Sun Hydraulics (China) Co.,Ltd. Dongguan Branch
ADD: Room 302,Building 10,38 Dongke Road,Dongcheng Street ,
Dongguan city, Guangdong Province
TEL: +86 (755) 26010708
Sales Tel: +86 (755) 26010859
Oversea sales: (+86) 13925211653
China sales: (+86) 13602627256
P.C.: 523127
WEB: www.joyonway.com
After-sales service: service@joyonway.com

Android Download

App Store Download

Depending on the different system configuration, all the content mentioned in this manual may not appear on your system.

PB562-000

Operation instruction Manual

V0.1 English

Contents

EMC:
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.

RSS-Gen & RSS-247 statement:
This device complies with Industry Canada licence-exempt RSS standard(s).
Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RSS-102 Statement:
This equipment complies with Industry Canada radiation exposure limits set forth for an uncontrolled environment.
Cet équipement est conforme à l'exposition aux rayonnements Industry Canada limites établies pour un environnement non contrôlé.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

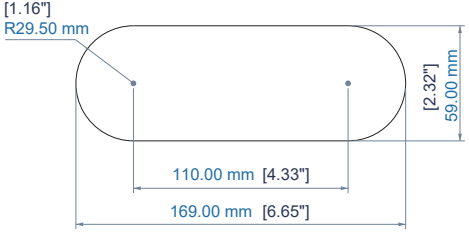
FCC Caution:
Changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

FCC Statement:
"This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help."

This controller is not intend for transportable pool use.

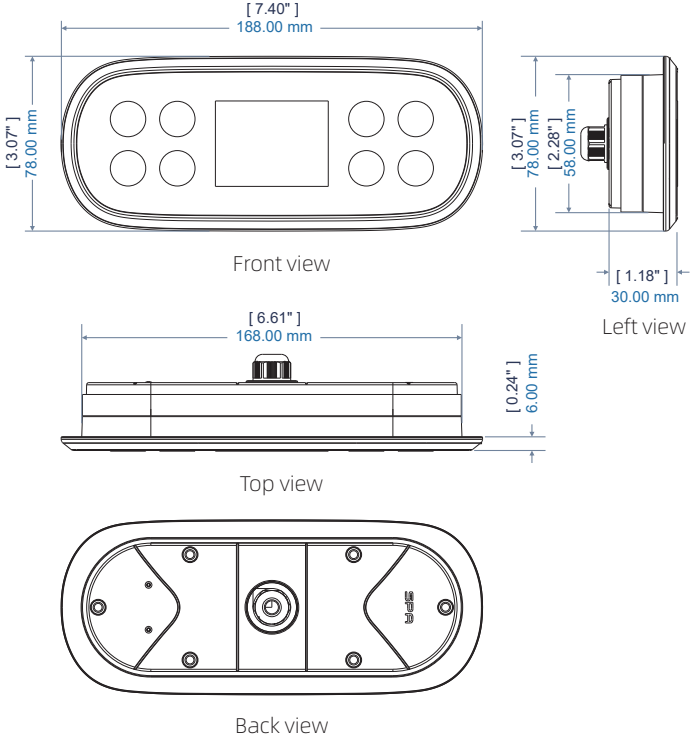
2.4 inch TFT color display， 8 capacitive touch buttons

PB562-000 Control Panel Rendering



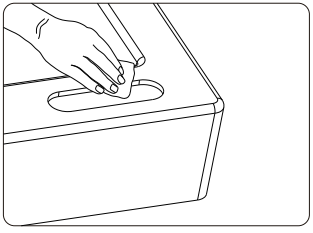
Suggested hole size

Control Panel Installation Instructions



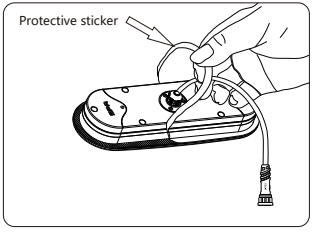
Control Panel Installation Instructions

1



Make a hole in the appropriate position of the bathtub according to the size of the control panel, and clean the area around the opening with tools,especially burrs, debris, etc. to prevent the control panel from being unfirmly sticked.

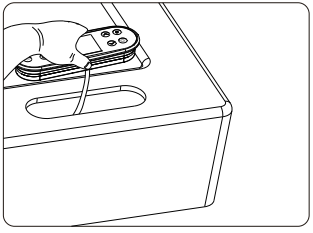
2



As shown in the figure, remove the adhesive protective sticker from the control panel. **Special attention:** It is strictly prohibited to touch the adhesive with hands; It is strictly prohibited to have water or other impurities contact the adhesive surface. Install the control panel onto the bathtub within 60 seconds after removing the adhesive surface protection.

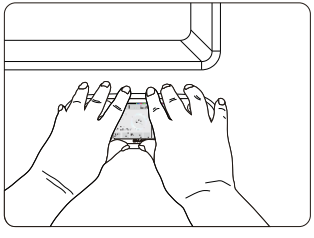
Control Panel Installation Instructions

3



As shown in the figure, remove the adhesive protective sticker, and then install the control panel at the cleaned opening.

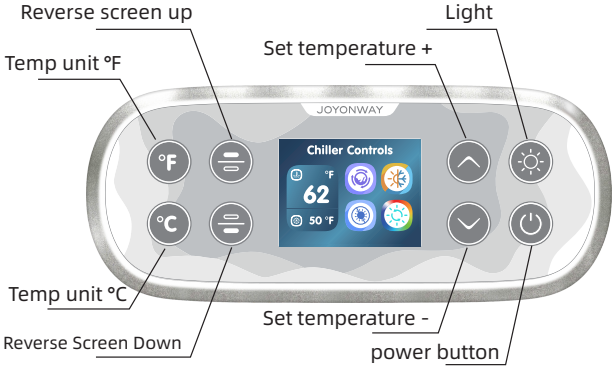
4



As shown in the figure, after the control panel is installed, press the control panel tightly for 60 seconds and then push and press the panel several times to make sure it is firmly sticked.

⚠ Warn

1.Please strictly follow the SPA wiring diagram to connect the power supply.
2.Please do not power on the SPA until the water level reaches the water level line inside the tub.



Temp unit: °F

Use this button to switch the display temperature unit of the system to Celsius degrees.

Temp unit: °C

Use this button to switch the display temperature unit of the system to Fahrenheit.

Reverse screen up

Used to reverse the screen upwards.

Reverse Screen Down

Used to reverse the screen downwards.

Set temperature +

Used to increase the set temperature .
The maximum set temperature is 104 °F (40 °C).

Set temperature -

Used to reduce the set temperature.
The Minimum set temperature is 40 °F (5 °C).

Light

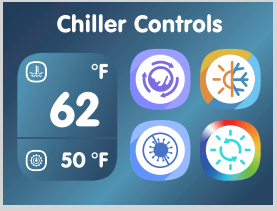
Used to switch the on/off of the light switch.
The light will automatically turn off after being on for 1 hour.

Power button

Used to switch the system on and off.
When the system is turned off, all buttons cannot be operated except the power button, The system stops working and will shut down all loads.
When the system is turned on, the screen lights up, and the circulation pump and disinfection functions are turned on, All the buttons can be operated, and the system will automatically operate to control the water temperature to the set temperature.

Introduction to the main interface

Main interface



Details are as follows

Current water temperature °F/℃。

Preset water temperature °F/℃。

Circulating pump icon

Heat pump icon

Disinfection icon

Light icon

Panel Warning Message

When the control system experiences some states that require user attention, the control panel will display a warning message on the control panel.

The following is the screen status when this information are displayed, as shown in the figure

Warning message display location

When the following fault messages appear, first please try to power off the system and then power on again a few minutes later to clear the fault; If the fault occurs again, please follow the instructions below to handle the fault; During the troubleshooting process, please ensure that the power connection to the system is disconnected.

F10:Communication error

Control panel and control pack cannot communicate.
Cause: the control panel cannot exchange information with the control pack.
Action: Please turn off the power, check if the wiring connection between the control panel and the control pack is good, and if the connectors are tightly connected. After confirmation no errors, power on. If this fault cannot be eliminated, please contact the service provider or manufacturer.

F11: No communication with heatpump

Control pack and heat pump cannot communicate.
Cause: the control pack and heat pump cannot exchange information.
Measure: Please turn off the power supply, check if the wire connection between the control pack and the heat pump is good, if the connectors are tightly connected, and if the power supply of the heat pump is correctly connected. After confirming that there are no errors, power on again. If this fault cannot be eliminated, please contact the service provider or manufacturer.

Heat Pump ER03: Water flow failure

Water flow failure
Cause:
1. The water flow switch fault
2. Low water flow
3. The inlet and outlet water are reversed
4. There is air in the pipe
5. The pipe blocked
Action:
1.Check the water flow switch and replace it if it is faulty
2.Check the water valve and the temperature difference between inlet and outlet water
3.Whether the inlet and outlet water pipes are correctly connected
4.Emptying water system
5.Pipe cleaning

Heat Pump ER04: Winter anti-freezing

Winter anti-freezing
Cause:
The ambient temperature is lower than the antifreeze setting value
Action:
Normal protection procedure

Heat Pump ER05: High pressure protection

High pressure protection
Cause:
1. Low water flow
2.. Pressure switch fault
3. The fan motor unwork or the speed too low
4.Overcharged the refrigerant
Action:
1. Check whether the temperature difference between inlet and outlet water is too large, and whether the outlet water temperature is too high
2. Use a multimeter to check whether the high voltage protection switch works
3. Check the water flow of the water pump and the speed of the fan
4. Refill the refrigerant

Heat Pump ER06:

Low Pressure Failure
Cause:
Action:

Heat Pump ER09: Communication with the upper computer failed

Communication with the upper computer failed
（Communication with Balboa system failed）
Cause:
Action:
1. Replace the main board
2. Check the communication cables between the main board and Balboa system
3. Check whether the Balboa system software matches

Heat Pump ER10: Communication fault of frequency conversion module

Communication fault of frequency conversion module (alarm when communication is disconnected between external board and drive board)
Cause:
1. The mainboard or driver board damaged
2. The connector of the communication cable between the mainboard and the driver board is in poor contact or falls off
3. The communication cable is damaged
Action:
1. Replace the main board or driver board
2. Check the communication cables between the main board and driver board
3. Replace the communication cable

Heat Pump ER12: Exhaust too high protection

Exhaust too high protection
Cause:
1. Less refrigerant or leakage
2. The system blocked
3. Compressor refrigerant oil is insufficient
4. The resistance value of the exhaust probe is offset, and the inlet temperature probe is dropped
Action:
1. Refill the refrigerant
2. Replace the filter
3. Add refrigerant oil to the compressor
4. Replace the exhaust probe and reconnect the water inlet temperature probe

Heat Pump ER15: Inlet water temp. Error

Inlet water temp. Error
Cause:
The sensor plug is in poor contact or off, or the sensor is damaged
Action:
Check and replace the water inlet temperature sensor (T2 sensor)

Heat Pump ER16: Outer coil pipe temp. Error

Outer coil pipe temp. Error
Cause:
The sensor plug is in poor contact or off, or the sensor is damaged
Action:
Check and replace the coil pipe temperature sensor(T3)

Heat Pump ER18: Exhaust gas temp. Error

Exhaust gas temp. Error
Cause:
The sensor plug is in poor contact or off, or the sensor is damaged
Action:
Check and replace the exhaust gas temperature sensor(T1)

Heat Pump ER19:

DC Fan Motor Failure
Cause:

Action:

Heat Pump ER20: Abnormal protection of frequency conversion module

Abnormal protection of frequency conversion module
Cause:
IPM module internal fault, check related problems according to the attached table
Action:

Heat Pump ER21: Ambient temp. Error

Ambient temp. Error
Cause:
The sensor plug is in poor contact or off, or the sensor is damaged
Action:
Check and replace the ambient temperature sensor(T4)

Heat Pump ER23:

Cooling outlet water temperature low protection
Cause:

Action:

Heat Pump ER27: Outlet temperature fault

Outlet temperature fault
Cause:
The sensor plug is in poor contact or off, or the sensor is damaged
Action:
Check and replace the water outlet temperature sensor(T6)

Heat Pump ER29: Return gas temp. Error

Return gas temp. Error
Cause:
The sensor plug is in poor contact or off, or the sensor is damaged
Action:
Check and replace the suction gas sensor(T5)

Heat Pump ER32: Heating outlet water high temperature protection

Heating outlet water high temperature protection
Cause:

Action:

Heat Pump ER33: Outer Door Coil High Temperature Protection

Outer Door Coil High Temperature Protection
Cause:

Action:

Heat Pump ER35: Compressor Current Protection

Compressor Current Protection
Cause:

Action:

Heat Pump ER42: Internal Coil Temperature Failure

Internal Coil Temperature Failure
Cause:

Action:

Heat Pump ER44: Ambient Temperature Too Low Protection

Ambient Temperature Too Low Protection
Cause:

Action:

Heat Pump ER46: DC Fan Error

DC Fan Error
Cause:
1.Dc fan failure
2.Plug is in poor contact or off
Action:
1. Replace the DC fan
2. Reconnect cables to the DC fan