

HLVSP SERIES

VARIABLE SPEED PUMP MANUAL

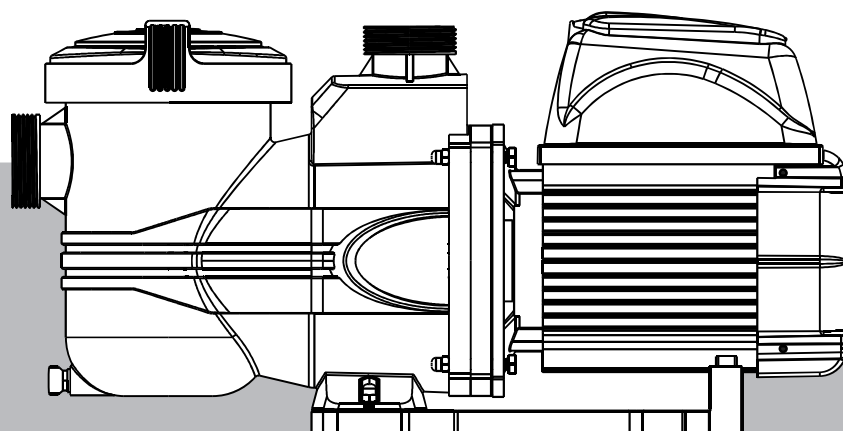
HLVSP100QW

HLVSP150QW

HLVSP200QW

HLVSP100QWU

HLVSP150QWU



Please Read The Manual Carefully Before Use.

1 PRODUCT INTRODUCTION

HLVSP series pump is designed for the filtration of small and medium swimming pool, fountain, spa, aquaculture and water park.

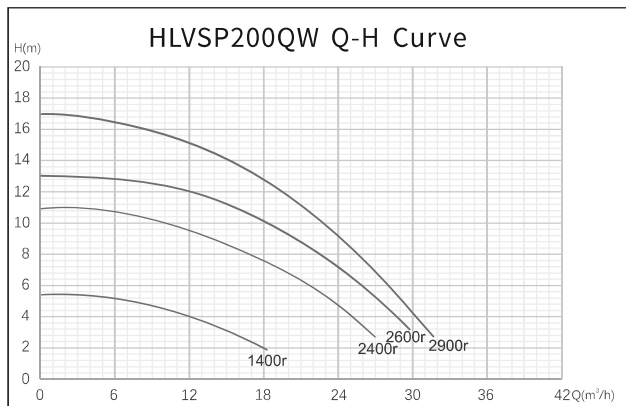
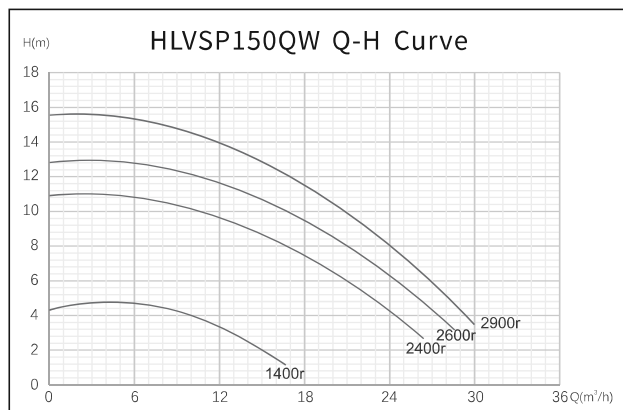
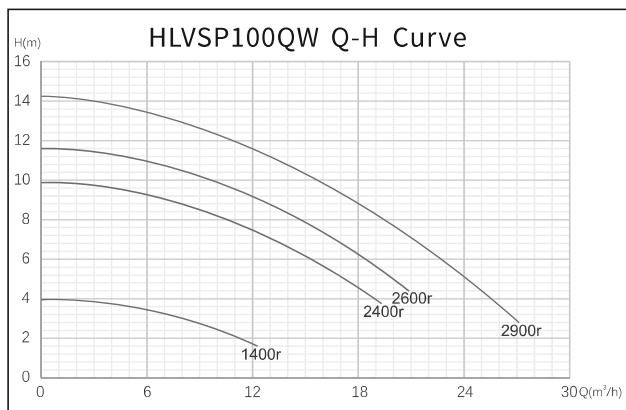
2 PRODUCT BASIC PARAMETERS

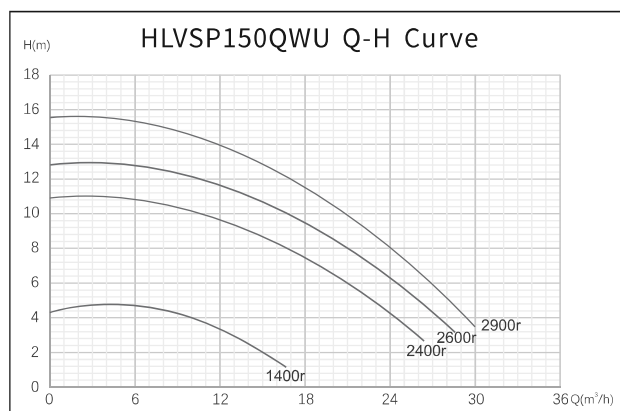
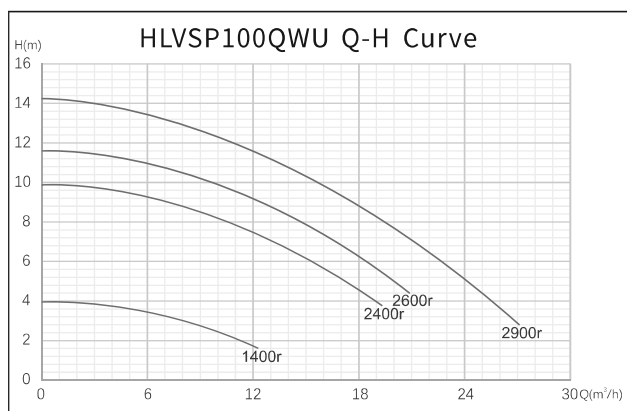
Self-priming height: 2.5m;
Ambient temperature: 5-45°C;
Liquid temperature: 5-50°C.

2.1 TECHNICAL PARAMETERS TABLE

Model	Voltage (V)	RPM (r/min)	Horse power (HP)	Connection size	Advised pool volume (m ³)
HLVSP100QW	220-240V 50/60Hz	1000-2900	1	2"/63mm	60-90
HLVSP150QW	220-240V 50/60Hz	1000-2900	1.5	2"/63mm	80-120
HLVSP200QW	220-240V 50/60Hz	1000-2900	2	2"/63mm	100-150
HLVSP100QWU	110-120V 50/60Hz	1000-2900	1	2"/63mm	60-90
HLVSP150QWU	110-120V 50/60Hz	1000-2900	1.5	2"/63mm	80-120

2.2 Q-H CURVE

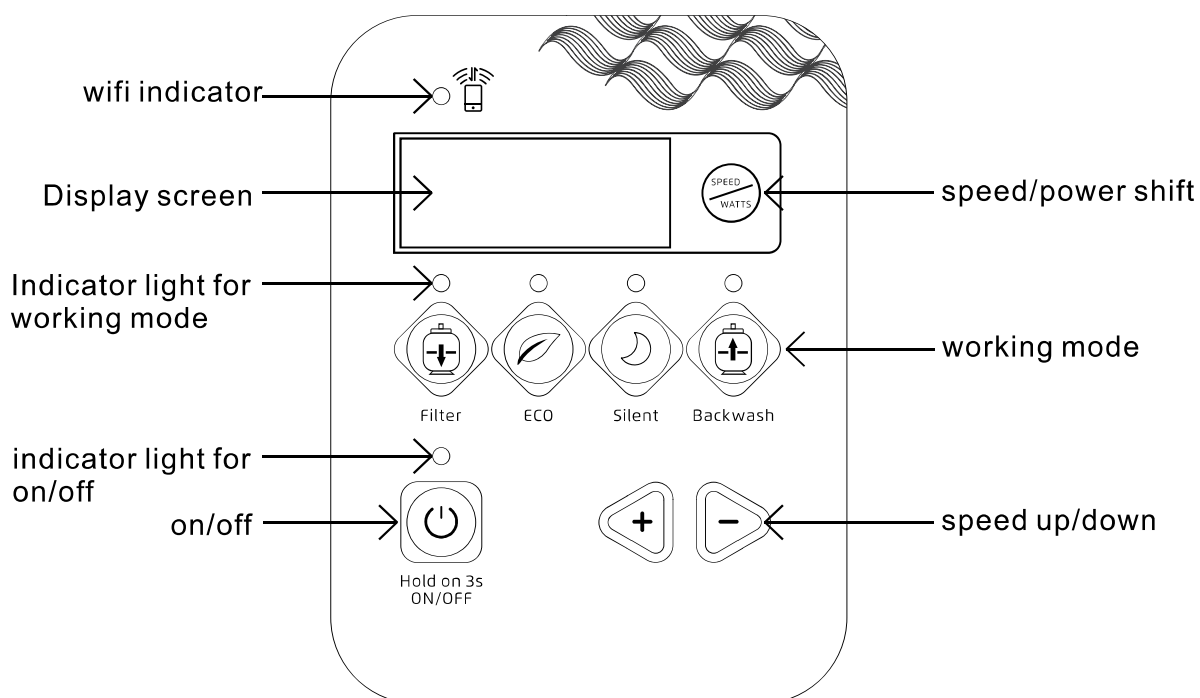




Model	Max. Flow (m ³ /h)	Max. Head (m)	Head		
			8m	10m	12m
			Flow Rate (m ³ /h)		
HLVSP100QW	27	14.5	20	16	11
HLVSP150QW	30	16	24	21	17
HLVSP200QW	33	17	26	23	20
HLVSP100QWU	27	14.5	20	16	11
HLVSP150QWU	30	16	24	21	17

3 PRODUCT OPERATION INSTRUCTION

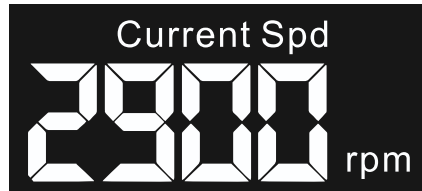
Control panel.



3.1 DISPLAY SCREEN



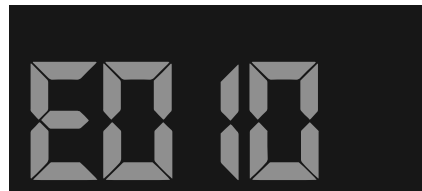
speed setting



current speed



output power



error code





3.2 INDICATOR LIGHT

Indicator light	Description
Wi-Fi indicator flashing green	The device enters the pending network mode and can be configured through the APP.
WiFi indicator is always green	The device is networked.
Wi-Fi indicator is always red	The device network is abnormal/the device is offline.
On/off indicator light is always red	The device is powered on and enters standby mode.
On/off indicator light is off	The device is powered off.
On/off indicator light is always white	The device is powered on and enters working state.
The mode indicator is always white	If the mode indicator is always on, it means the device has entered this working mode.

3.3 PUMP FUNCTION

Working Mode:

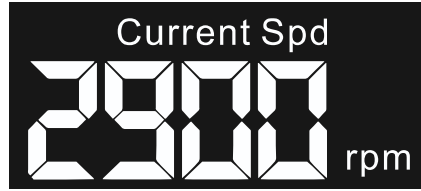
There are 4 pre-set working modes, they are Filter, ECO, Silent and Backwash.

Working Mode	Description
Filter 	The pump's speed will be converted to 2900r/min within 40 seconds.
ECO 	The pump's speed will be converted to 2600r/min within 40 seconds.
Silent 	The pump's speed will be converted to 2400r/min within 40 seconds.
Backwash 	The pump first runs at 2900r/min for 15s and then falls back to 2400r/min.

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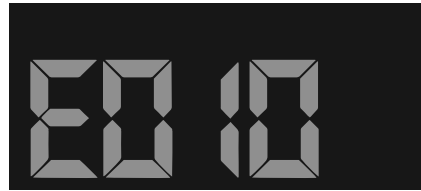
speed setting



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Speed adjustment function:

Short press “ ”, the speed will be increased or decreased by 50r/min; Long press “ ”, the speed will be increased or decreased by 100r/min.

Speed/Power shift:

Press “”, the screen will show the current speed or output power.



On/Off:

Long press “” for 3s, the pump will be on or off.

Self-priming:

After the pump starting, it will self-prime 2 minutes at a speed of 2900 rpm, and then enters to preset mode or custom speed.

WIFI network configuration/Cancel WIFI network configuration:

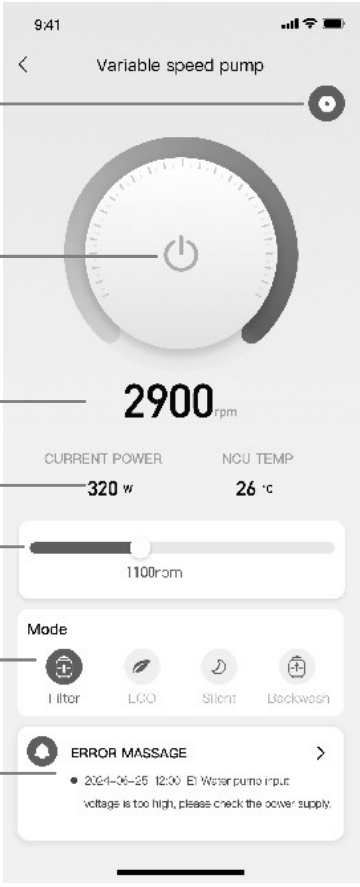
Long press and hold button “ ” for 3s, after the device buzzer beeps twice, it enters the pending network configuration mode, and then complete network configuration settings from the app.

3.4 APP DOWNLOAD


Search "tuya" on Google Play or App Store to download it.

3.5 APP FUNCTION

Home Dashboard



1. Click the menu button to enter the secondary page (pump information , time setting.)

2. Click  to turn the pump on/off.

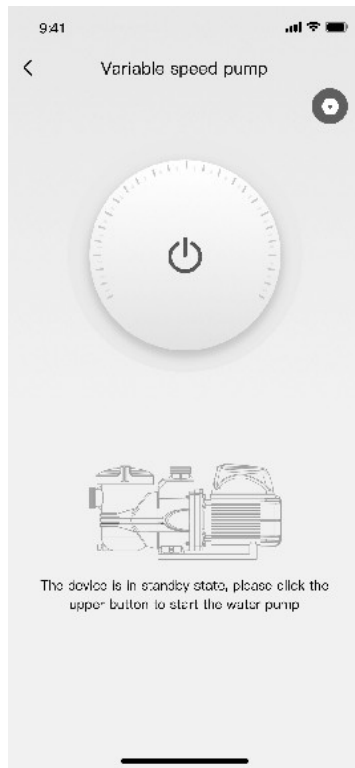
3. View real-time data on current speed, power, and water temperature.

4. Press and slide the slider left and right to control the speed(RPM).

5. 1. Click the Filter mode, the pump will be converted to 2900r/min within 40 seconds.
2. Click the ECO mode, the pump will be converted to 2600r/min within 40 seconds.
3. Click the Silent mode, the pump will be converted to 2400r/min within 40 seconds.
4. Click the Backwash mode, the pump will first run at 2900r/min for 15 seconds, and then fall back to 2400r/min.

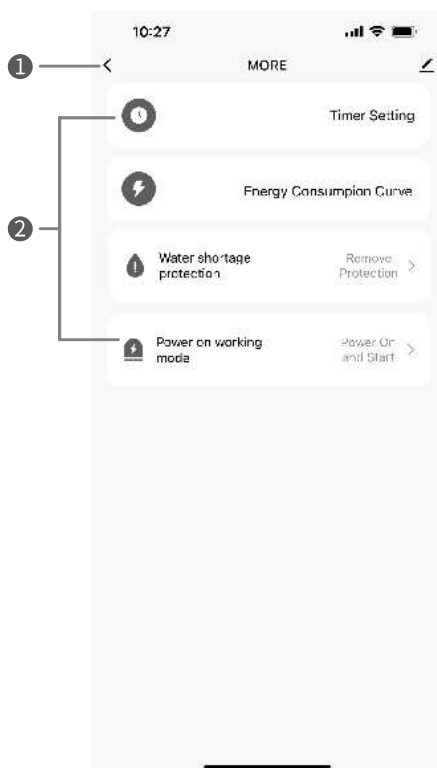
6. ERROR MESSAGE
• 2024-06-25 12:00 E1 Water pump input voltage is too high, please check the power supply.

Shutdown page



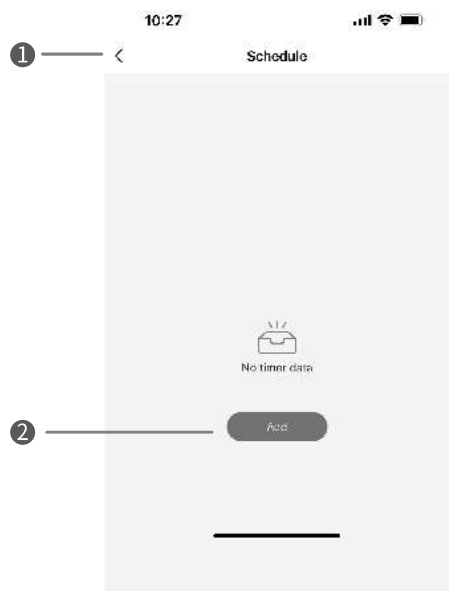
- ⑥ Click the “ERROR MESSAGE” to check the details.

Menu secondary page



- ① Click the Back icon to return to the previous page.
- ②
 1. Click the **Timer Setting** to enter the page and set the working time for the pump.
 2. Click the **Energy Consumption Curve**, and a pop-up window will appear at the bottom to view the daily and monthly 0-24h energy consumption.
 3. Click the **Water Shortage Protection**, and a pop-up window will appear at the bottom to set the water shortage protection to "start protection" or "cancel protection".
 4. Click on the **Power-on Working Mode**, and a pop-up window will appear at the bottom to set the power-on working mode to "power-on start" or "power-on standby".

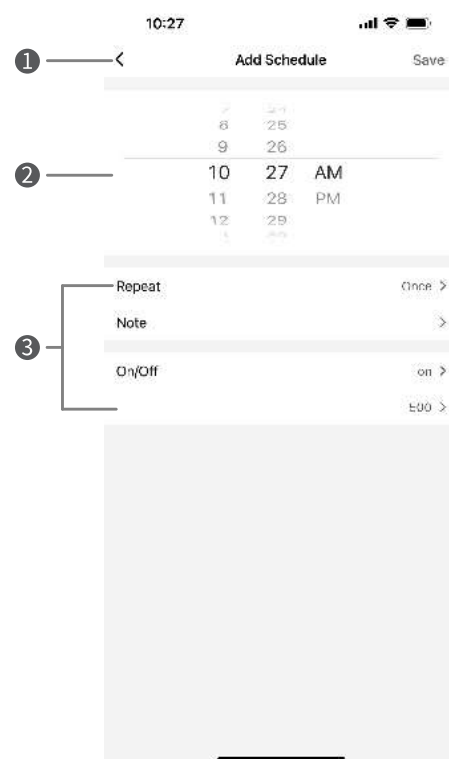
Timer Setting Page



1 Click the Back button to return to the previous page.

2 Click the **Add** button to add a timing schedule.

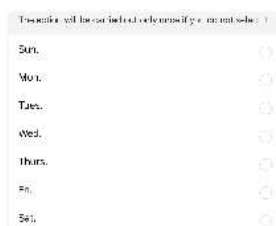
Timer Setting Page



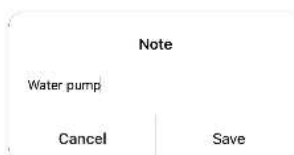
1 Click the Back button to return to the previous page
Click **Save** to save the timing.

2 Scroll up and down to select specific times.

3 Click Repeat or the arrow to enter the third-level page, set the execution rules for the timer, and check or uncheck.



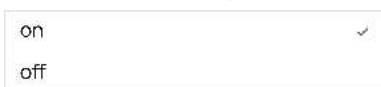
Click the Note or arrow to enter the third-level page, make notes for the timer, click **Save** to generate the notes immediately, and click **Cancel** to return to the previous page.



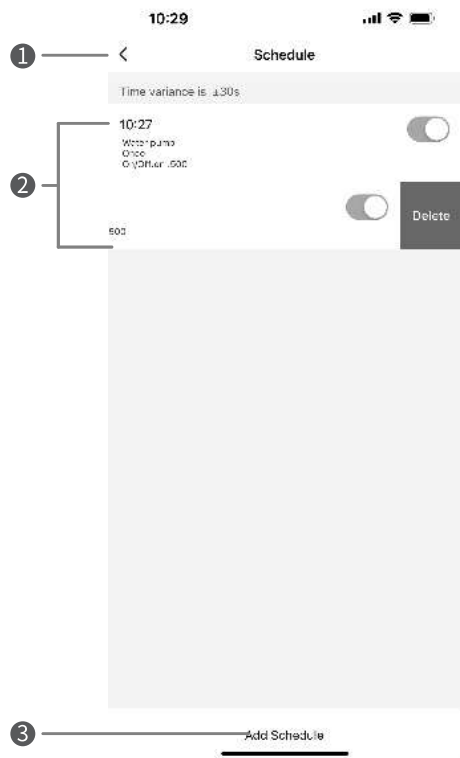
500
550
600
650
700
750

✓ Click the current speed or arrow to enter the third-level page and adjust the speed of the timer.

Click the ON/OFF or the arrow to enter the third-level page to turn the pump on and off.

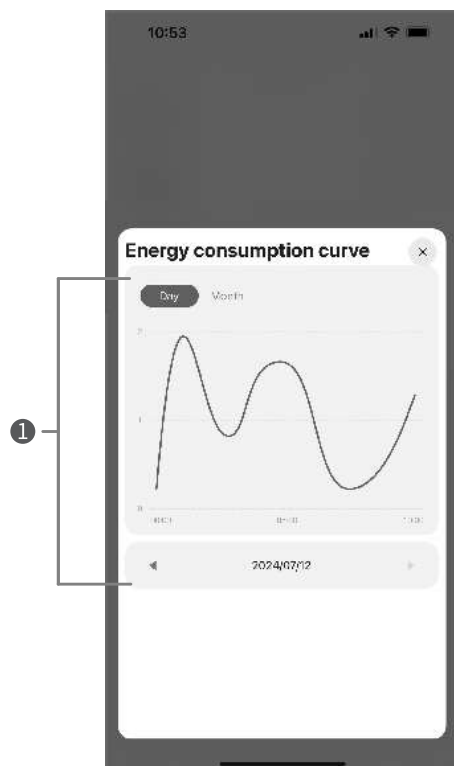


Timing page added



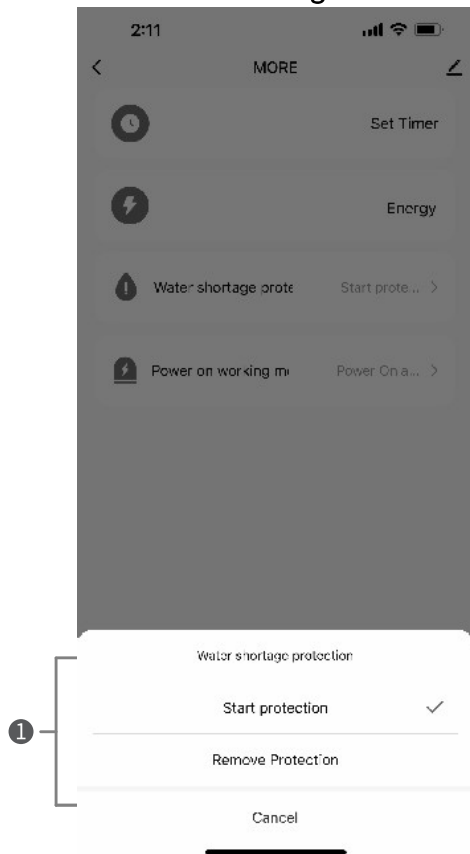
- ① Click the Back button to return to the previous page
- ② View the content of the timer settings.
Use sliding to turn on and off the timer.
Slide left to delete the unnecessary time plans.
- ③ Click the "Add Schedule" button at the bottom of the screen to add a new timer schedule.

Energy Consumption Curve Page



- ① 1. Click the top right button in the pop-up window to exit the energy consumption curve data page.
2. You can click on "day" or "month" on the curve chart to switch time, and click on the curve in the table to display specific energy consumption data.

Water Shortage Protection - Bottom Popup

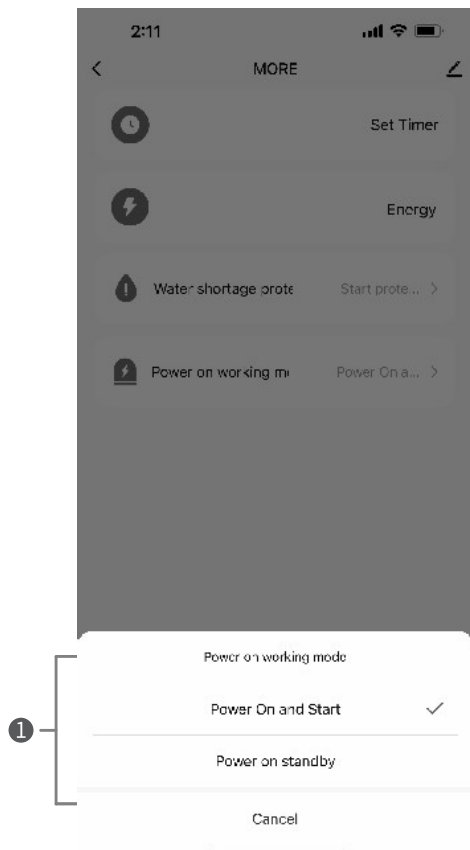


1. Click "Start protection" or "Cancel protection" to set the function of water shortage protection.

Note: If the water shortage protection function is turned off, it will cause the pump head to run out of water. If you insist on turning it on, there is a risk of dry burning the mechanical seal and causing the pump head water leakage.

2. Click Cancel or the black area to return to the previous level.

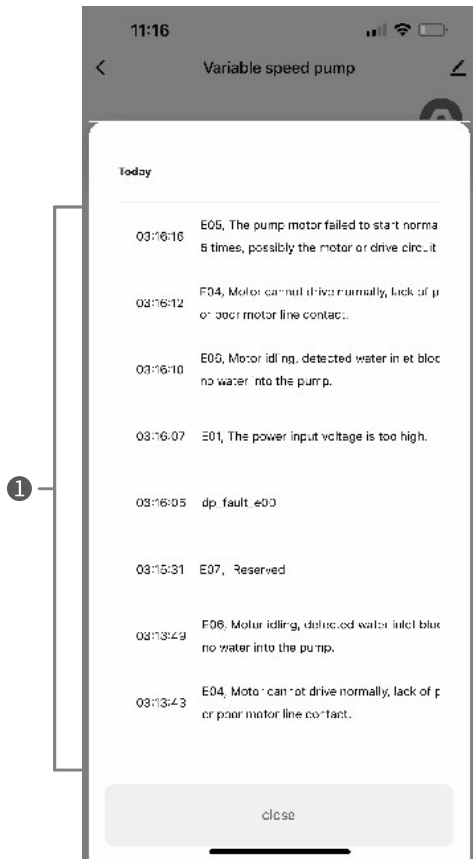
Power-on Protection-Bottom Pop-up



1. Click "Power-on Start" or "Power-on Standby" to set the function of power-on working mode.

Click Cancel or the black area to return to the previous level.

Error message

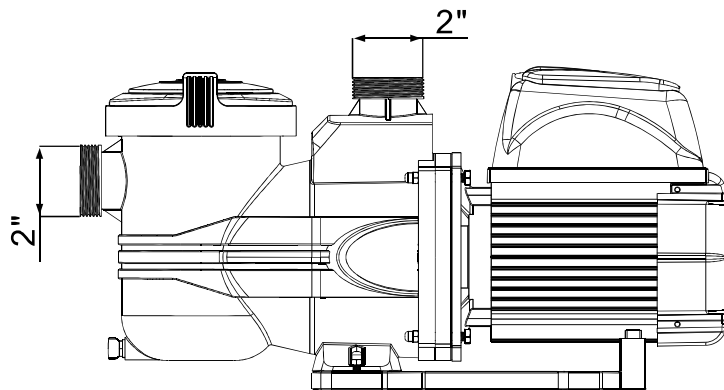


- 1 Click "Error message" on the first-level page to enter the pop-up window at the bottom to view detailed error .
Click the close button or the black area to return to the previous page;

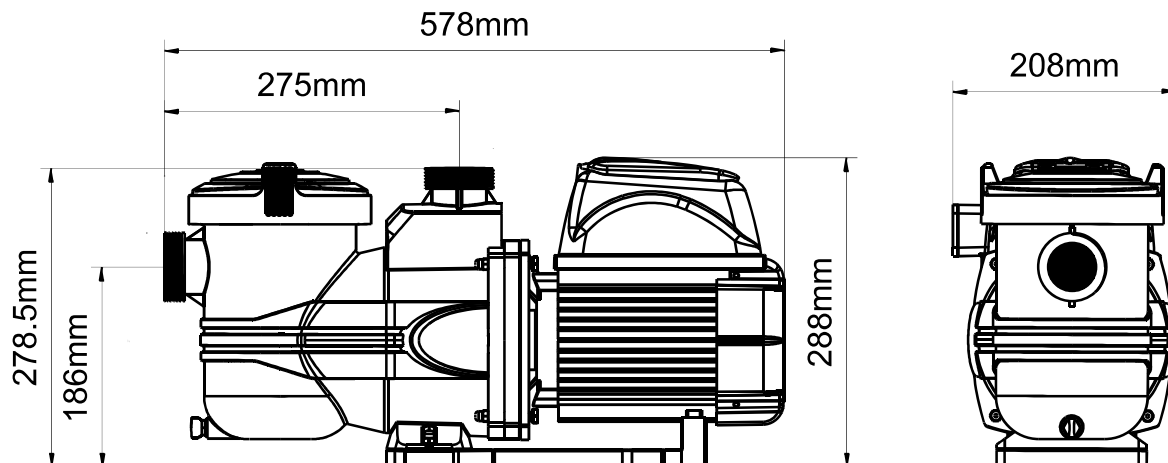
4 PRODUCT STRUCTURE AND DIMENSIONS

4.1 CONNECTION SIZE (INLET/OUTLET)

The pump comes with 2" connection. The user can use water pipe adapters to match different sizes of pipes.



4.2 PRODUCT DIMENSION



5 INSTALLATION

1. The pump needs to be installed on a flat and solid surface and fixed with hex bolts.
2. The pump inlet and outlet must be aligned with pipes, and there should be no misconnection.
3. The pump outlet pipe needs to install check valve.
4. The pump inlet and outlet pipes should be fixed to avoid damage to the pump caused by the vibration of the pump.
5. The pump cannot be installed above the water surface 2M.
6. Sufficient space should be reserved around the water pump for water discharge.

6 TROUBLE SHOOTING

Error code	Reason of Error	Remark & Solution
E01	overvoltage protection	Pump input voltage too high, check the power supply
E02	Low voltage protection	Pump input voltage too low, check the power supply
E03	over temperature protection	The IPM module temperature exceeds the protection threshold and causes shutdown.
E04	Phase failure	Motor not start, check motor internal wiring if wrong connection or loosen
E05	Start up failure	Motor failed to start, check circuit if normal. The pump motor failed to start normally after repeating 5 times, maybe the motor or the driving circuit is abnormal. (Instantaneous current overcurrent, IPM Fo, excessive field-weakening input, current sampling circuit failure.)
E06	Water shortage protection	The water pump is idling. Check whether water intake is blocked or the water inlet valve is not open.
E07	Placeholder	—
E08	Overload protection	The water pump runs abnormally and the overload protection starts, the driving current exceeds the protection threshold.
E09	OTA upgrade failure	OTA upgrade failed. Restore the previous version.
E10	Placeholder	—
E11	Keypad failure	The pump key panel is malfunctioning, check whether the pump internal wiring is loose
E12	PFC protection	An unexpected loss of input power has been detected.

7 PRECAUTIONS

1. The wiring must be correctly configured according to the wiring diagram indicated in the specification, and wrong wiring may lead to safety accidents.
2. Please avoid using under the following environmental conditions:
 - (1) Environment with severe vibration.
 - (2) Near flammable objects.
 - (3) In an environment prone to condensation, in an environment with a relative humidity of 90% or more.
 - (4) Please do not store the product with external force or heavy load, and do not place heavy objects on the product, otherwise it may cause damage to the appearance of the product or damage to the device .
3. Please avoid storing in high temperature and humid places. It's recommended to store the product with a humidity of 40-60%RH and a temperature of 20-30°C for a long-term storage.
4. In case of an error, please refer to the error code prompt for troubleshooting. If you still cannot solve it, please contact the salesman.