JOYONWAY
BY BALBOA

# P69B133

## SPA CONTROL SYSTEM

| | |
|---|---|
| 1 | 220-240V~ 48A 50Hz |
| 2 | 380-415V 3N~ 28A 50Hz |
| 3 | 240V~ 48A 60Hz |
| 4 | 240V~ and 120V~ 48A 60Hz |
| 5 | 120V~ 48A 60Hz |


CAN ICES-003(B) / NMB-003(B)

V1.0

## Revised version

| Version | Revised content | Revised by | Revision date |
|---|---|---|---|
| V1.0 | New revision | Sun Hydraulics (China) co.,Ltd. Dongguan Branch | 2024/01/02 |

# Contents

WARNING

## Cautious for electric shock!

**Please carefully read the following items before installation or connection.**

1、Appliances must be permanently connected to fixed wiring.

2、Parts incorporating electrical components, except remote control devices, must be located or fixed so that they cannot fall into the bath.

3、The appliance must be supplied through a residual current device (RCD/GFCI) having a rated residual operating current not exceeding 30 mA.

4、These devices can be connected only to a supply with system impedance no more than 0.099 ohm for Single-phase input or 0.001 ohm for Multi-phase input. In case necessary, please consult your supply authority for system impedance information.

5、This product is not suitable for cleaning with water or other dissolvant. Please do not attempt to maintain this control system yourself; If the product needs to be maintained, please contact your distributor or repair service agency. Please follow all the instructions on power connection in the manual. Installation must be conducted by a licensed electrician. All ground wire must be properly installed. (Recommended tightening torque for ground wire is 3 N • M)

6、Use only copper conductors with a temperature resistance of more than 75°C for power supply.

7、The European standard single-phase input current cannot exceed 32A. The three-phase input current cannot exceed 22A. The American standard input current cannot exceed 32A; The load current carried by the control system cannot exceed the rated input current.

8、End product can have another the connection of external equipotential bonding conductors.

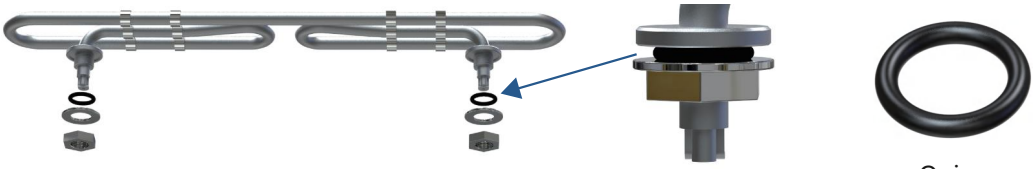
9、This controller is not intend for transportable pool use.

### Correct Disposal of this product

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

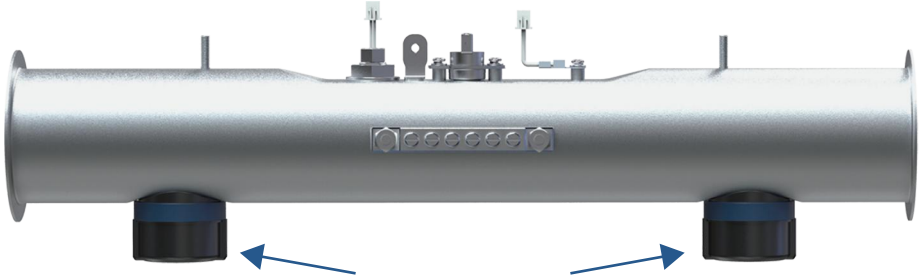
## Maintenance Warning

When repairing and replacing the heating wire, professional operation is required, be sure to use JOY-ONWAY's certified O-rings to ensure that no O-rings are missed and installed to ensure that the heating tube is sealed and does not leak.As shown in the following figure:



O ring

After repairing and replacing the heating element, install the sealing parts back to place. As shown in the following figure:



Install the sealing parts back to place

# 1、Product overview

**Power input: 220-240V~ 48A 50Hz**
**380-415V 3N~ 28A 50Hz**
**120V~ 48A 60Hz**
**240V~ and 120V~ 48A 60Hz**
**240V~ 48A 60Hz**

## Model: P69B133


Output for two set of ON/OFF type or
RGB type SPA light (+5V/3A or +12/3A)

4 set of single-speed pump (10.5A)

1 set of blower (10.5A)

1 set of circ-pump (3.5A)

1 set of thermostatic heating
(2000W or 3000W or 4000W@230V~)

1 set of ozone (1A)

1 set of auxiliary power output (10.5A)

Use of ambient temperature -20℃~55℃

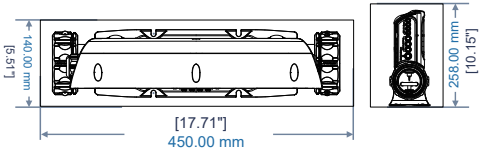
| Clock display | Freeze protection | Heating timer | Water circulation timer |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **Matched panels:** | Any version of PB562/PB562 Plus<br>Any version of PB563/PB563 Plus<br>Any version of PB565/PB565 Plus | **Heating element:** | 2KW heating tube<br>3KW heating tube<br>4KW heating tube |

# 2、Product dimensions

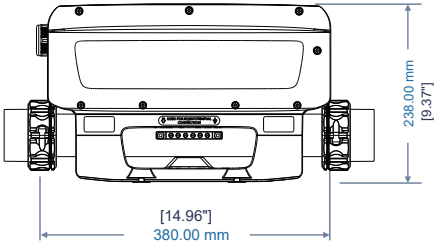
## 2.1、P69B133 Control System Dimensions and Installation Instruction

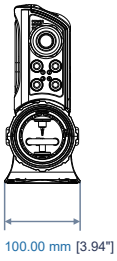
Designs of P69B133 control system



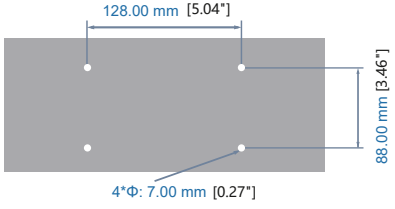

The distance between the product and o bstacles should be above 20mm

Minimum space reserved W: 140.00mm
H: 258.00mm D: 450.00mm



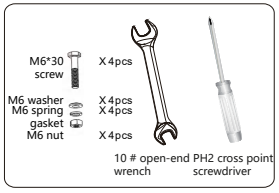




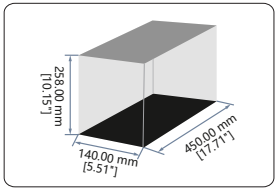

Suggested hole size

# Installation Instruction

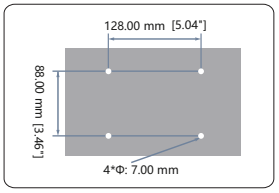
## Fixed installation



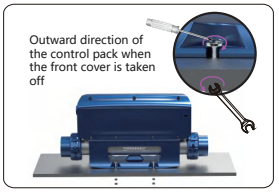

1. Materials and tools to be prepared;



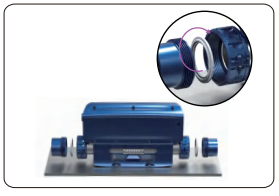

2. The distance between the product and obstacles should be above 20mm



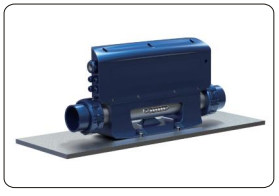

3. Please make holes on the fixing plate according to the dimensions shown in the above figure;




4. As shown in the figure, align the control pack with the fixing plate hole position and use a special wrench to lock in M6 screws in sequence;



5. As shown in the figure: after fixing the base plate of the control pack, place waterproof rubber ring into the joint , and tighten the water pipe joint as required;



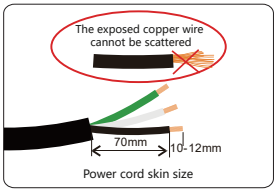
6. Tighten the water pipe joint, and complete the control pack installation.



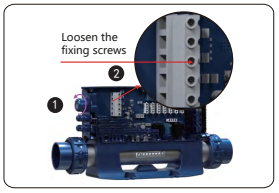
# Installation Instruction

## P69B133 power cord connection


1. Installation tools.

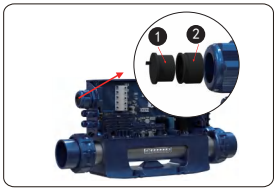



2. Peel the power cord to approximately the size shown in the figure.

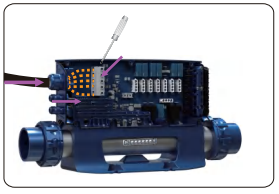



3.❶ Loosen the gland nut according to the rotation direction shown in the figure above;

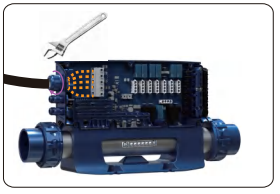
❷ Unscrew the screw of the "main power input connector" upwards to make the connector wiring port loose.




4. In the gland head, sealing ring is chosen according to the size of the power cable. Sealing ring numbers ❶ + ❷ is suitable for power cables with a diameter of 12-18mm, and it is necessary to remove the seal on ring ❶ ; sealing ring ❷ individually is suitable for power cables with a diameter of 18-25mm.



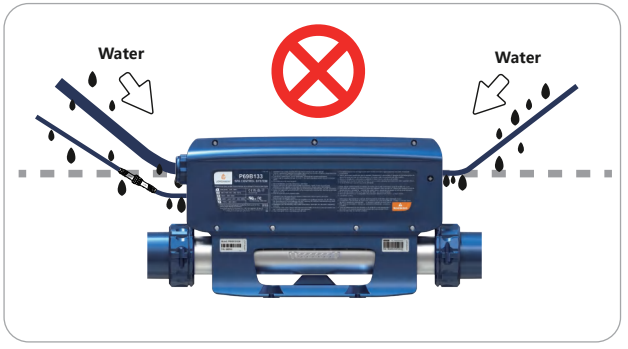
6. Thread the main power cable from the through hole of the gland nut; Connect the power cable to the corresponding terminal block as shown in the wiring diagram on the control pack cover. After connecting the power cable to the terminal block , tighten the screw with a screwdriver to compress and tighten the wire. The recommended torque is 2.5-3.0N · M.



6. After confirming that each power cord is securely buckled, tighten the waterproof nut of the power cord, and then use a special wrench to tighten it completely.

# Installation Instruction

## Wire installation




Error of control system wire connecting, as shown in the above figure


Because the driver may operate in a humid environment, steam may condense into water droplets on the wire of the product due to the large temperature difference and other reasons, or water leakage may occur. The water will flow to the product along wire, and the product may be damaged if soaked for a long time. It is strongly recommended to install the driver according to the following requirements:

**All the wires of the control system are bent into a U shape, as shown in the above figure**

# Installation Instruction

## P69B133 power cord connection

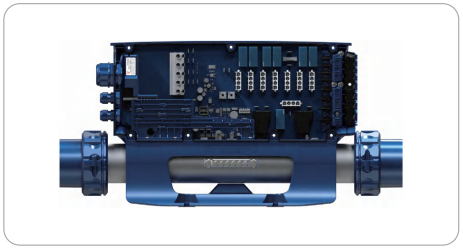
| | | |
|---|---|---|
| It is recommended to use 3 * 10mm² cable when the total load current is 48A | 220 - 240V~ 48A 50Hz<br>J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❸ - N BLUE<br>❷ - L BROWN<br>❶ - G YE/GN |
| It is recommended to use 5 * 4mm² cable when the total load current is 28A | 380 - 415V 3N~ 28A 50Hz<br>J2 - J3 J4 - J5 J7 - J8 J6 - J18 J14 - J19 | ❺ - N2 BLUE<br>❹ - L2 BROWN<br>❸ - N1 BLUE<br>❷ - L1 BROWN<br>❶ - G YE/GN |
| It is recommended to use 5 * 4mm² cable when the total load current is 22A | 380 - 415V 3N~ 22A 50Hz<br>J2 - J3 J4 - J5 J6 - J7 J14 - J19 | ❺ - L3 GREY<br>❹ - L2 BLACK<br>❸ - N BLUE<br>❷ - L1 BROWN<br>❶ - G YE/GN |
| It is recommended to use a 3 * 8AWG power cable when the total load current is 48A | 240V~ 48A 60Hz<br>J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❸ - L2 RED<br>❷ - L1 BLACK<br>❶ - G GREEN |
| It is recommended to use a 4 * 8AWG power cable when the total load current is 48A | 240V~ and 120V~ 48A 60Hz<br>J3 - J6 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❺ - N WHITE<br>❹ - - -<br>❸ - L2 RED<br>❷ - L1 BLACK<br>❶ - G GREEN |
| It is recommended to use a 3 * 8AWG power cable when the total load current is 48A | 120V~ 48A 60Hz<br>J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❸ - N WHITE<br>❷ - L BLACK<br>❶ - G GREEN |

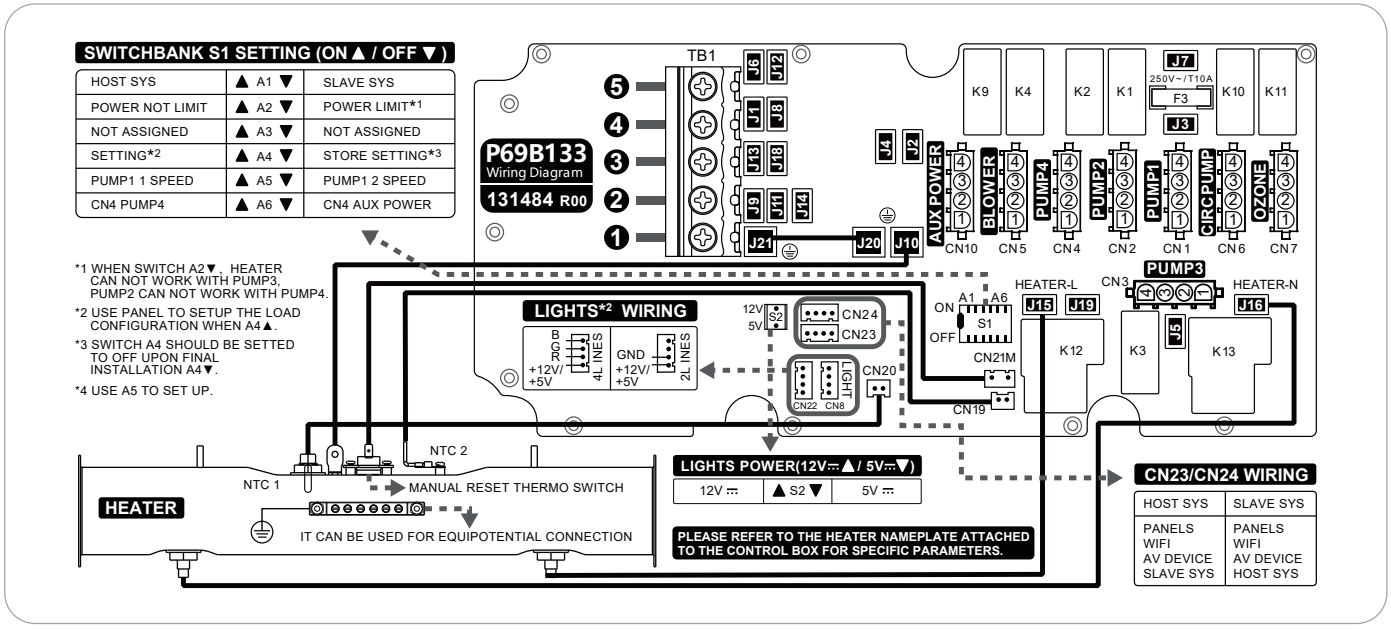
**Users choose the appropriate power cable based on the actual load electrical parameters.**

For supply connections , Use copper conductors only, Temperature at least 75°C (167°F),

# 3、Basic information

## 3.1、Wiring diagram





## 3.2、Power supply and load

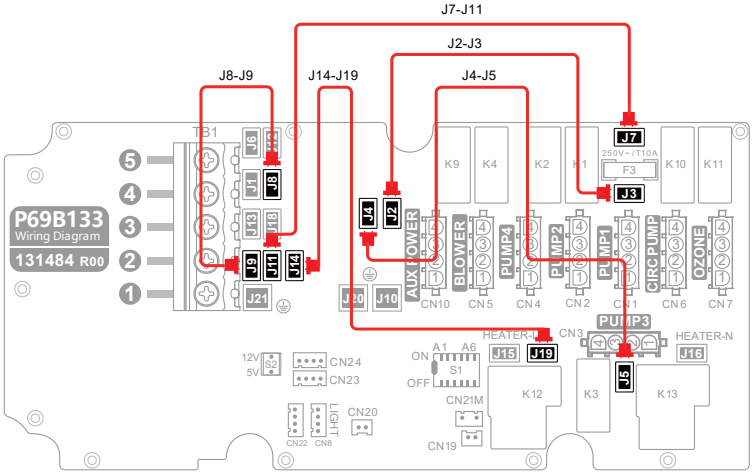
## POWER INPUT AND LOAD OUTPUT

PAY ATTENTION TO THE DIFFERENT CONNECTIONS BETWEEN J2/J3/J4/J5/J6/J7/J8/J9/J11/J14/J18/J19 IN EACH POWER TYPE.

| CONNECTOR / POWER TYPE | POWER INPUT | PUMP1(1 SPEED)*4 | | PUMP1(2 SPEED)*4 | PUMP2 | PUMP3 | PUMP4 | BLOWER | OZONE | AUX | HEATER | LIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PUMP1(1 SPD) | CIRC PUMP (HEATER PUMP) | PUMP1 (HEATER PUMP) | | | | | | | | |
| | TB1 | CN1 | CN6 | CN1 | CN2 | CN3 | CN4 | CN5 | CN7 | CN10 | J15 J16 | CN8 CN22 |
| 220 - 240V~ 48A 50Hz<br>J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❸ - N BLUE<br>❷ - L BROWN<br>❶ - G YE/GN | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L-HI / 3-L-LO 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 2-L 1-N | J15-L J16-N | 12V ⎓ 3A or 5V ⎓ 3A 2A Max/CH |
| | | 220-240V~ 10.5A | 220-240V~ 3.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 1A | 220-240V~ 10.5A | 220-240V~ | |
| 380 - 415V 3N~ 28A 50Hz<br>J2 - J3 J4 - J5 J7 - J8 J6 - J18 J14 - J19 | ❺ - N2 BLUE<br>❹ - L2 BROWN<br>❸ - N1 BLUE<br>❷ - L1 BROWN<br>❶ - G YE/GN | 4-L2 / 3(N/A) 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 4-L2-HI / 3-L2-LO 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 4-L1 / 3(N/A) 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 2-L2 1-N | J15-L1 J16-N | 12V ⎓ 3A or 5V ⎓ 3A 2A Max/CH |
| | | 220-240V~ 10.5A | 220-240V~ 3.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 1A | 220-240V~ 10.5A | 220-240V~ | |
| 380 - 415V 3N~ 22A 50Hz<br>J2 - J3 J4 - J5 J6 - J7 J14 - J19 | ❺ - L3 GREY<br>❹ - L2 BLACK<br>❸ - N BLUE<br>❷ - L1 BROWN<br>❶ - G YE/GN | 4-L3 / 3(N/A) 2-N / 1-G | 4-L3 / 3(N/A) 2-N / 1-G | 4-L3-HI / 3-L3-LO 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 4-L1 / 3(N/A) 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 4-L2 / 3(N/A) 2-N / 1-G | 4-L3 / 3(N/A) 2-N / 1-G | 2-L2 1-N | J15-L1 J16-N | 12V ⎓ 3A or 5V ⎓ 3A 2A Max/CH |
| | | 220-240V~ 10.5A | 220-240V~ 3.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 1A | 220-240V~ 10.5A | 220-240V~ | |
| 240V~ 48A 60Hz<br>J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❸ - L2 RED<br>❷ - L1 BLACK<br>❶ - G GREEN | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1-HI / 3-L1-LO 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 2-L1 1-L2 | J15-L1 J16-L2 | 12V ⎓ 3A or 5V ⎓ 3A 2A Max/CH |
| | | 240V~ 10.5A | 240V~ 3.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 1A | 240V~ 10.5A | 240V~ | |
| 240V~ and 120V~ 48A 60Hz<br>J3 - J6 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❺ - N WHITE<br>❹ - - -<br>❸ - L2 RED<br>❷ - L1 BLACK<br>❶ - G GREEN | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-N / 1-G | N/A | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-L2 / 1-G | 4-L1 / 3(N/A) 2-N / 1-G | 2-L1 1-L2 | J15-L1 J16-L2 | 12V ⎓ 3A or 5V ⎓ 3A 2A Max/CH |
| | | 240V~ 10.5A | 120V~ 3.5A | | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 120V~ 1A | 240V~ 10.5A | 240V~ | |
| 120V~ 48A 60Hz<br>J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | ❸ - N WHITE<br>❷ - L BLACK<br>❶ - G GREEN | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L-HI / 3-L-LO 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 4-L / 3(N/A) 2-N / 1-G | 2-L 1-N | J15-L J16-N | 12V ⎓ 3A or 5V ⎓ 3A 2A Max/CH |
| | | 120V~ 10.5A | 120V~ 3.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 1A | 120V~ 10.5A | 120V~ | |

## 220-240V~ 48A 50Hz **J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19**

| CONNECTOR / POWER TYPE | POWER INPUT | PUMP1(1 SPEED)*4 | | PUMP1(2 SPEED)*4 | PUMP2 | PUMP3 | PUMP4 | BLOWER | OZONE | AUX | HEATER | LIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PUMP1(1 SPD) | CIRC PUMP (HEATER PUMP) | PUMP1 (HEATER PUMP) | | | | | | | | |
| | TB1 | CN1 | CN6 | CN1 | CN2 | CN3 | CN4 | CN5 | CN7 | CN10 | J15 J16 | CN8 CN22 |
| 220 - 240V~ 48A 50Hz **J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19** | ❸ - N BLUE<br>❷ - L BROWN<br>❶ - G YE/GN | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L-HI / 3-L-LO<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 2-L<br>1-N | J15-L<br>J16-N | 12V ⎓ 3A<br>or<br>5V ⎓ 3A<br>2A Max/CH |
| | | 220-240V~ 10.5A | 220-240V~ 3.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 1A | 220-240V~ 10.5A | 220-240V~ | |

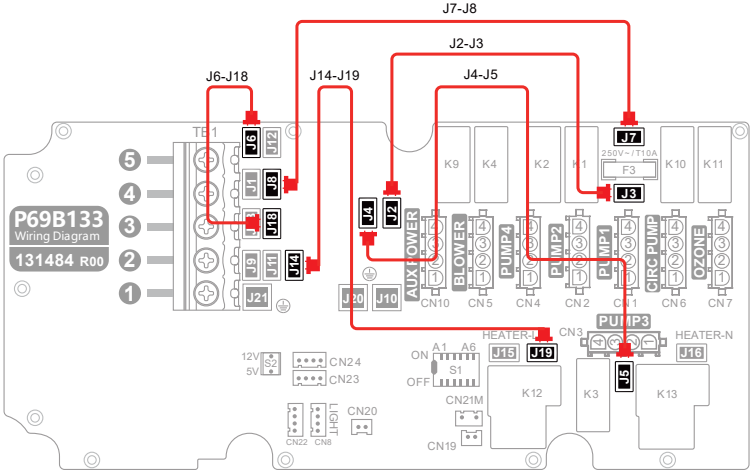


## 380-415V 3N~ 28A 50Hz **J2 - J3 J4 - J5 J7 - J8 J6 - J18 J14 - J19**

| CONNECTOR / POWER TYPE | POWER INPUT | PUMP1(1 SPEED)*4 | | PUMP1(2 SPEED)*4 | PUMP2 | PUMP3 | PUMP4 | BLOWER | OZONE | AUX | HEATER | LIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PUMP1(1 SPD) | CIRC PUMP (HEATER PUMP) | PUMP1 (HEATER PUMP) | | | | | | | | |
| | TB1 | CN1 | CN6 | CN1 | CN2 | CN3 | CN4 | CN5 | CN7 | CN10 | J15 J16 | CN8 CN22 |
| 380 - 415V 3N~ 28A 50Hz<br>J2 - J3 J4 - J5 J7 - J8 J6 - J18 J14 - J19 | 5 - N2 BLUE<br>4 - L2 BROWN<br>3 - N1 BLUE<br>2 - L1 BROWN<br>1 - G YE/GN | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L2-HI / 3-L2-LO<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L1 / 3(N/A)<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 2-L2<br>1-N | J15-L1<br>J16-N | 12V ⎓ 3A or<br>5V ⎓ 3A<br>2A Max/CH |
| | | 220-240V~ 10.5A | 220-240V~ 3.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 1A | 220-240V~ 10.5A | 220-240V~ | |

Load carried by L1 phase: PUMP3 / HEATER

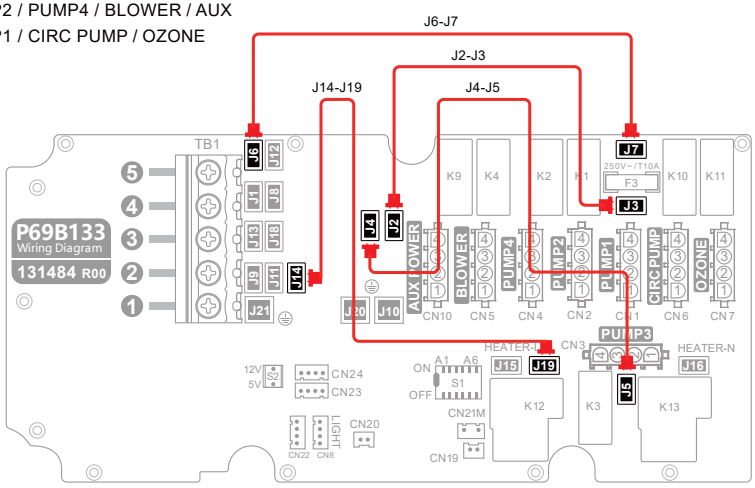
Load carried by L2 phase: PUMP1 / PUMP2 / PUMP4 / CIRC PUMP / BLOWER / OZONE / AUX



## 380-415V 3N~ 22A 50Hz **J2 - J3 J4 - J5 J6 - J7 J14 - J19**

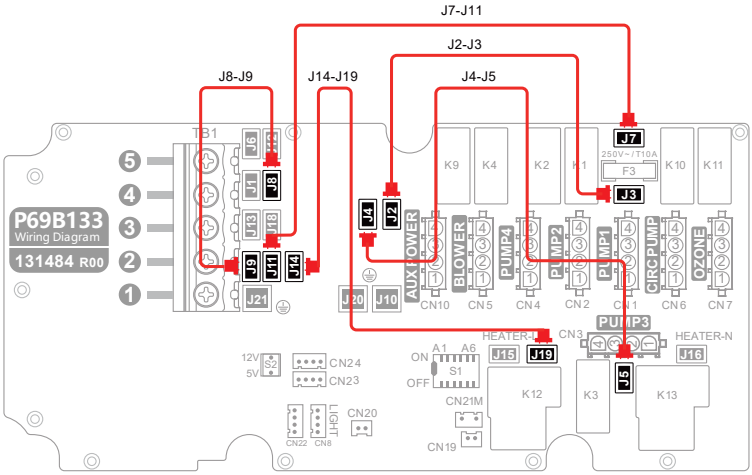
| CONNECTOR / POWER TYPE | POWER INPUT | PUMP1(1 SPEED)*4 | | PUMP1(2 SPEED)*4 | PUMP2 | PUMP3 | PUMP4 | BLOWER | OZONE | AUX | HEATER | LIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PUMP1(1 SPD) | CIRC PUMP (HEATER PUMP) | PUMP1 (HEATER PUMP) | | | | | | | | |
| | TB1 | CN1 | CN6 | CN1 | CN2 | CN3 | CN4 | CN5 | CN7 | CN10 | J15 J16 | CN8 CN22 |
| 380 - 415V 3N~ 22A 50Hz<br>J2 - J3 J4 - J5 J6 - J7 J14 - J19 | 5 - L3 GREY<br>4 - L2 BLACK<br>3 - N BLUE<br>2 - L1 BROWN<br>1 - G YE/GN | 4-L3 / 3(N/A)<br>2-N / 1-G | 4-L3 / 3(N/A)<br>2-N / 1-G | 4-L3-HI / 3-L3-LO<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L1 / 3(N/A)<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L2 / 3(N/A)<br>2-N / 1-G | 4-L3 / 3(N/A)<br>2-N / 1-G | 2-L2<br>1-N | J15-L1<br>J16-N | 12V ⎓ 3A<br>OR<br>5V ⎓ 3A<br>2A Max/CH |
| | | 220-240V~ 10.5A | 220-240V~ 3.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 10.5A | 220-240V~ 1A | 220-240V~ 10.5A | 220-240V~ | |

Load carried by L1 phase: PUMP3 / HEATER
Load carried by L2 phase: PUMP2 / PUMP4 / BLOWER / AUX
Load carried by L3 phase: PUMP1 / CIRC PUMP / OZONE



## 240V~ 48A 60Hz **J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19**

| CONNECTOR / POWER TYPE | POWER INPUT | PUMP1(1 SPEED)*4 | | PUMP1(2 SPEED)*4 | PUMP2 | PUMP3 | PUMP4 | BLOWER | OZONE | AUX | HEATER | LIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PUMP1(1 SPD) | CIRC PUMP (HEATER PUMP) | PUMP1 (HEATER PUMP) | | | | | | | | |
| | TB1 | CN1 | CN6 | CN1 | CN2 | CN3 | CN4 | CN5 | CN7 | CN10 | J15 J16 | CN8 CN22 |
| 240V~ 48A 60Hz<br>J2 - J3 J4 - J5<br>J8 - J9 J7 - J11<br>J14 - J19 | ❸ - L2 RED<br>❷ - L1 BLACK<br>❶ - G GREEN | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1-HI / 3-L1-LO<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 2-L1<br>1-L2 | J15-L1<br>J16-L2 | 12V ⎓ 3A<br>or<br>5V ⎓ 3A<br>2A Max/CH |
| | | 240V~ 10.5A | 240V~ 3.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 1A | 240V~ 10.5A | 240V~ | |

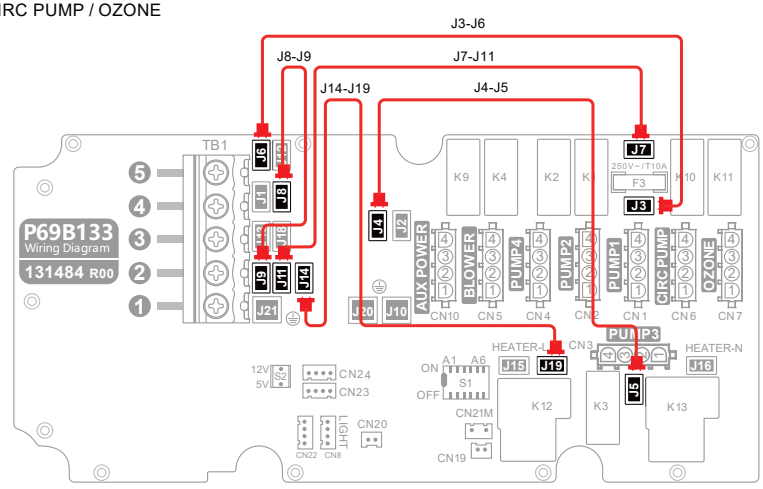


## 240V~ and 120V~ 48A 60Hz

**J3 - J6 J4 - J5 J8 - J9 J7 - J11 J14 - J19**

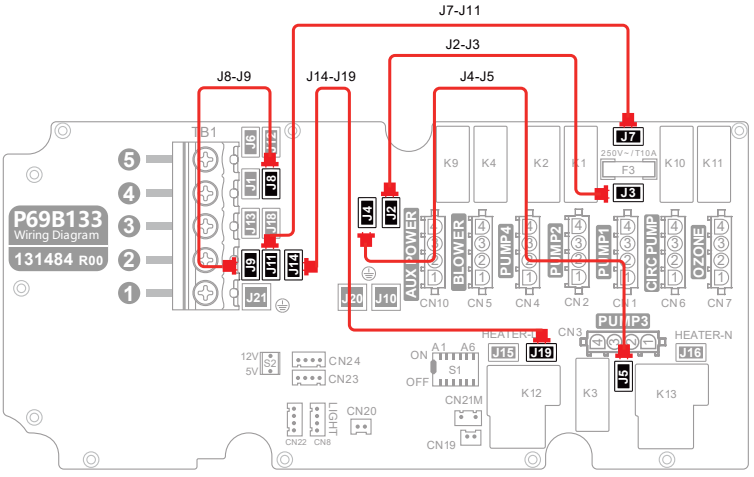
| CONNECTOR / POWER TYPE | POWER INPUT | PUMP1(1 SPEED)*4 | | PUMP1(2 SPEED)*4 | PUMP2 | PUMP3 | PUMP4 | BLOWER | OZONE | AUX | HEATER | LIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PUMP1(1 SPD) | CIRC PUMP (HEATER PUMP) | PUMP1 (HEATER PUMP) | | | | | | | | |
| | TB1 | CN1 | CN6 | CN1 | CN2 | CN3 | CN4 | CN5 | CN7 | CN10 | J15 J16 | CN8 CN22 |
| 240V~ and 120V~ 48A 60Hz<br>J3 - J6 J4 - J5 J8 - J9 J7 - J11 J14 - J19 | 5 - N WHITE<br>4 - - -<br>3 - L2 RED<br>2 - L1 BLACK<br>1 - G GREEN | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-N / 1-G | N/A | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-L2 / 1-G | 4-L1 / 3(N/A)<br>2-N / 1-G | 2-L1<br>1-L2 | J15-L1<br>J16-L2 | 12V ⎓ 3A<br>or<br>5V ⎓ 3A<br>2A Max/CH |
| | | 240V~ 10.5A | 120V~ 3.5A | | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 240V~ 10.5A | 120V~ 1A | 240V~ 10.5A | 240V~ | |

Load carried by L2 line: PUMP1 / PUMP2 / PUMP3 / PUMP4 / BLOWER / AUX / HEATER
Load carried by N line: CIRC PUMP / OZONE



## 120V~ 48A 60Hz **J2 - J3 J4 - J5 J8 - J9 J7 - J11 J14 - J19**

| CONNECTOR / POWER TYPE | POWER INPUT | PUMP1(1 SPEED)*4 | | PUMP1(2 SPEED)*4 | PUMP2 | PUMP3 | PUMP4 | BLOWER | OZONE | AUX | HEATER | LIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PUMP1(1 SPD) | CIRC PUMP (HEATER PUMP) | PUMP1 (HEATER PUMP) | | | | | | | | |
| | TB1 | CN1 | CN6 | CN1 | CN2 | CN3 | CN4 | CN5 | CN7 | CN10 | J15 J16 | CN8 CN22 |
| 120V~ 48A 60Hz<br>J2 - J3 J4 - J5<br>J8 - J9 J7 - J11<br>J14 - J19 | ❸ - N WHITE<br>❷ - L BLACK<br>❶ - G GREEN | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L-HI / 3-L-LO<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 4-L / 3(N/A)<br>2-N / 1-G | 2-L<br>1-N | J15-L<br>J16-N | 12V ⎓ 3A<br>or<br>5V ⎓ 3A<br>2A Max/CH |
| | | 120V~ 10.5A | 120V~ 3.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 10.5A | 120V~ 1A | 120V~ 10.5A | 120V~ | |

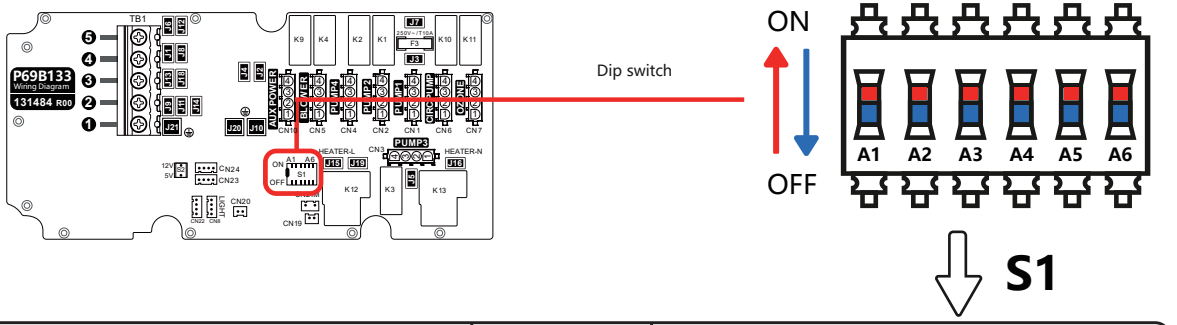


### 3.3、Configure load

**There are two ways to configure the load: Use the Dip switch or use the control panel.**

### 3.3.1、Use the Dip switch to configure the load

Use the Dip switch for load configuration: Set the Dip switch positions A1-A6 according to the Dip switch S1 configuration table on the control system PCB.



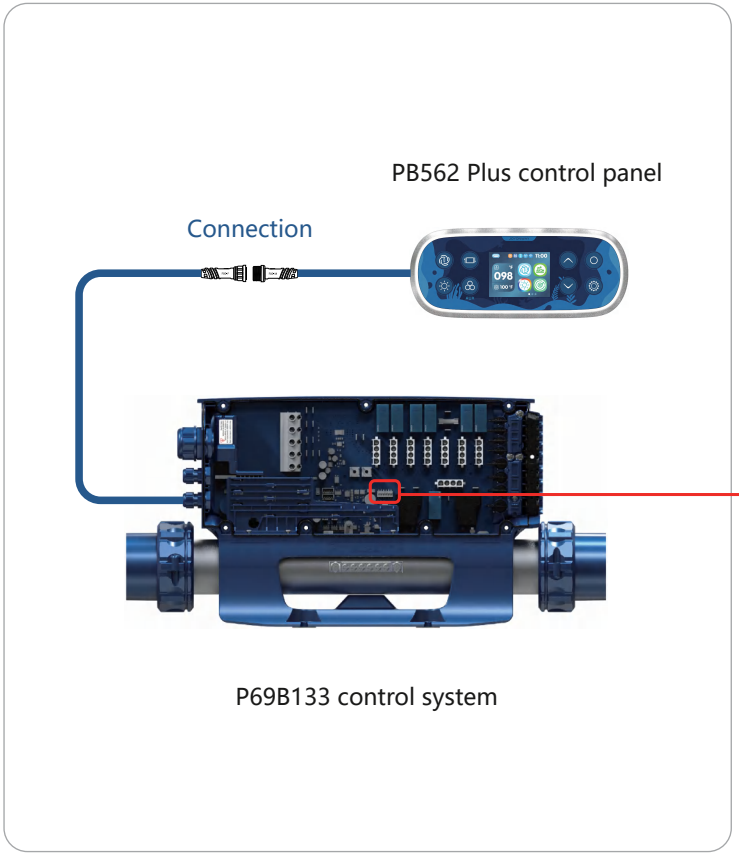

| | | |
|---|---|---|
| HOST SYS | ▲ A1 ▼ | SLAVE SYS |
| POWER NOT LIMIT | ▲ A2 ▼ | POW ER LIMIT |
| NOT ASSIGNED | ▲ A3 ▼ | NOT ASSIGNED |
| SETTING | ▲ A4 ▼ | STORE SETTING |
| PUMP1 1 SPEED | ▲ A5 ▼ | PUMP1 2 SPEED |
| CN4 PUMP4 | ▲ A6 ▼ | CN4 AUX POWER |

| | |
|---|---|
| **A1** | ▲ **HOST SYS:** When there is only one control pack in the SPA control system, please set this pack as the main control system.<br>▼ **SLAVE SYS:** When set as a slave control system, it can form a multi-pack SPA control system with the main control system. |
| **A2** | ▲ **POWER NOT LIMIT**<br>▼ **POW ER LIMIT:** If pump 3 is turned on, the thermostat will be turned off; Water pump 2 and pump 4 cannot be turned on at the same time. |
| **A3** | ▲ **NOT ASSIGNED**<br>▼ **NOT ASSIGNED** |
| **A4** | ▲ **SETTING**<br>▼ **STORE SETTING** |
| **A5** | ▲ **PUMP1 1 SPEED**<br>▼ **PUMP1 2 SPEED** |
| **A6** | ▲ **CN4 PUMP4:** The output ofpump 4 is used as the output of pump 4.<br>▼ **CN4 AUX POWER:** The port of pump 4 is used as an auxiliary power source. |

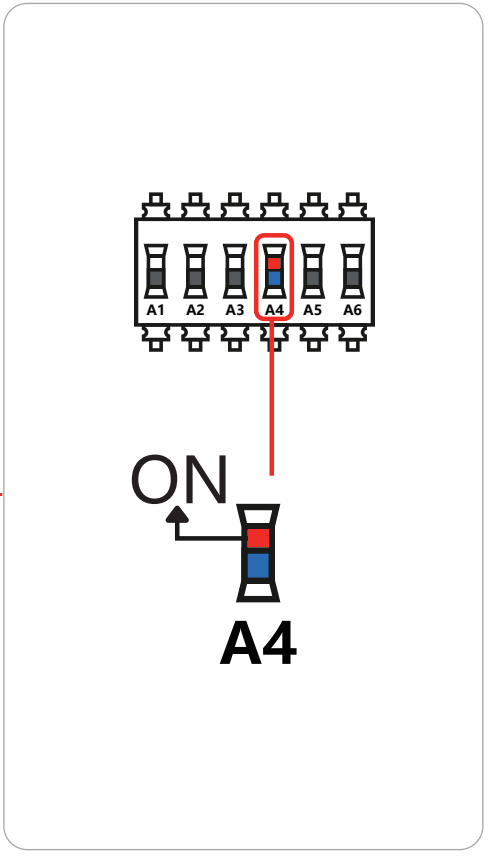
### 3.3.2、Configure functions using the control panel. Panels: PB562 Plus control panel/PB563 Plus control panel/PB565 Plus control panel.

(1) Use the control panel PB562 Plus for functional configuration.

Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.

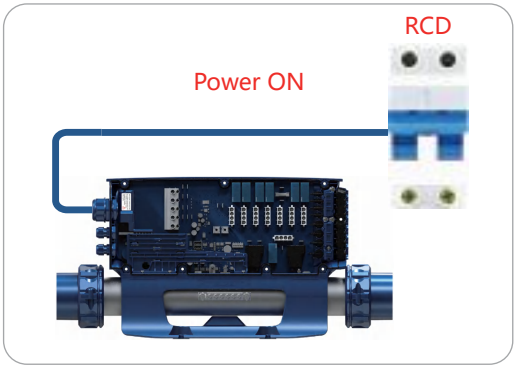



Step 1: Connect the PB562 control panel to the P69B133 control system.



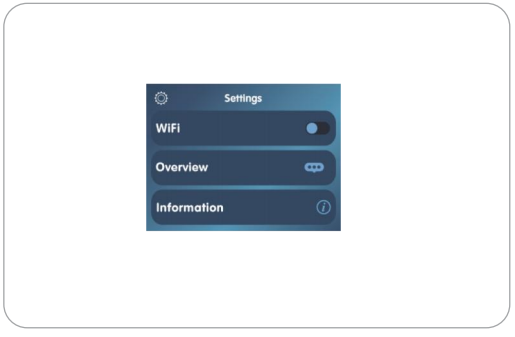

Step 2: Turn the Dip switch A4 to ON.

Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.

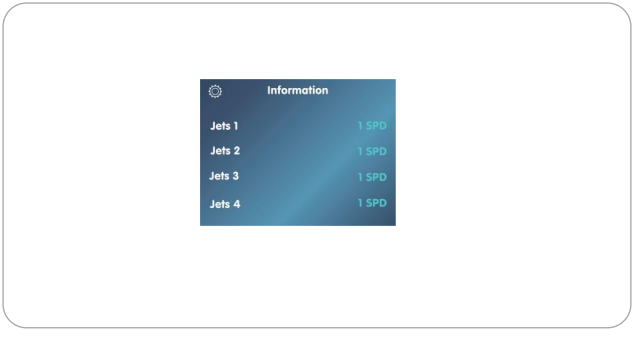



Step 3: Power ON, the PB562 control panel will automatically turn on, and then operate on the PB562 control panel.


Step 4: Press the button " " to enter the Settings interface.




Step 5: Press the button " " " " to select Information, and then press the button " " to enter the Information interface.

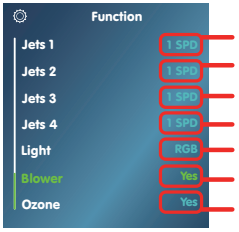



Step 6: Press and hold the button " " for about 3 seconds to enter the Function interface and set the load.

(Simple method to change the light type: After powering off the SPA for one minute, re-power it on. Within 5 minutes, enter Information interface, press and hold " " for 8 seconds, and switch between RGB and ON/OFF modes)

Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.

Press the " " or " " buttons to select the item that needs to be changed, and then press the button " " to make the change.




It cannot be configured here (Dip switch setting is required, reference 3.3.1)

Press " " to switch between 1 Speed or None

Press " " to switch between 1 Speed or None

Press " " to switch between 1 Speed or None

Press " " to switch between 1 Speed or None

Press " " to switch between RGB or ON/OFF

Press " " to switch between YES or None

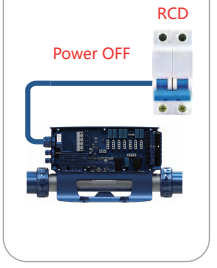
Press " " to switch between YES or None

RGB : The lights connected to the control system are of RGB type

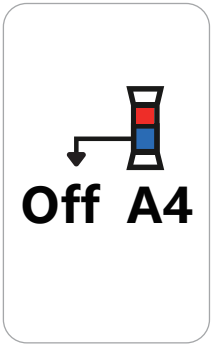
ON/OFF: The lights connected to the control system are of ON/OFF type

After configuration is completed, press " " to return to the Settings interface.

Step 7: Select the function you want to set.



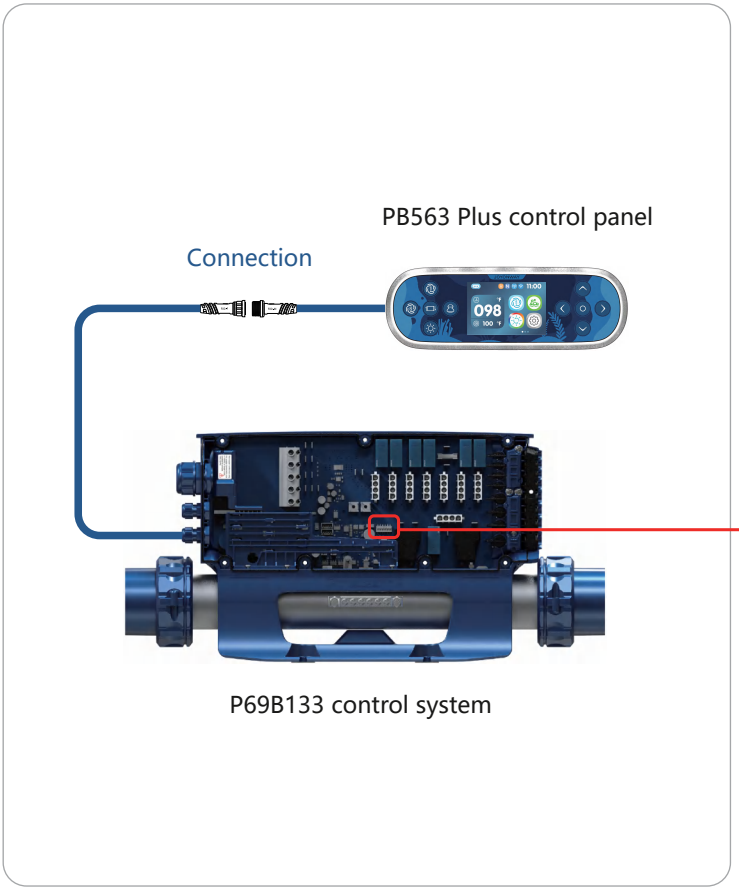

Step 8: Power OFF



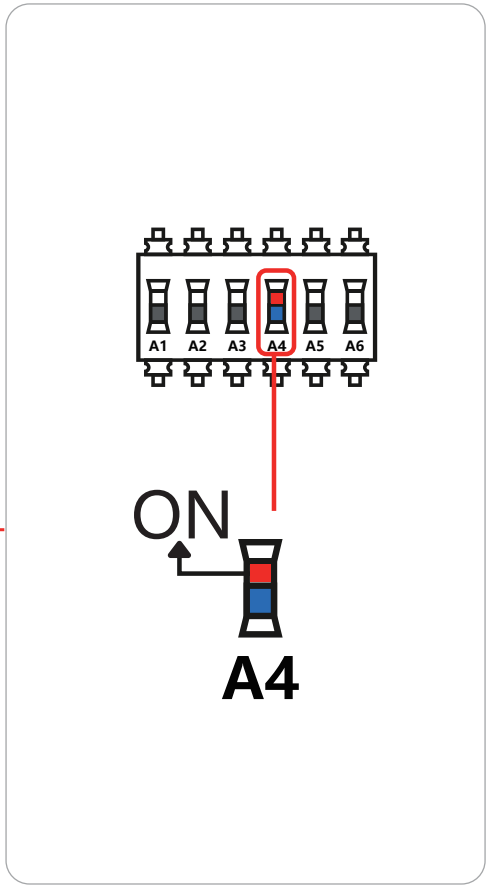

Step 9: Dial to Off to complete the configuration.

## (2) Function configuration using PB563 Plus control panel

Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.

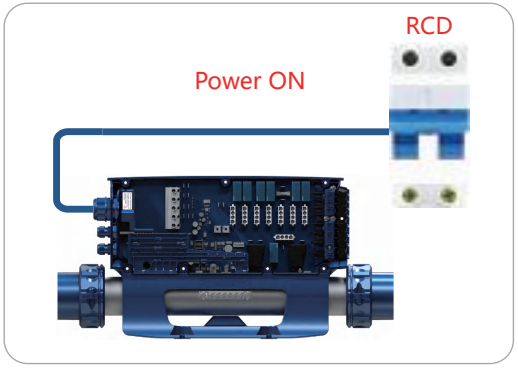



Step 1: Connect the PB563 control panel to the P69B133 control system.



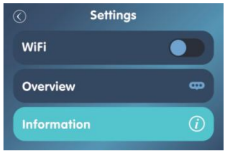

Step 2: Turn the Dip switch A4 to ON.

Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.




Step 3: Power ON, the PB563 control panel will automatically turn on, and then operate on the PB563 control panel.


Step 4: Press the button " " to activate the function menu, press the buttons " " " " " " " " to switch to the icon " " , and then press the button " " to enter the Settings interface.

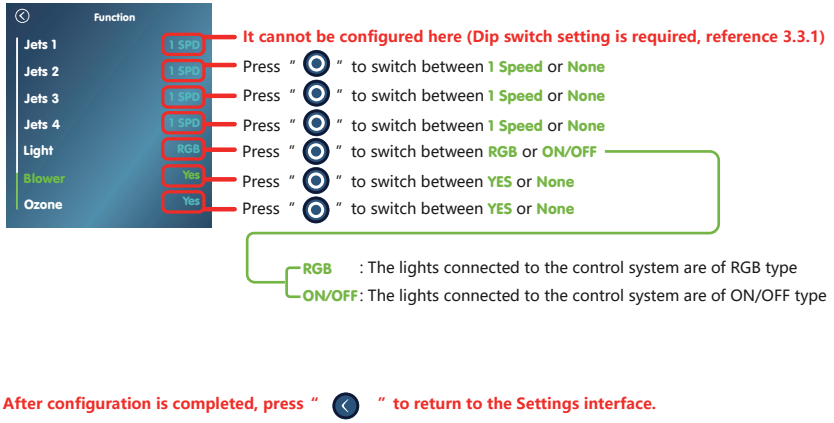



Step 5: Press the button " " " " to select Information, and then press the button " " to enter the Information interface.

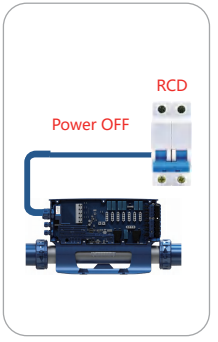

Step 6: Press and hold the button " " for about 3 seconds to enter the Function interface and set the load.

(Simple method to change the light type: After powering off the SPA for one minute, re-power it on. Within 5 minutes, enter Information interface, press and hold " " for 8 seconds, and switch between RGB and ON/OFF modes)

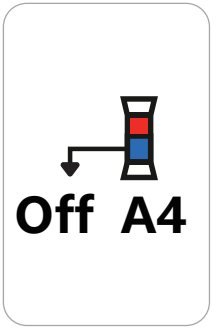
Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.




Step 7: Select the functions you want to set.



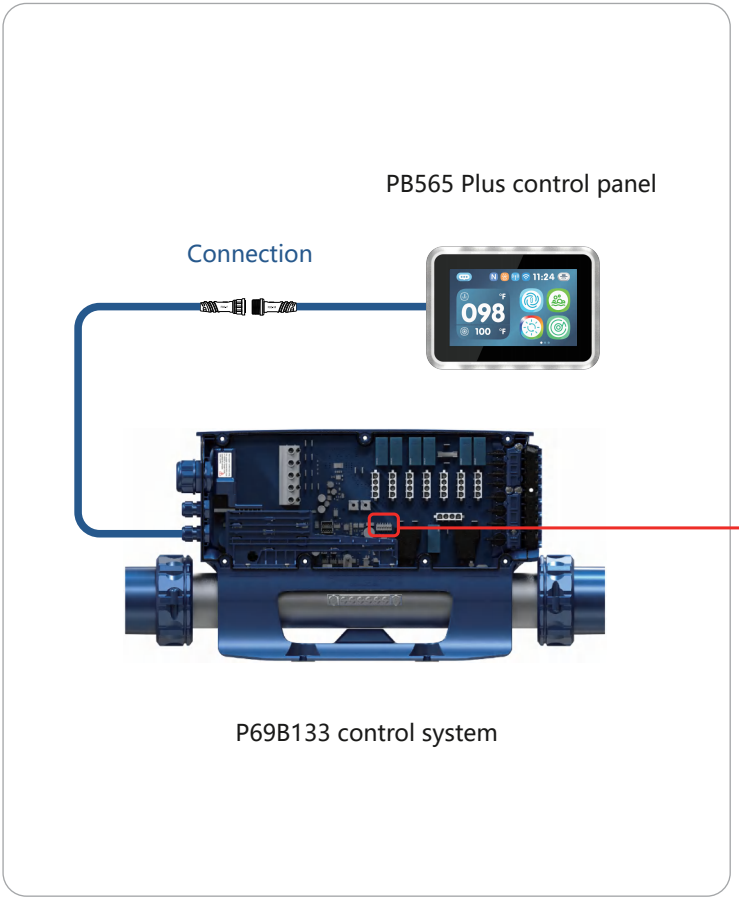

Step 8: Power OFF



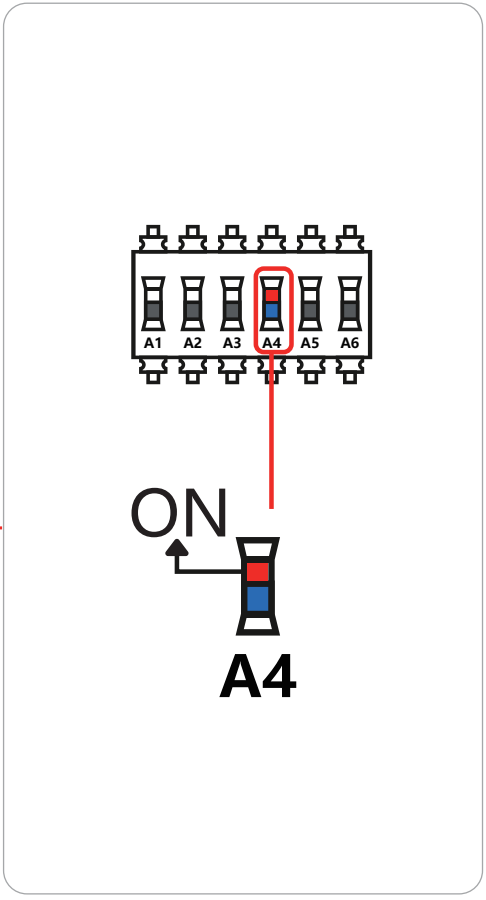

Step 9: Dial to Off to complete the configuration.

## (3) Function configuration using PB565 Plus control panel

Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.

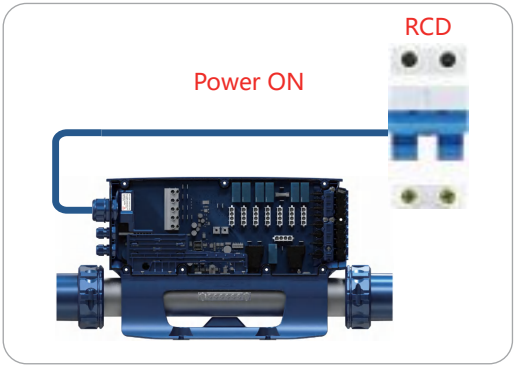



Step 1: Connect the PB565 control panel to the P69B133 control system.



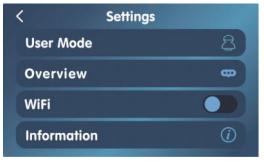

Step 2: Turn the Dip switch A4 to ON.

Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.




Step 3: Power ON, the PB565 control panel will automatically turn on, and then switch to the PB565 control panel for operation.

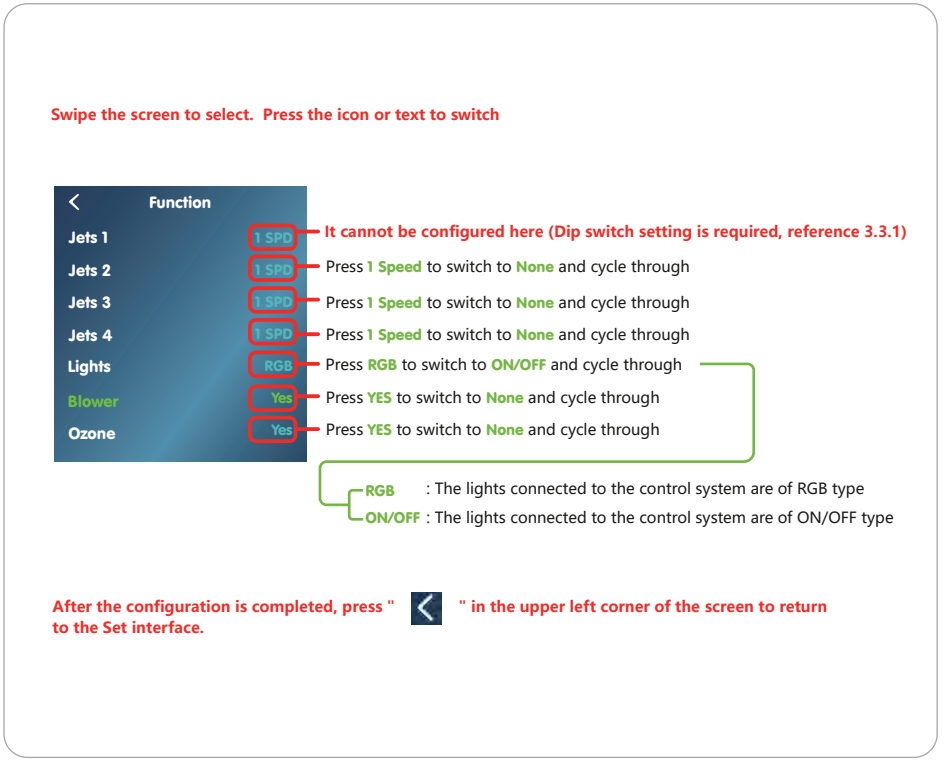

Step 4: Find the " " icon in the menu interface and press the icon to enter the Settings interface.



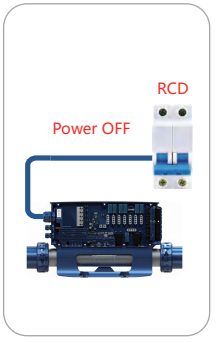

Step 5: Find Information on the Settings interface, press and hold About for about 3 seconds to enter the Function interface to set the load.


(Simple method to change the light type: After powering off the SPA for one minute, re-power it on. Within 5 minutes, enter Information interface, press and hold "Light" for 8 seconds, and switch between RGB and ON/OFF modes)

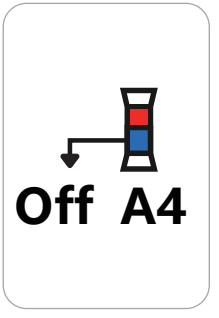
Note: The operation of configuring functions using the control panel must be completed within 60 seconds after the control system being powered on.




Step 6: Select the functions you want to adjust.



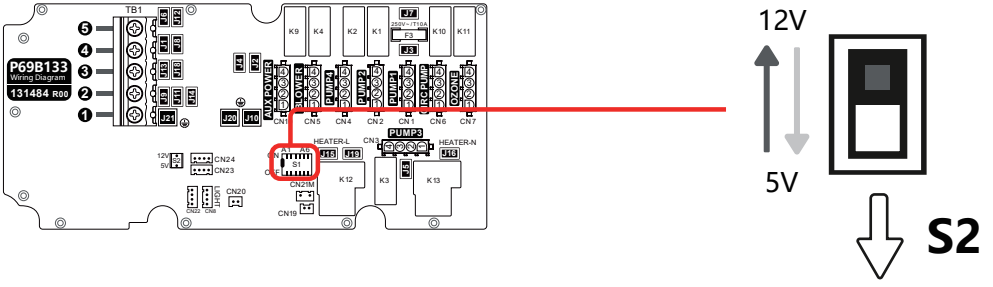

Step 7: Power OFF




Step 8: Dial to Off to complete the configuration.

### 3.3.3、Power configuration of the lamp

The power configuration of the lamp is set according to the S2 configuration table on the PCB board of the control system.




| 12V ⎓ | ▲ S2 ▼ | 5V ⎓ |
|---|---|---|

▲ 12V ⎓ : When set up ▲ , the power output of the lamp is 12V

▼ 5V ⎓ : When set down ▼ , the power output of the lamp is 5V

## 4、Replaceable parts

| | |
|---|---|
| Heating tube: 2KW heating tube<br>3KW heating tube<br>4KW heating tube | Fuse: Current 10A Position number F3 |

# PB562/PB562 Plus control panel

2.4 inch TFT color display screen, 8 capacitive touch buttons.


**Screen reverse**
Used to reverse the display content upside down 180 degrees, and the direction of the navigation buttons also changes accordingly.

**Confirm**
Used to activate the cursor in the function area, change the function status, or enter the function page; In the menu interface, confirm or switch the function status.

**Pump 1**
If pump 1 is a single speed pump, it is used to control the on/off of pump 1; If pump 1 is a dual speed pump, press the button continuously to switch between low speed, high speed, or off. The specific sequence is as follows: low speed on ->high speed on ->off.

**Navigation (Up)**
Used to select functions upwards or adjust parameters upwards in the menu interface.

**Light**
There are two modes for the lights. In the on/off mode, press the button to turn the lights on and off. In RGB mode, the lights have 9 states including automatic color change, red, green, yellow, blue, purple, cyan, white, and off, and users can cycle through the states. (The "on/off mode" or "RGB mode" has been determined at the factory and cannot be changed by the user)

**Navigation (down)**
Used to select functions downwards, or adjust parameters downwards in the menu interface.

**Multifunction**
Used for functions such as pump 2 (if equipped) or blower (if equipped) or user mode.

**Set (Return)**
Used to set quick access to the set interface, or to save and return when the function status changes.

# PB563/PB563 Plus control panel control panel

3.5 inch TFT color display screen, 10 capacitive touch buttons


**Pump 1**
If pump 1 is a single speed pump, it is used to control the on/off of pump 1; If pump 1 is a dual speed pump, continuous button pressing can switch between low speed, high speed, or off. The specific sequence is as follows: low speed on ->high speed on ->off.

**Navigation (Up)**
Used to select functions upwards or adjust parameters upwards in the menu interface.

**Navigation (Left)**
When selecting functions, select to the left or return to the previous interface when in the menu interface.

**Pump 2**
Used to control the on and off of water pump 2.

**Confirm**
Used to activate the cursor in the function area, change the function status, or enter the function page; In the menu interface, confirm or switch the function status.

**Screen reverse**
Used to reverse the display content upside down 180 degrees , and the direction of the navigation buttons also changes accordingly.

**Light**
There are two modes for lights, and in on/off mode, press buttons to turn the lights on and off. In RGB mode, the lights have 9 states including automatic color change, red, green, yellow, blue, purple, cyan, white, and off, and users can cycle through the states. (The "on/off mode" or "RGB mode" has been determined at the factory and cannot be changed by the user)

**Navigation (down)**
Used to select functions downwards, or adjust parameters downwards in the menu interface.

**Navigation (Right)**
When selecting functions, select to the right.

**User mode**
quick access to the user mode interface.

# PB565/PB565 Plus control panel control panel

5.0 inch TFT color display screen, screen touch operation


**Press to enter and display the current system's time, voltage, and power.**

**The current time and status of the running functions.**

**Screen reverse icon**

Used to reverse the display content upside down 180 degrees.

**Current water temperature ℉/℃.**

**The preset heating temperature ℉/℃.**

**Function control area, slide to find more functions, press the function icon to change the function status or enter the function page.**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