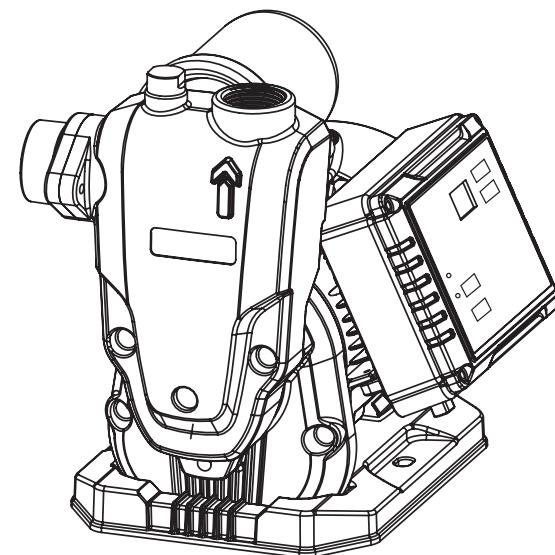


PRODN®



WZB-DC

USER MANUAL
INTELLIGENT INVERTER WATER PUMP

1. WARNING

1. Earthing:

*Please ensure that the power outlet socket is properly earthed for maximum safety.

*Explosion hazard. Do not ground to a gas supply line. (as shown the figure)

*Please make sure that the power outlet socket and plug are dry.

2. For safety, always disconnect the pump from the mains for repair or maintenance.

3. The pump is strictly prohibited from immersing into the water. The antifreeze shall be applied if water temperature is below 4°C.

4. Never move the water pump by pulling or holding the power cord as it will cause breakage and short circuit. Please carry the water pump with both hands.

5. The water pump is designed to pump clear water only that is free from explosive substances and solid particles or fibre. Never use the pump for pumping flammables and /or explosive liquid such as gasoline, alcohol, etc. as it will cause explosion.

6. Installation and maintenance must be carried out by qualified personnel. Improper repair may cause personal injury and damage to the equipment. In addition, the product warranty shall be void due to wrong application.

7. If the power cord is to be extended or replaced, use only the same or higher wire specification.

Please make sure connection is secured, waterproofed and fully insulated.

8. The manufacturer will not assume any liability in case of any modification to the water pump.

9. DO NOT DRY RUN (WITHOUT WATER SUPPLY) !

2. PERFORMANCE DATA

| Model | 1WZB-20DC | 1WZB-25DC | 1WZB-35DC | 1.5WZB-45DC |
|--------------------------|----------------|----------------|----------------|----------------|
| Power | 0.3kW | 0.6kW | 0.9kW | 1.5kW |
| Motor Input Current | 1.8A | 3.7A | 4.8A | 5.8A |
| Controller Input Current | 2.8A | 4.7A | 8.0A | 12A |
| Rated Q. | 1.0m³/h | 1.5m³/h | 2.0m³/h | 3.0m³/h |
| Rated H. | 20m | 25m | 35m | 45m |
| Max. Q. | 2.1m³/h | 2.6m³/h | 4.5m³/h | 5.5m³/h |
| Max. H. | 33m | 45m | 43m | 57m |
| Speed | 3000r/min | 3500r/min | 4000r/min | 4000r/min |
| Suction | 8 | 8 | 8 | 8 |
| Inlet/Outlet | 25 | 25 | 25 | 40 |
| Optimal Range | 1.5-3.0kgf/cm² | 1.5-3.5kgf/cm² | 1.5-3.8kgf/cm² | 1.5-5.0kgf/cm² |

3. WORKING CONDITIONS

PH Value: 5-8

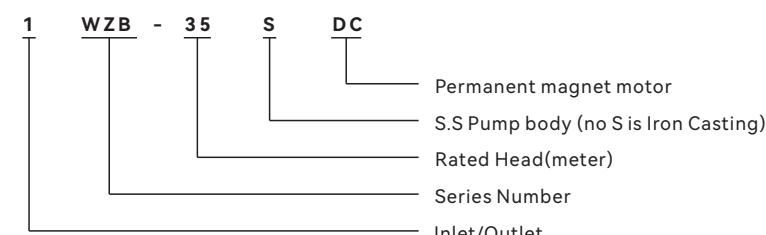
Ambient Temperature: 0-40°C

Ambient humidity: max. 85% (RH)

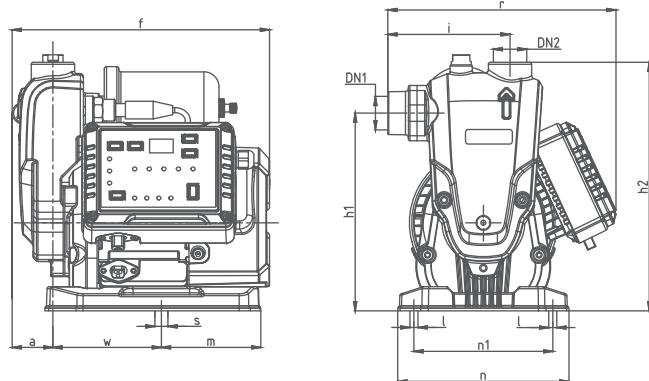
Liquide Temperature: 0-60°C

(The maximum temperature of liquid not over than 75°C)

4. MODEL MEANING



5、INSTALLATION DIMENSIONS



| Model | DN1 | DN2 | Installation dimension (mm) | | | | | | | | | | | |
|-------------|--------|--------|-------------------------------|-------|-------|-------|-----|------|-------|-----|-------|----|---|-------|
| | | | a | f | h1 | i | h2 | m | n | n1 | w | s | l | r |
| 1WZB-20DC | G1 | G1 | 40.5 | 250.8 | 187.5 | 119 | 237 | 98.8 | 170.1 | 138 | 104.6 | 13 | 8 | 228 |
| 1WZB-25DC | G1 | G1 | 40.5 | 250.8 | 187.5 | 119 | 237 | 98.8 | 170.1 | 138 | 104.6 | 13 | 8 | 228 |
| 1WZB-35DC | G1 | G1 | 40.5 | 255.7 | 196.5 | 121.5 | 247 | 98.8 | 170.1 | 138 | 107.8 | 13 | 8 | 226.8 |
| 1.5WZB-45DC | G1 1/2 | G1 1/2 | 53.5 | 267 | 206.5 | 132 | 257 | 98.8 | 170.1 | 138 | 106 | 13 | 8 | 243.7 |

6、GUIDE TO FILL PUMP BODY WITH WATER

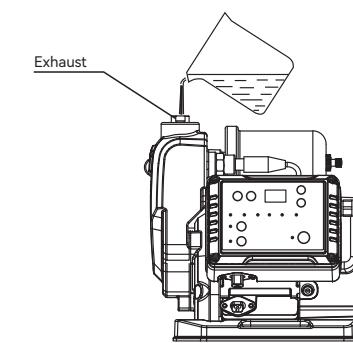
For newly installed pumps, make sure to completely fill the pump body and inlet with water before starting the pump.

Fill water to the pump body by following the instruction before starting the new pump.

A.Open up the priming screw or outlet of pumps, fill the pump body until it is completely full.

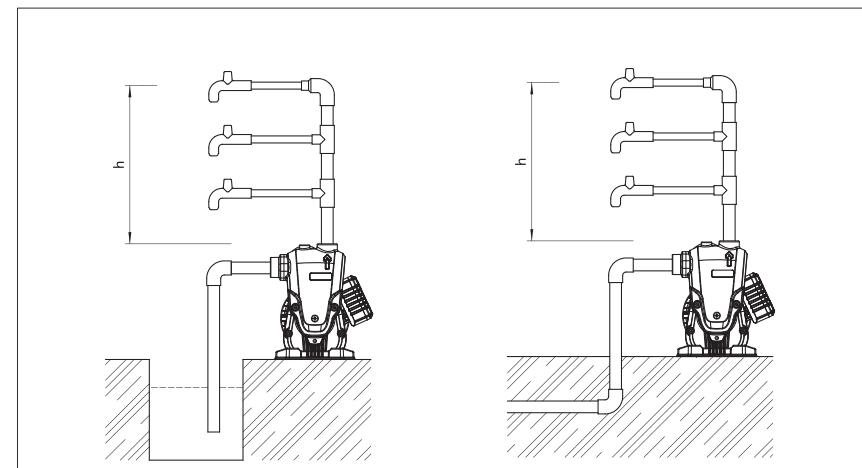
B.Turn the power on to start the water pump. At this moment, do not have to tighten the priming screw as to accelerate discharge the air of the water pump. Generally the water pump can operate normally after 3 minutes. Then, tighten the priming screw.

C.If the water pump fails to pump water, the water inside the pump body may not be enough, In this case repeat the above operation.



7、APPLICATION

Pump water from well or main pipe.



8、WORKING PRESSURE SETTING

| NO. | Model | Factory Setting |
|-----|-------------|------------------------|
| 1 | 1WZB-20DC | 2.3kgf/cm ² |
| 2 | 1WZB-25DC | 2.8kgf/cm ² |
| 3 | 1WZB-35DC | 2.8kgf/cm ² |
| 4 | 1.5WZB-45DC | 2.8kgf/cm ² |

Calculation of Working Pressure Value:

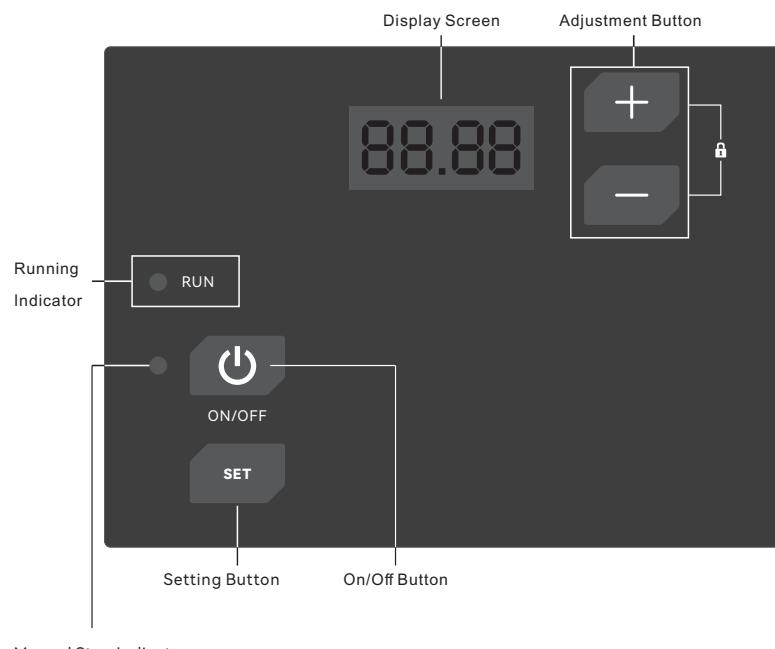
P- Working Pressure Value (Pump Head)

H- The vertical height between the pump outlet and the highest point of use; (1.0kgf/cm² ≈ 10m)

P=H/10+1.0kgf/cm²

9. CONTROLLER PANEL

Digital series



Manual Stop Indicator

After the pump is powered on, no operation for five minutes will automatically lock the button (except the start/stop button). Please press the plus or minus button at the same time to unlock it.



Reminders

Note: The default values of the pump parameters are the optimal values to meet the majority of customers, usually do not need to modify the settings, if necessary, should be carried out under the guidance of professionals, otherwise some of the losses caused by the user to bear their own.

| NO. | Button/ Indicator | Function |
|-----|-------------------------|--|
| 1 | 88.88 Display screen | <p>A sequential fast showing of factory settings will be displayed. "Factory code (PLD)" > "Power" > Control board version number (such as u01) > Display board version number (such as U01) at the beginning when power is turn on.</p> <p>(e.g. :PLD > 0.75 > u01>U01).</p> <ol style="list-style-type: none"> 1. at Automatic mode, the real-time pressure value of the water pipe is displayed. (e.g.: 2.00 means 2bar) 2. at Manual mode, the frequency value is displayed. (e.g.: L50 means 50Hz) 3. The setting item or parameter value is displayed during setup. |
| 2 | | <ol style="list-style-type: none"> 1. Switch on/off the pump manually. 2. Press and hold for 3 seconds to switch the working mode of manual/automatic. <p>2.1 Manual mode is displaying the frequency. (e.g.: L50 means 50HZ)</p> <p>2.2 Automatic mode is displaying the real-time pressure. (e.g.: 2.00 means 2bar)</p> |
| 3 | | <ol style="list-style-type: none"> 1. Enter setting menu. 2. Selection of the setting (b1 to b17) display on the screen. |
| 4 | | <ol style="list-style-type: none"> 1. Lock/unlock the controller panel: press + and – together at the same time. 2. Set the working pressure: press + or – to adjust the working pressure value at automatic working mode. 3. Set the motor speed: press + or – to adjust the motor speed value as frequency at manual working mode. |
| 5 | Manual Stop Indicator | <p>The indicator light flashes to indicate that the pump has been manually stopped.</p> <p>Therefore, the pump must be started manually when the indicator light is flashing.</p> <p>The indicator light is always on when the pump is running or in automatic mode.</p> |
| 6 | Running Indicator | <p>RUN:</p> <p>Light permanently on: Pump is running and the pressure is same as the set working pressure value;</p> <p>Light flashing on: Pump is running but the pressure lower than the set working pressure value;</p> |

CONTROLLER SETTING AND OPERATION

- A. Press + and - together to unlock/lock the controller.
- B. Press the + or - to set the working pressure of the pump. Then the pump can automatically work according to set pressure.
- C. Press SET enter setup menu.

Range : Setting value range

FS: Factory Setting

| |
|--|
| <p>[Range : 10-90%, FS:80%] Set the start pressure value. 88.08 The pump will be automatically started at the percentage below the working pressure value. E.g.: the pressure setting is 2bar, the start pressure is 2barx80%=1.6bar. Navigation: Press "SET" > "b01" > "SET" > Adjust digit [10~90] > "SET" to</p> |
| <p>[Range: 0-Start pressure, FS:0.5 bar] Water shortage protection value, if the working pressure falls lower than the set value, pump will stop functioning. 88.03 After shortage protection, the pump will start at interval of 1H,2H,4H,8H. The pump will start immediately when the main pipe restore water supply. Navigation: Press "SET" > "+" or "-" > "b03" > "SET" > Adjust digit [0 ~ start pressure] > "SET" to save or wait for 20s it will be saved automatically.</p> |
| <p>[Range:10-180 second, FS:180] The time taken for pump to stop working when it is dry run. Navigation: Press "SET" > "+" or "-" > "b04" > "SET" > Adjust digit [10 ~ 180] > "SET" to save or wait for 20s it will be saved automatically.</p> |
| <p>[00 : ON 01: OFF FS :00] Open or close the automatic protection function when the pump working pressure has erratic fluctuation. Navigation: Press "SET" > "+" or "-" > "b05" > "SET" > Adjust digit [00</p> |
| <p>[00 :Pressure (Bar) 01 : Head (Meter), 02 :Motor Speed (RPM),03:Water Temperature(°C) ,04: Power (kw), FS:00] Set the real-time displaying item. Navigation: Press "SET" > "+" or "-" > "b06" > "SET" > Adjust digit</p> |

[Range : 10-50, FS:30]

This setting should be reduced when the water outlet of the pump is closed and not easy to stop, and increased when the pump is stopped by mistake during operation.

Navigation: Press "SET" > "+" or "-" > "b07" > "SET" > Adjust digit

[00 : OFF 01: ON FS :01]

Switch the function of anti-freeze protection.

Navigation: Press "SET" > "+" or "-" > "b14" > "SET" > Adjust digit [00

[Range: -10 °C ~ +10 °C FS: 5 °C]

To set the starting temperature of anti-freezing protection.

The pump will automatically start when the water temperature in pump body drop to this setting value and stop when the temperature up to B16 setting.Prevent the water in pump from freezing to broken pump body. It is based B14 setting Enable ("00")

Navigation: Press "SET" > "+" or "-" > "b15" > "SET" > Adjust digit

[Range: +20 °C ~ +40 °C FS: +30 °C]

Set the stop temperature of anti-freezing protection.

When the pump is started due to the activation of anti-freezing protection. It will automatically stop when the water temperature is up to this setting value. It is based B14 setting Enable ("00")

Navigation: Press "SET" > "+" or "-" > "b16" > "SET" > Adjust digit

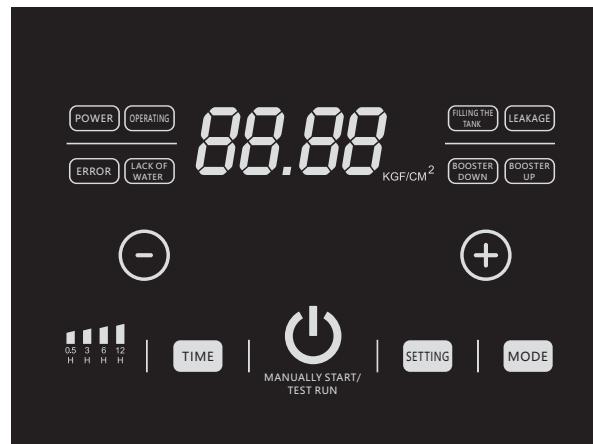
[Range: 40°C ~ 130 °C FS: 75 °C]

Setting the protection of water temperature.

When the water temperature exceeds this setting, the pump will stop for protection.After protection, the pump will automatically start when the water temperature is dropped 2°C from the protection temperature.

Navigation: Press "SET" > "+" or "-" > "b17" > "SET" > Adjust digit

LED touch screen controller panel



| NO. | Button/ Indicator | Function |
|-----|-------------------------|--|
| 1 | 88.88 Display screen | <p>A sequential fast showing of factory settings will be displayed. "Factory code (PLD)" > "Power" > Control board version number (such as u01) > Display board version number (such as U01) at the beginning when power is turn on.</p> <p>(e.g. :PLD > 0.75 > u01>U01).</p> <p>1. at Automatic mode, the real-time pressure value of the water pipe is displayed. (e.g.: 2.00 means 2bar)</p> <p>2. at Manual mode, the frequency value is displayed. (e.g.: L50 means 50Hz)</p> |
| 2 | MODE | <p>1. Click to select working mode: Booster-Up Booster-Down Filling the tank.</p> |
| 3 | SETTING | <p>1. Enter setting menu. 2. Selection of the setting (b1 to b17) display on the screen. 3. Save the setting value.</p> |
| 4 | + | <p>1. Lock/unlock the controller panel: press + and – together at the same time. 2. Set the working pressure: press + or – to adjust the working pressure value.</p> |
| 5 | POWER | <p>1. Switch on/off the pump manually. 2. Long press for continuous running of the pump.</p> |
| 6 | TIME | Select the mode filling the tank. Then make selection on time interval. |
| 7 | 0.5 3 6 12 H H H H | Select the mode filling the tank. Then make selection on time interval. Light off : Timing mode is turned off. |

| | | |
|----|---|--|
| 8 |  | Power indicator Light on indicates the power is on. |
| 9 |  | RUN: Light permanently on: Pump is running and the pressure is same as the set working pressure value; Light flashing on: Pump is running but the pressure lower than the set working pressure value; |
| 10 |  | FAULT: Warning light Light on means the pump has fault or working abnormally. The screen will display the warning code. When you have eliminated the fault or the fault disappears by itself, the light will be turned off |
| 11 |  | DRY RUN (Lack of water supply) Light on means the pump stopped with no water supply. When you have eliminated the fault or the fault disappears by itself, the light |
| 12 |    | Working Mode Indicator: |
| 13 |  | Light on means the outlet pipe has leakage. It is a warning light and the pump is still working normally. When you have eliminated the fault or the fault disappears by itself, the light |

CONTROLLER SETTING AND OPERATION

- A. Press + and - together to unlock/lock the controller.
- B. Press the + or - to set the working pressure of the pump. Then the pump can automatically work according to set pressure.
- C. Press SET enter setup menu.

Range : Setting value range

FS: Factory Setting

| | |
|---|---|
|  | [Range : 10-90%, FS:80%] Set the start pressure value. The pump will be automatically started at the percentage below the working pressure value. E.g.: the pressure setting is 2bar, the start pressure is 2barx80%=1.6bar. Navigation: Press "SET" > "b01" > "SET" > Adjust digit [10~90] > "SET" to |
|  | [00 : Positive 01 : Reverse, FS:00] Adjust motor rotating direction. This parameter setting must stop the motor to adjust. Positive rotation for WZB and LDB-Z series are clockwise when view from fan cover side. Positive rotation for CHM and LDB-M series are counterclockwise when view from fan cover side. Navigation: Press "SET" > "+" or "-" > "b02" > "SET" > Adjust digit [0 ~ start pressure] > "SET" to save or wait for 20s it will be saved |
|  | [Range: 0-Start pressure, FS:0.5 bar] Water shortage protection value, if the working pressure falls lower than the set value, pump will stop functioning. After shortage protection, the pump will start at interval of 1H,2H,4H,8H. The pump will start immediately when the main pipe restore water supply. Navigation: Press "SET" > "+" or "-" > "b03" > "SET" > Adjust digit [0 ~ start pressure] > "SET" to save or wait for 20s it will be saved automatically. |
|  | [Range:10-180 second, FS:180] The time taken for pump to stop working when it is dry run. Navigation: Press "SET" > "+" or "-" > "b04" > "SET" > Adjust digit [10 ~ 180] > "SET" to save or wait for 20s it will be saved automatically. |
|  | [00 : ON 01: OFF FS :00] Open or close the automatic protection function when the pump working pressure has erratic fluctuation. Navigation: Press "SET" > "+" or "-" > "b05" > "SET" > Adjust digit [00 ~ 01] > "SET" to save or wait for 20s it will be saved automatically. |
|  | [00 : Pressure (Bar) 01 : Head (Meter), 02 :Motor Speed (RPM),03:Water Temperature(°C) ,04: Power (kW), FS:00] Set the real-time displaying item. Navigation: Press "SET" > "+" or "-" > "b06" > "SET" > Adjust digit |

| |
|---|
| <p>[Range : 10-50, FS:30] 88.88 This setting should be reduced when the water outlet of the pump is closed and not easy to stop, and increased when the pump is stopped by mistake during operation. Navigation: Press "SET" > "+" or "-" > "b07" > "SET" > Adjust digit </p> |
| <p>[00 : OFF 01: ON FS :01] 88.88 Switch the function of anti-freeze protection. Navigation: Press "SET" > "+" or "-" > "b14" > "SET" > Adjust digit [00 </p> |
| <p>[Range: -10 °C ~ +10 °C FS: 5 °C] To set the starting temperature of anti-freezing protection. 88.89 The pump will automatically start when the water temperature in pump body drop to this setting value and stop when the temperature up to B16 setting. Prevent the water in pump from freezing to broken pump body. It is based B14 setting Enable ("00") Navigation: Press "SET" > "+" or "-" > "b15" > "SET" > Adjust digit </p> |
| <p>[Range: +20 °C ~ +40 °C FS: +30 °C] Set the stop temperature of anti-freezing protection. 88.86 When the pump is started due to the activation of anti-freezing protection. It will automatically stop when the water temperature is up to this setting value. It is based B14 setting Enable ("00") Navigation: Press "SET" > "+" or "-" > "b16" > "SET" > Adjust digit </p> |
| <p>[Range: 40°C ~ 130 °C FS: 75 °C] Setting the protection of water temperature. 88.80 When the water temperature exceeds this setting, the pump will stop for protection. After protection, the pump will automatically start when the water temperature is dropped 2°C from the protection temperature. Navigation: Press "SET" > "+" or "-" > "b17" > "SET" > Adjust digit </p> |

10. PHONE APP BINDS THE PUMP (WIFI IS A OPTION FUNCTION)

Download APP

1. Search "intelligent inverter pump" in Apple store.
2. Scan the QR code as below.



android



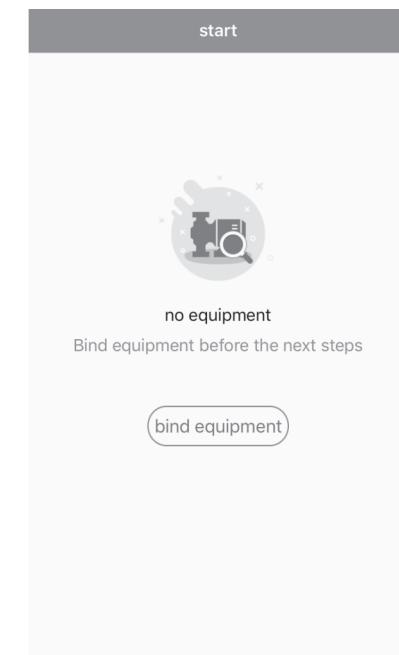
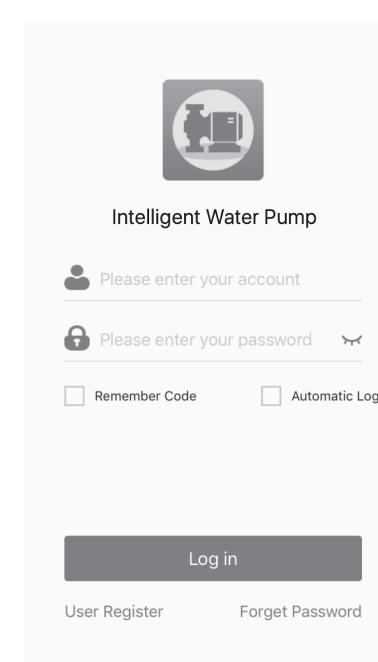
iOS

Connection

The phone and pumps connect with a same Wifi.

Open APP , Register a account and login.

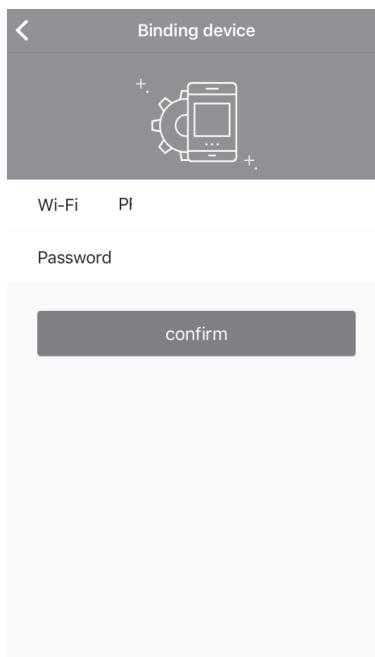
Click "bind equipment".



1. Select the WIFI and Enter password
2. Long Press the "SET" button on PUMPS until hear the sound of Beep (5 seconds).

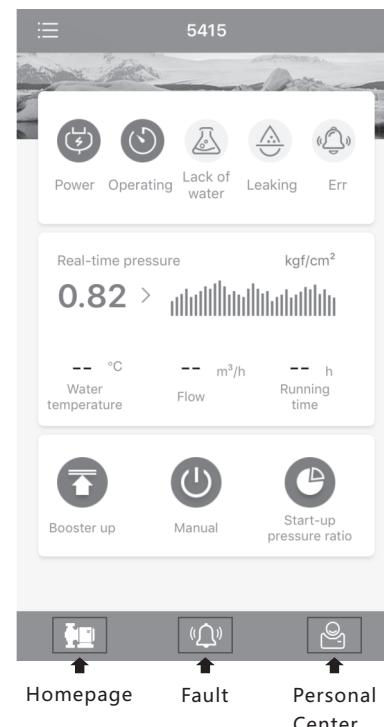
3. Click "confirm" on phone APP and begin to connect.

Note: if long time can not connected, try again or check WIFI situation

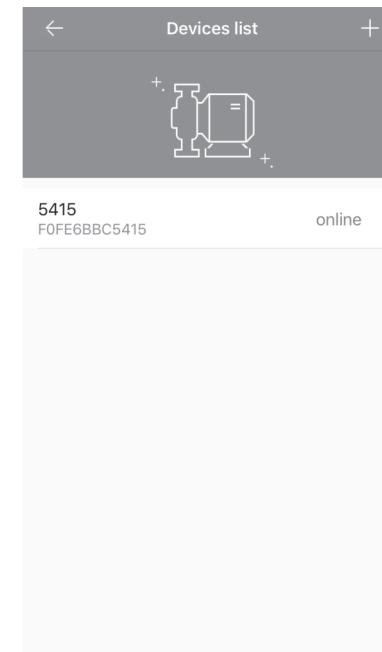


Enter the homepage of APP when they were connected.

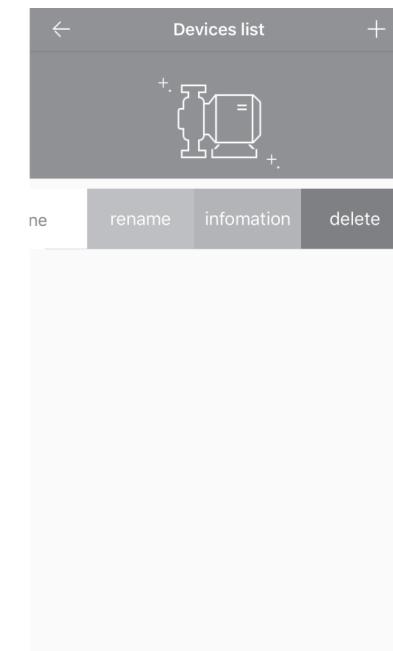
Note: 1. After connecting the pump successfully, the APP can be used under any network (including mobile data) . 2. If the pump changed to another WIFI, it need reconnect. 3. One pump can bind multiple APP accounts. 4. An APP can bind multiple pumps.



Click it on the top left corner and enter Devices list.



Slide the device name to the left, it can rename, Check information and delete the device; click "+" in the top right corner to add a new device.



11. PRECAUTIONS

- 1.Whenever possible, install the water pump in shady, cool and dry area. If the water pump is to be used in the open area, don't expose it to direct sunlight. Otherwise it will cause damage to the water pump and cause electrical hazard.
- 2.When used in shady area, it is recommended to install Y Type filter onto the suction pipe to prevent the sand from entering the pump body.
- 3.In winter freezing areas, make sure to turn on the anti-freeze function and keep the pump connected to the power supply. Do not cover the fan cover and heat sink of the motor with insulation material, which will cause poor ventilation and heat dissipation and cause a fire. When the pump is out of use, the water in the pump should be drained.
4. When there is a heating system in the water supply line, it will produce a certain amount of water vapor, which may affect the use of the pump, it is recommended to install a pressure relief valve.

12. OPERATION AND MAINTENANCE

- 1.Before starting the water pump, ensure that the power cord is properly connected, the voltage is correct, and all suction pipe and discharge pipe are well connected and sealed.
- 2.The relevant technical data of the water pump are indicated on the nameplate for reference.
- 3.If the pump is not used for long time, disconnect the power supply, drain the water and clean the pump body, store the water pump in shady, cool and dry area. When restart, if the water pump can't operate normally, remove the fan cover and turn the fan manually until the fan can rotate smoothly
- 4.After 2000 hours of normal use, the pump should be maintained.
- 5.Rust-proof function: If the pump is in the power-on state and the pump has not been used for a long time, it will automatically run for 30 seconds every 24 hours to avoid pump body rust jamming the impeller.

| | | | |
|---|--|---|--|
| 2 | The pump does not stop | Pressure sensor fault | Change pressure sensor |
| | | Pipe leakage or tap is not full closed | Check the pipe and taps |
| | | Working pressure value is too high | Decreases the working pressure value |
| | | Motor reversal | Adjust the direction of motor rotation through b02 or adjust the wiring |
| | | The pipe is dry run but the dry run protection is not available | Adjust the parameter of b03 or b05 to activate the dry run protection function |
| 3 | The pump function but no water flows out | Motor reversal | Adjust the direction of motor rotation through b02 or adjust the wiring |
| | | Pipe blocked or check valve can not open | Check the pipe and check valve |
| | | No water supply | Awaiting water supply |
| | | Error | Check the Error code on display |
| 4 | The pump function but water flows is small | Motor reversal | Adjust the direction of motor rotation through b02 or adjust the wiring |
| | | Air into pump body | Open the outlet of pump and keep running |
| | | The pipe of outlet is bigger than inlet | Change the pipe |
| | | The pipe of inlet is too small | Change the pipe |

13. COMMON FAULTS AND TROUBLE SHOOTING METHODS

| NO. | PROBLEM | PROBABLE CAUSES | POSSIBLE REMEDIES |
|-----|-------------------------|-----------------------------|-------------------------------|
| 1 | The pump does not start | The pipe pressure higher | Increases working pressure |
| | | Than pump's setting value | Value or adjust b01 parameter |
| | | b01 parameter value too low | Increases b01 parameter value |
| | | The pipe or tap is blocked | Check the pipe and tap |

| NO. | WARNING CODE | REASON OF FAULT | SOLUTION |
|-----|--------------|---|---|
| 1 | E01 | [Low voltage] Input Voltage lower than 130V(1Phase)/245V(3Phase) | 1.The voltage rises to 180V (1phase)/310V(3phase), the fault will removed automatic and pumps can working again; 2. Fitted a voltage stabilizer. |
| 2 | E02 | [Over voltage] Input voltage higher than 280V(1Phase)/465V(3Phase) | 1.The voltage drops to 280V (1phase)/465V(3phase), the fault will removed automatic and pumps can working again; 2. Fitted a voltage stabilizer. |

| | | | |
|---|-----|---|--|
| 3 | E03 | [Pressure sensor fault] | <ol style="list-style-type: none"> 1. Turn off power, Re-plug the signal wire to pressure sensor to ensure in good connection. 2. Check the Connecting Terminal in controller and ensure in good connection. 3. Change a new signal wire. 4. Change a new pressure sensor. |
| 4 | E04 | [IPM temperature too high] | <ol style="list-style-type: none"> 1. Cooling, IPM module internal temperature reduced to 80 degrees, the pump returned to normal operation; 2. Installed the pump in well ventilated place. |
| 5 | E08 | <p>[Lack phase/Over current]</p> <ol style="list-style-type: none"> a. Rotor locked as Impeller broken, rust, or sewage inside pump body. b. bad connection between motor and controller c. The three-phase resistance of the pump is unbalanced due to the wading of the motor. d. the motor lack-phase. | <ol style="list-style-type: none"> 1. Renew impeller or clear the rust and sewage; 2. Check or renew the connected wire between motor and controller. 3. Change motor. |
| 6 | E09 | <p>[IPM current too high and overloaded]</p> <ol style="list-style-type: none"> 1. Overloading. 2. Electromagnetic interference. 3. Pool wiring connection between motor and controller. 4. IPM broken. | <ol style="list-style-type: none"> 1. Check and remove the case of overloaded motor. 2. External environment interference. 3. Check and replace the connection between motor and controller. 4. Replace the controller. |
| 7 | ERR | [Fault of pressure transmitter] | <ol style="list-style-type: none"> 1. Check and replace the wiring. 2. Replace the transmitter. |
| 8 | P01 | [Water shortage warning] | <ol style="list-style-type: none"> 1. The pump working pressure has erratic fluctuation. 2. Pressure lower than b03 setting. 3. Outlet too big to keep pressure. 4. Water shortage. |
| 9 | E13 | [Communication fault between display the screen's and the control's board] | Check the connect terminal of PCBA board. |