RPM, S3 = 3000 RPM, S4 = 3600 RPM

In practical use, the user can change the pre-set rotation speeds by sliding the program window left or right. The speed can be adjusted in the speed setting area of the main display, in increments of 50 RPM.



Parameter settings

1. **Rated frequency**
   - Can be set to 50 Hz or 60 Hz (*default: 60 Hz*)

2. **Rated voltage**
   - Selectable values: 110 V, 220 V, 240 V
   - Voltage is automatically assigned at power-on (*default: 220 V*).

3. **Rated power**
   - Used to detect overload and serve as a reference value for the power display.
   - For 220–240 V: adjustable range: 350 W–2200 W
   - For 110 V: max. power: 1100 W

4. **Temperature protection**
   - Protects the IPM module from overheating.
   - Adjustable temperature range: 60–150 °C (*default: 80 °C*)

5. **Dry-run protection**
   - If the pump runs without water, the speed is automatically reduced to 70 % of the rated speed.
   - A red warning with a current AD value (-2) appears in the menu and is entered in the settings field.

6. **Fault display & logging**
   - In case of a fault, a red exclamation mark and a text description are displayed.
   - All errors are stored in the logbook.
   - The menu view shows current voltage and module temperature for easier diagnosis.

Error and protection functions

Voltage fluctuations

- If the voltage deviates by more than ±20 % from the rated value for over 3 s, the system shuts down and triggers an alarm.
- Once the voltage returns to within ±15 %, the system resumes operation automatically.

Short circuit

- In case of a short circuit or overcurrent, the IPM module triggers a shutdown signal.
- If the short circuit occurs in the external motor, the system will not restart.

Motor connection error

- If one phase is missing, the system will attempt to restart the motor twice at one-minute intervals (*not applicable to AC asynchronous frequency inverters*).

Motor overload

- If the power consumption exceeds 1.15 times the set value for more than 15 s, the pump will shut down.
- The system will then attempt two restarts, each with a 1-minute interval.

Communication error

- If data communication is interrupted for more than 6 s, a fault message is displayed.
- After a reset, the connection is restored automatically.

Overtemperature protection

- If the IPM temperature exceeds the set value for 6 s, the system will shut down.
- Once the temperature drops below 55 °C, operation will resume after 6 s.

Level alarm

- If the fluid level or float switch signals a low level, an alarm is triggered and the pump is stopped.

Dry-run protection

- If the current AD value falls below the set threshold and the pump continues running for more than 30 s, the system will shut down and protect itself.
- If the speed is already below 70 %, the protection is not activated.

Input and output connections

- **PA:** 4–20 mA sensor input (*reserved*)
- **FAN:** connection for **external cooling fan**
  - Fan turns on at **55 °C**, turns off at **50 °C**.
  - Fan status is shown on the **LCD display**
- **NTC:** input for **external temperature sensor** (*reserved*)
- **LEVEL:** connection for **level sensor**, triggers alarm and stops the pump.
- **RS485:** interface for **MODBUS** communication (*reserved*)
- **RLY1: Fault-signal output**
- **RLY2:** Output for **light relay**
  - Active from **18:00 to 24:00**, with LCD indication when the pump is running.

Regulations for waste disposal

The Waste Electrical and Electronic Equipment Directive (WEEE Directive, 2012/19/EU) of the EU was implemented in the German law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE directive are labelled with the symbol of a crossed-out wheeled rubbish bin. This symbol indicates that this electric device must not be disposed of with the domestic waste.

WilTec Technik GmbH is registered with the German registration authority EAR (Stiftung Elektro-Altgeräte Register) under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic devices (intended for use in the countries of the European Union and other European countries with a separate waste collection system for these devices).
The symbol on the packaging or the product itself indicates that this product must not be treated as normal domestic waste but must be disposed of at a recycling collection station for electrical and electronic waste.
By disposing of this product correctly, you contribute to the protection of the environment and the health of your fellow people. Inappropriate disposal threatens the environment and health.

Material recycling helps to reduce the consumption of raw materials.

Additional information about the recycling of this product can be provided by your local commune, the municipal waste disposal facilities, or the store where you purchased the product.

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Important Note: