ARCTIC ESSENTIALS

OWNERS MANUAL

Warnings

WARNINGS:

Before installing or connecting the unit, please read the following.

* FOR UNITS FOR USE IN OTHER THAN SINGLE-FAMILY DWELLINGS, A CLEARLY LABELED EMERGENCY SWITCH SHALL BE PROVIDED AS PART OF THE INSTALLATION. THE SWITCH SHALL BE READILY ACCESSIBLE TO THE OCCUPANTS AND SHALL BE INSTALLED AT LEAST 5' (1.52 M) AWAY, ADJACENT TO, AND WITHIN SIGHT OF THE UNIT.

* ANY DAMAGED CABLE MUST BE IMMEDIATELY REPLACED.

* TURN POWER OFF BEFORE SERVICING OR MODIFYING ANY CABLE CONNECTIONS IN THIS UNIT.

* TO PREVENT ELECTRIC SHOCK HAZARD AND/OR WATER DAMAGE TO THIS CONTROL, ALL UNUSED BUSHING CONDUITS MUST BE PLUGGED WITH THE ATTACHED NIPPLE.

* THIS CONTROLLER MUST NOT BE INSTALLED IN PROXIMITY OF HIGHLY FLAMMABLE MATERIALS.

* LOW SUPPLY VOLTAGE OR IMPROPER WIRING MAY CAUSE DAMAGE TO THIS CONTROL SYSTEM. READ AND FOLLOW ALL WIRING INSTRUCTIONS WHEN CONNECTING TO POWER SUPPLY.

* THIS PACK CONTAINS NO USER SERVICEABLE PARTS. CONTACT AN AUTHORIZED SERVICE CENTER FOR SERVICE.

* ALL CONNECTIONS MUST BE MADE BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ANY STATE, PROVINCIAL OR LOCAL ELECTRICAL CODE IN EFFECT AT THE TIME OF THE INSTALLATION.

* PRODUCT MUST BE DISPOSED OF SEPARATELY IN ACCORDANCE WITH LOCAL WASTE DISPOSAL LEGISLATION.

Introduction

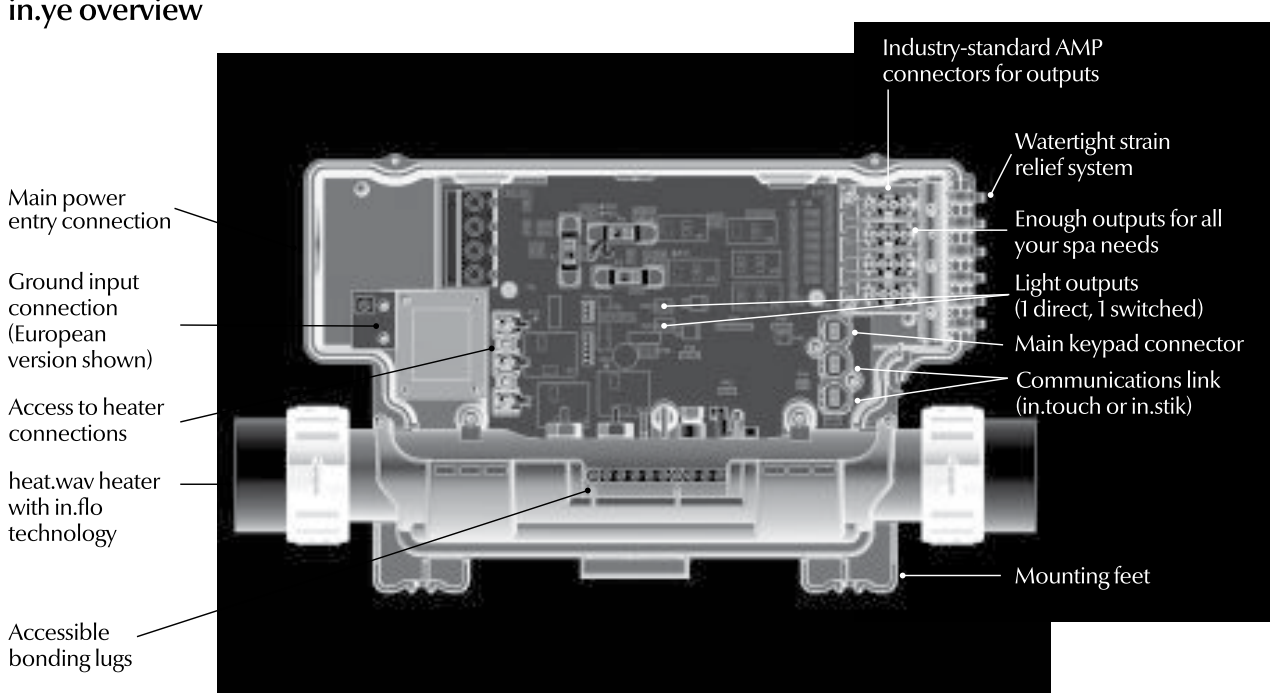
Y Series

whatever the spa, this is your control system

The Y Series offers the kind of simplicity that makes for a genuine top-of-its-class product. It is the natural choice for anyone who wants an easy-to-understand multi-application solution.

You don't have to wonder about compatibility; instead, there's just the comforting certainty that when you invest in the Y Series, all spa configurations are supported. What's more, it also takes into account future compatibility, so you can have peace of mind knowing that you can enjoy your spa pack for years to come.

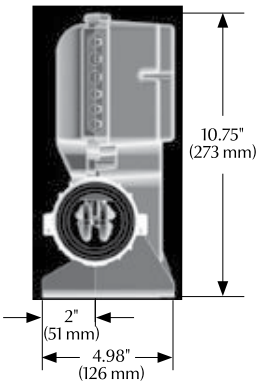
in.ye overview



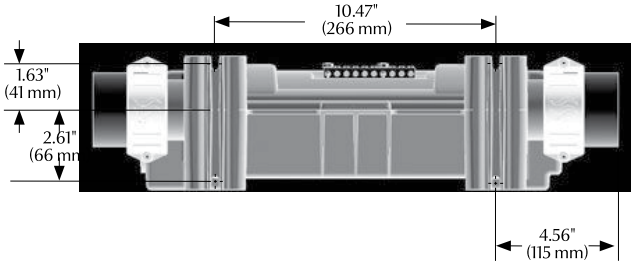
in.ye dimensions

Front view

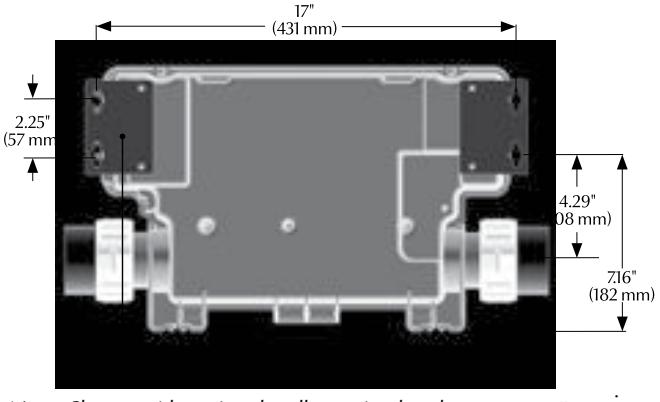
Side view



Bottom view



Rear view



Note: Shown with optional wall mouting brackets (see Installation)

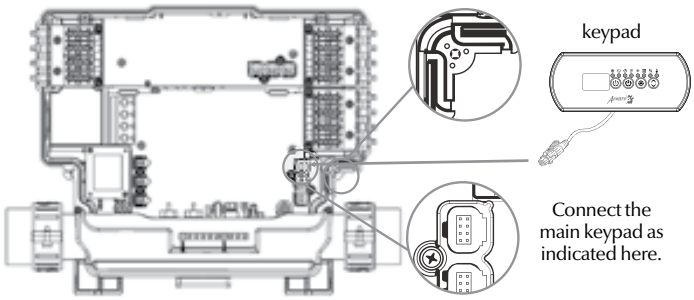
Keypad installation

See the techbook for your specific keypad model for installation details and drilling template.

Connecting the main keypad to the spa pack

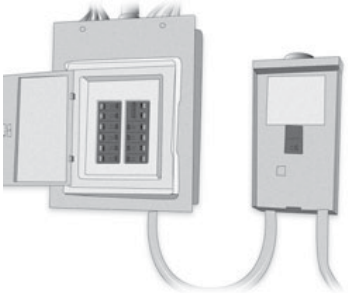
To connect the keypad, remove the cover, then insert the in.link connector into the appropriate keypad connector (as illustrated). Route the cable through one of the molded strain relief channels on the bottom right side of the spa pack (as illustrated). Fill the remaining space with the foam gaskets supplied. Don't forget to replace the cover and all screws (torque to 8 in.lb max [0.9 N.m]).

Note: always shut power down before connecting an accessory to the in.ye or in.yt.

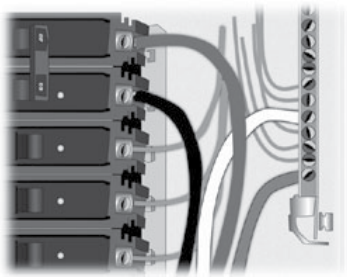


Y Series connections

Electrical wiring for North American models



Main electrical box GFCI panel



Warning!

For units for use in other than single-family dwellings, a clearly labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least 5' (1.52 m away, adjacent to, and within sight of the unit.

This product must always be connected to a circuit protected by a ground fault interrupter.

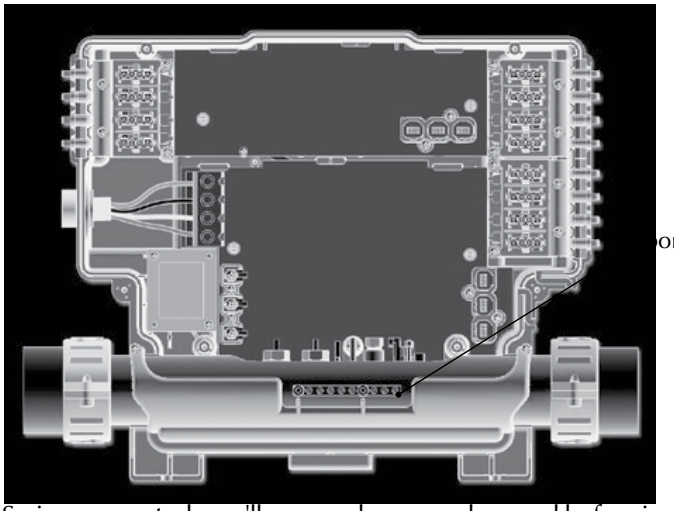
Proper wiring of the electrical service box, GFCI and in.yt terminal block is essential!

Check your electrical code for local regulations. Only copper wire should be used, never aluminum.

Disposal of the product

The appliance (or the product) must be disposed of separately in accordance with the local waste disposal legislation in force.

Electrical wiring for all models



onding lug

To install the wiring for the Y Series spa control, you'll need a Phillips screwdriver and a flat screwdriver.

Loosen the screws of the spa pack cover and remove it. Remove 5 1/2" (142 mm) of cable insulation. Strip away 1" (25 mm) of each wire insulation. Pull the cable through the cutout of the box and secure it with a strain relief (1" NPT strain relief; hole diameter: 1.335" [33.9 mm]).

(For CE use an IEC certified plastic bushing that will maintain the IPX5 rating.)

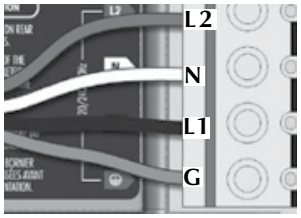
Make sure that only the uncut sheathing is clamped at this opening. Make sure that the terminal block case clamps are lowered before inserting wires. Push the color-coded wires into the terminals as indicated on the sticker and use the flat screwdriver to tighten the screws on the terminals.

After making sure wire connections are secure, push them back into the box and replace the cover. Tighten the screws of the spa pack cover. Do not over tighten cover screws (torque to 8in.lb max [0.9 N.m]).

Connect the bonding conductor to the bonding lug on the front of the Y Series spa pack (a grounded electrode conductor shall be used to connect the equipment grounding conductors).

Electrical wiring: North American model

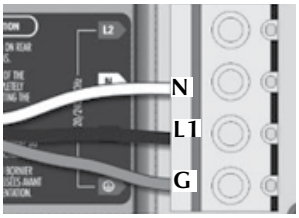
Refer to wiring diagram in the enclosure box lid for more information.



For 240 V (4 wires)

Correct wiring of the electrical service box, GFCI, and pack terminal block is essential.

Call an electrician if necessary.



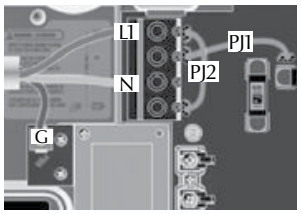
For 120 V (*3 wires)

*If connected to a 3 wire system, no 240 V component will work.

Note:To convert model to a 120 V system, the white (common) accessory wire must be moved. See wiring diagram for details.

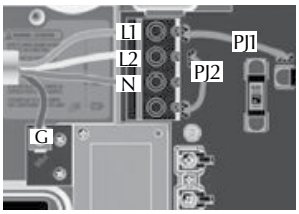
Electrical wiring: in.ye European model

Refer to wiring diagram in the enclosure box lid for more information.



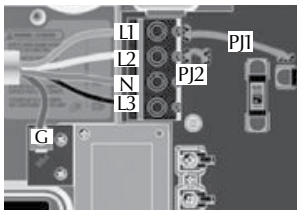
1-phase

Connect PJ1 between P7 and P13. Connect PJ2 between P10 and P74.



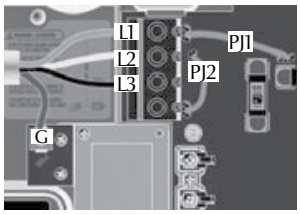
2-phase
with single neutral

Connect PJ1 between P7 and P10. Connect PJ2 between P13 and P74.



3-phase
with single neutral

Connect PJ1 between P7 and P10. Connect PJ2 between P11 and P13.



3-phase Delta

Connect PJ1 between P7 and P10. Connect PJ2 between P13 and P74.

In.ye.ce 230 V or 230/400 V

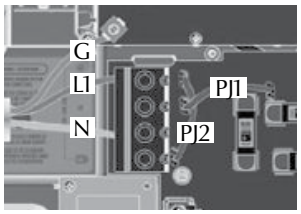
Correct wiring of the electrical service box, RCD, and pack terminal block is essential!
Call an electrician if necessary.

⚠ Warning!

In.ye.ce models must always be connected to a circuit protected by a Residual-Current Device (RCD) having a rated operating residual-current not exceeding 30 mA.

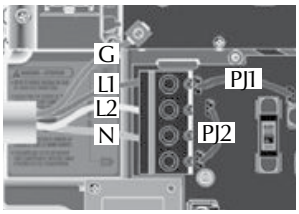
Electrical wiring: in.yt European model

Refer to wiring diagram in the enclosure box lid for more information.



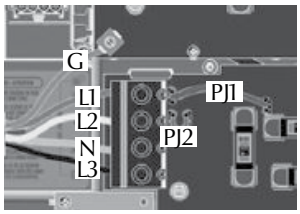
1-phase

Connect PJ1 between P7 and P13. Connect PJ2 between P10 and P74.



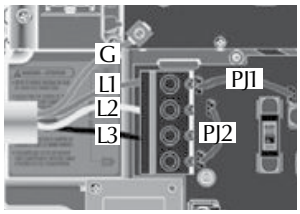
2-phase
with single neutral

Connect PJ1 between P7 and P10. Connect PJ2 between P13 and P74.



3-phase
with single neutral

Connect PJ1 between P7 and P10. Connect PJ2 between P11 and P13.



3-phase Delta

Connect PJ1 between P7 and P10. Connect PJ2 between P13 and P74.

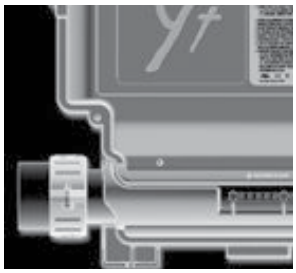
In.yt.ce 230 V or 230/400 V

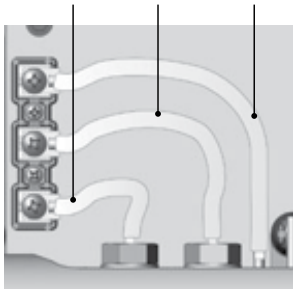
Correct wiring of the electrical service box, RCD, and pack terminal block is essential!
Call an electrician if necessary.

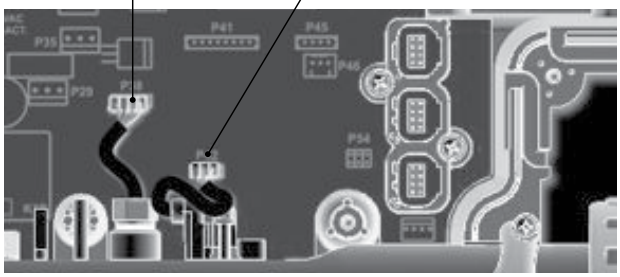
⚠ Warning!

In.yt.ce models must always be connected to a circuit protected by a Residual-Current Device (RCD) having a rated operating residual-current not exceeding 30 mA.

Heater connections







heat.wav heater

All Y Series systems come with a high performance heat.wav heater. With no pressure switch, it features in.flo integrated dry-fire protection.

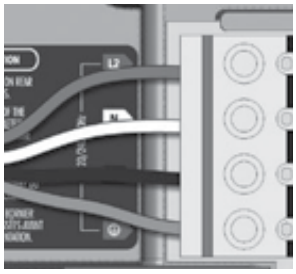
The heat.wav heater is factory configured for 240 V / 4 kW, but it can be converted to a dedicated 120 V / 1 kW by simply adding a cable connection (Part #: 9917-101959).
(120 V conversion is available on North American in.ye-3 models only).

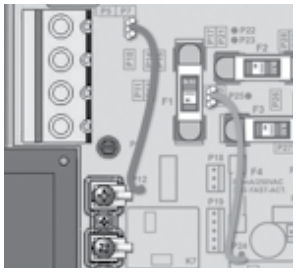
heat.wav specification summary:

- Supports 120 V or 240 V
- Protected by external breaker (not fused)*
- Incoloy® heater element
- Optional 5.5 kW (Part #: 9920-101449), 240 V heater is available.

**Note: European models are 230-240 V only, and are fuse protected*

All heater connections are accessible when the cover is removed. Connections include the in.flo dry-fire protection, hi-limit/regulation probe connectors, power and ground cable connections.

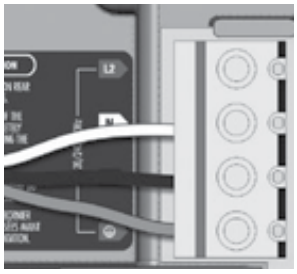


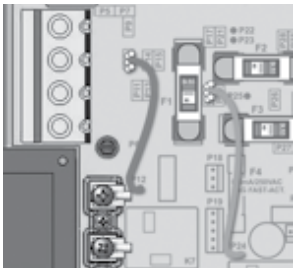


Connections for all 240 V heaters (North American installations only)

BROWN wire must be correctly and completely connected between P12 and P9.

For early North American version installations the YELLOW wire must be between P25 and P20. the ORANGE wire must be between P24 and P16





Connections for all 120 V heaters

BROWN wire must be correctly and completely connected between P12 and P10.

Note:To convert model to a 120 V system, the white (common) accessory wire must be moved. See wiring diagram for details.

Power-up & breaker setting

IMPORTANT! Read before starting

Turn off the breaker.

Make sure all accessories are linked to the bonding connector and connected to pack.

A minimum flow rate of 18 GPM is required. Make sure that all valves are open in the spa plumbing and that you have good water flow circulation from the primary pump into the heater.

Turn on the breaker.

in.flo dry-fire protection

At power up, the in.flo detector performs a flow check through the following process:

Pump 1 or circulation pump starts for 2 minutes.
The display will show "_ _" during the check flow process. After 2 minutes the system validates proper water flow.

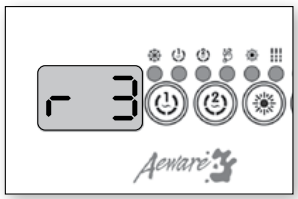
In case of failure, the system tries again. The water temperature is shown on the keypad display. Once the water has reached the set point value plus 0.8°F the heater is turned off.

Boot up display sequence (Each parameter is displayed for 2 seconds)

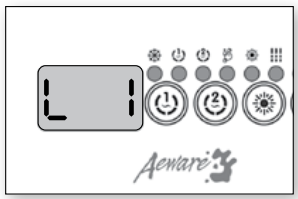
Lamp test

All the segments and LEDs light up.

Software number

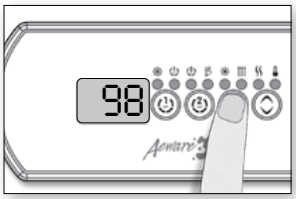


Software revision



Low-level selection

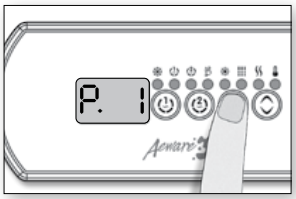
Low-level selected from low-level menu



It's important to specify the current rating of the GFCI used to ensure safe and efficient current management (and reduce nuisance GFCI trippings).

*Press and hold the **Prog** button until you access the breaker setting menu (programming menu will appear first).*

*Note: if the keypad in use does not have the **Prog** key, use the **Light** key instead.*



Chose the number of phases supplying your spa. Use the **Up/Down** key to chose the desired value and press the Program or light key to confirme the selection. You can choose between 1, 2 or 3 phases.

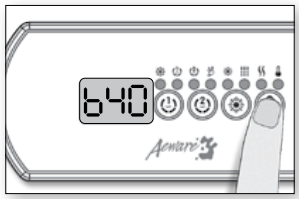
Number of phase selection	
UL	Menu not available
CE	1, 2 or 3
UL Swim*	1 or 2
CE Swim*	1, 2 or 3

**See Swim Spa manual for details.*

The values displayed by the system correspond to 0.8 of the maximum amperage capacity of the GFCI.

Use the **Up/Down** buttons to select the desired value.

The value can typically be modified from 10 to 48 A.



Press the **Prog** button to set breaker rating. This table shows typical settings of b for different GFCI ratings. Select the one that matches your breaker.

GFCI	b
60 A	48 A
50 A	40 A
40 A	32 A
30 A	24 A
20 A	16 A

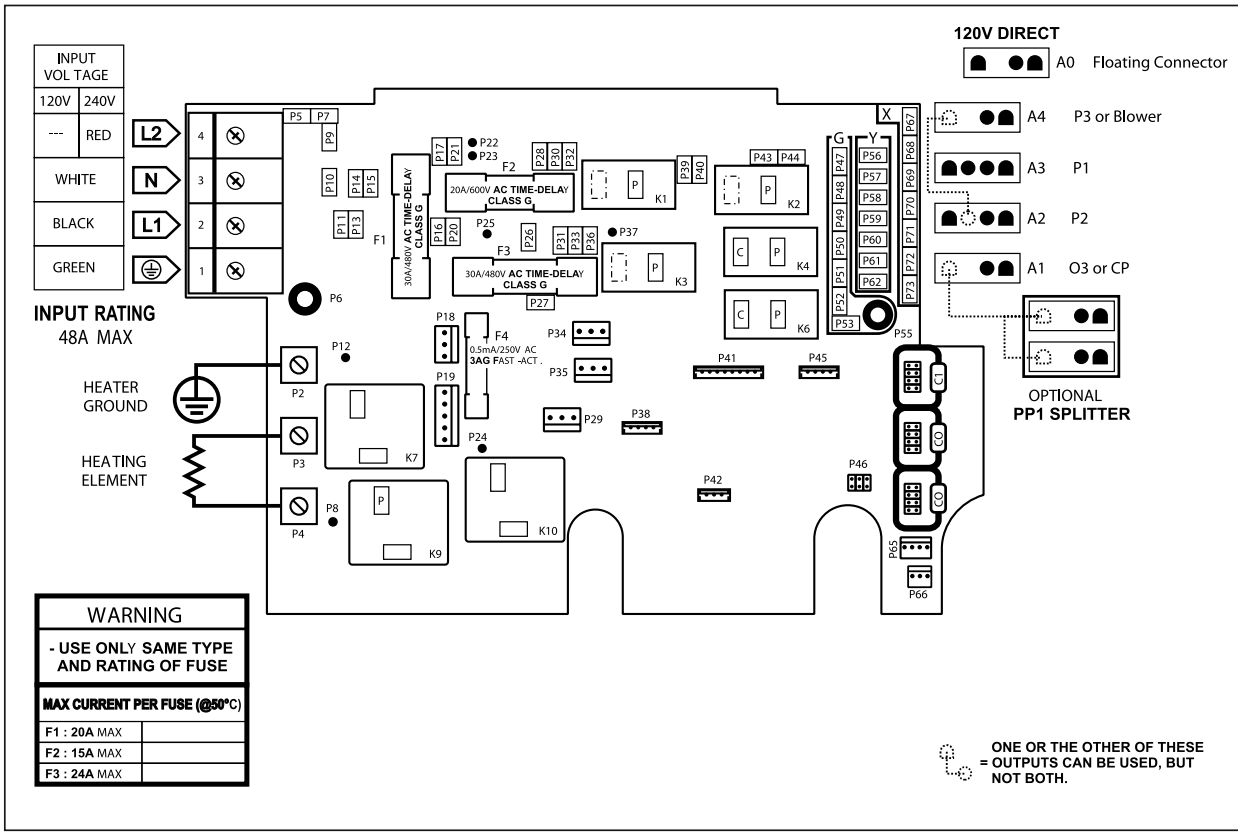
Note: Every OEM has its own preset configurations.

High voltage accessory connections

Two options are available with Y Series spa packs for connecting high voltage accessories: 0.250″ quick-connect terminals, or AMP pins and housings.

in.ye

These tabs require high-voltage accessories to have straight, non-insulated, female quick-connect terminals for all connections, including ground. Depending on where the connections are made on the in.ye pack PCB, 120 V and 240 V accessories are supported. Refer to the following tables for correct connections. Note that all female terminal must be correctly and completely seated on the PCB tab for proper current ratings.



Direct output 1 (in.ye-5 ce only) (Floating connector)

Voltage	120 V	240 V
Green / ground	P47	P47
Black / line	P32	P32
White / common	P56	P67

Pump 1 (A3)

Voltage	120 V	240 V
Green / ground	P49	P49
Black / low speed	K2-P	K2-P
White / common	P58	P69

Pump 3 (A4) (in.yt-5 ce only)

Voltage	120 V	240 V
Green / ground	P48	P48
Black / low speed	K6-P	K6-P
White / common	P57	P68

Ozonator* (A1)

Voltage	120 V	240
Green / ground	P52	P5
Black / line	K1-P	K1-
White / common	P61	P7

Pump 2 (A2)

Voltage	120 V	240 V
Green / ground	P51	P51
Black / low speed	K6-P	K6-P
Red / high-speed	K3-P	K3-P
White / common	P60	P71

Circ. pump* (A1)

Voltage	120 V	240 V
Green / ground	P52	P52
Black / line	K1-P	K1-P
White / common	P61	P72

Blower (A4) (in.ye-5 ce only)

Voltage	120 V	240 V
Green / ground	P48	P48
Black / line	K6-P	K6-P
White / common	P57	P68

Light (12 V AC, 1A Max.)

Voltage	
Always on	P34
Relay	P35

** Ozonator and circ pump can be combined on the same output via the optional splitter PP1.*

This table shows typical connections. OEMs may have a different connection scheme.

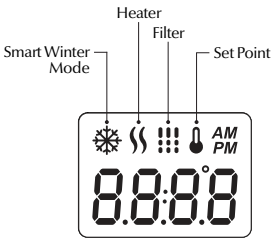
Keypad Overview

in.k300™

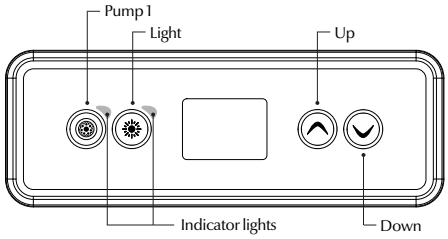
Compact full-function keypad

The Quick Reference Card provides an overview of your spa's main functions and the operations accessible from your digital keypad.
This QRC depicts a generic overlay, custom versions may vary.

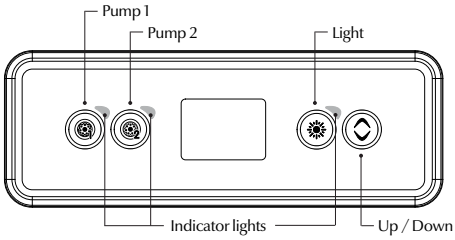
Description



1 Pump Model



2 Pump Model



Spa Functions

Off Mode

Pressing **Pump 1** for 5 seconds will enable the Off mode. This mode allows you to stop all outputs including automatic functions such as filter cycle, heat request and smart winter mode for 30 minutes to perform quick spa maintenance. When Off mode is active, the display will toggle between the "OFF" message, the clock and the water temperature. The spa light will flash for a few seconds before the end of the 30 minutes to warn you that the system is about to resume its normal operation. Press **Pump 1** or **Pump 2** (if available) to restart the system before the expiration of the 30 minute delay. When the system resumes its normal operation, the display shows "On" for 3 seconds.

Pump 1

Press **Pump 1** key to turn Pump 1 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump*). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

The "Pump 1" indicator lights up when Pump 1 is on. With a dual-speed pump, the indicator will flash when pump 1 is on at low speed.

Pump 2 key

Not available on all models

Press **Pump 2** key to turn Pump 2 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump*). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

The "Pump 2" indicator lights up when Pump 2 is on. With a dual-speed pump, the indicator will flash when pump 2 is on at low speed.

Light key

Press **Light** key to turn light on. A second press turns light off. A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first.

The "Light" indicator lights up when light is on.

Up/Down keys

Use **Up** or **Down** key to set desired water temperature. The temperature setting will be displayed for 2 seconds to confirm your new selection.

2 pump spas have a combined **Up**/**Down** key. Hold the button to increase the parameter and release the button to stop. Hold the button again to decrease the parameter.

The "Set Point" icon indicates that the display shows the desired temperature, NOT the current water temperature!

* If single speed pump: press Pump key to turn pump on. Press Pump key again to turn pump off.

Programming Steps

Program menu

The program menu is accessible by holding down the **Light** key for 5 seconds. In the program menu the following parameters can be set: clock, the filter or purge cycles, economy mode and temperature units. While you are in the program menu, use the **Up** or **Down** key to adjust the parameters and use the **Light** key to jump to the next parameter. The changes will be saved after the confirmation of the last parameter only. If there is no action taken for 10 seconds, the system will exit the program menu without saving any changes.

Setting the clock

Enter the program menu by holding down the **Light** key for 5 seconds. The display will show the current clock setting with the hour flashing.

Depending on factory settings your system may be set to 24-hour time or 12-hour time.

Setting the hour: Use the **Up** or **Down** keys to adjust the hours. Press the **Light** key to jump to the next parameter, the minutes.

Setting the minutes: Use the **Up** or **Down** keys to adjust the minutes. Press the **Light** key to jump to the next parameter, the filter or purge start time (**FS**).

Programming the filter/ purge cycles

Depending on system configuration your spa will perform either a filter or a purge cycle. The filter cycle menu consists of the following parameters: the start time (**FS**), the duration (**Fd**) and the frequency (**FF**). The purge cycle menu consists of the following parameters: the start time (**FS**) and the frequency (**FF**).

A filter cycle consists of starting all the pumps and blower in high speed for 1 minute (purge step) then, the pump associated with the filter will run in low speed for the remaining duration of the filter cycle (clean step).

A purge cycle is used when the spa is equipped with a 24 hour circulation pump which provides a continuous clean step. It consists of starting all the pumps and blower in high speed for 1 minute.

Setting filter or purge cycle start time

The display will show **FSxx**, "xx" representing the starting hour of the cycle. Use the **Up** or **Down** key to adjust the hours. Use the **Light** key to jump to the next parameter, filter duration (**Fd**).

Setting filter cycle duration

(not available on purge systems)

The display will show **Fdxx**, "xx" representing the duration in hours of the filter cycle. Use the **Up** or **Down** key to adjust the duration. Use the **Light key** to jump to the next parameter, filter or purge frequency (**FF**).

0 = no filtration
24 = continuous filtration

It is not recommended to set this to "0".

Setting filter or purge cycle frequency

The display will show **FFxx**, "xx" representing the number of cycles per day. Use the **Up** or **Down** key to adjust the frequency. Use the **Light** key to jump to the next parameter, economy mode (**EP**).

The "Filter cycle" indicator lights up when filter is on and flashes when suspended.

Setting economy mode

This mode allows you to lower the temperature set point of the spa by 20 °F (11 °C) during a certain period of the day.

The display will show **EPx**, "x" representing the state of the programmed economy (0 = disabled, 1 = enabled). Use the arrow keys to enable or disable economy mode. Use the **Light** key to jump to the next parameter, economy start time (**ES**).

Setting economy start time

The display will show **ESxx**, "xx" representing the hour at which the economy mode will become active. Use the **Up** or **Down** key to adjust the hour. Use the **Light** key to jump to the next parameter, economy duration (**Ed**).

When the Economy mode is ON, the display will toggle between the "Eco" message, the time, and the water temperature.

Setting economy duration

The display will show **Edxx**, "xx" representing the duration in hour of the economy mode. Use the **Up** or **Down** key to adjust the hour. Use the **Light** key to jump to the next parameter, temperature unit.

24 = continuous economy

Setting temperature unit

Water temperature can be displayed in either Fahrenheit (°F) or Celsius (°C). The display will show F or C.

Use the **Up** or **Down** key to change the setting. Use the **Light** key to save all the parameters.

Smart Winter Mode

Our Smart Winter Mode protects your system from the cold by turning pumps on several times a day to prevent water from freezing in pipes.

The "SWM" indicator lights up when freezing is detected and flashes when the purge is active.

Cooldown

After heating the spa water to the desired Set Point, the heater is turned off, but its associated pump (Pump 1 low-speed or CP) remains on for a predetermined period of time to ensure adequate cooling of the heating element, prolonging its useful life.

Water temperature regulation

Every 15 to 90 minutes the pump will run to ensure accurate water temperature readings as well as avoid heater activation in dry conditions. After verifying pump activation and taking a water temperature reading if required, the system automatically turns the heater on to reach and maintain water temperature at Set Point.

Indicator flashes when taking water temperature reading.

Water temperature regulation

In a regulation cycle, the system first generates water flow through the heater housing and the plumbing, in order to ensure accurate water temperature readings as well as avoiding heater activation in dry conditions.

After verifying pump activation and taking a water temperature reading if required, the system automatically turns the heater on to reach and maintain water temperature at Set Point.

The "Heater" indicator lights up when the heater is on. It flashes when there is a request for more heat but the heater has not yet started.

Smart Winter Mode

Our Smart Winter Mode protects your system from the cold by turning pumps on several times a day to prevent water from freezing in pipes.

The "Smart Winter Mode" indicator lights up when the Smart Winter Mode is on.

Cooldown

While performing this task, the heater is not allowed to turn on and its icon flashes.

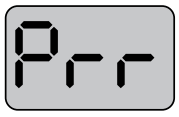
Troubleshooting

Hr
An internal hardware error has been detected in in.xe.
Contact dealer or service supplier.

HL
The system has shut the heater down because the temperature at the heater has reached 119°F (48°C). Do not enter the water! Remove the spa cover and allow the water to cool down, then shut power off and power your spa up again to reset the system.

AOH
Temperature inside the spa skirt is too high, causing the internal temperature in the in.xe to increase above normal limits. Open skirt and wait until error clears.

FLO
The system does not detect any water flow while the primary pump is running. Check and open water valves. Check for water level. Clean filter.
If the problem persists, call your dealer or service supplier.



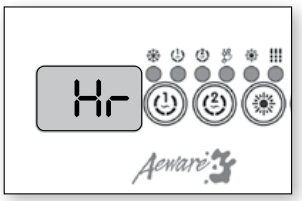
Prr
A problem is detected with the temperature probe.
Call your dealer or service supplier.

OH
The water temperature in the spa has reached 108°F (42°C). Do not enter the water! Remove the spa cover and allow the water to cool down to a lower temperature. Call your dealer or service supplier if problem persists.

Hr error message / flow chart & step-by-step

An internal hardware error has been detected

Step-by-Step

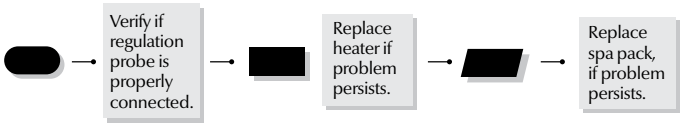


- Restart the spa pack and start & stop all pumps and blower.
- If error reappears, replace the spa pack.

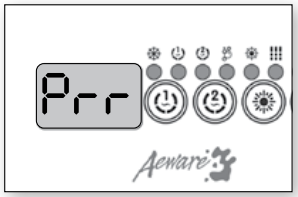
Prr error message / flow chart & step-by-step

Regulation probe issue

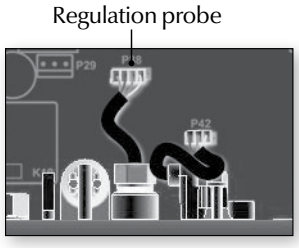
Flow chart



Step-by-Step



- Verify if regulation probe (located above the heater) is properly connected.

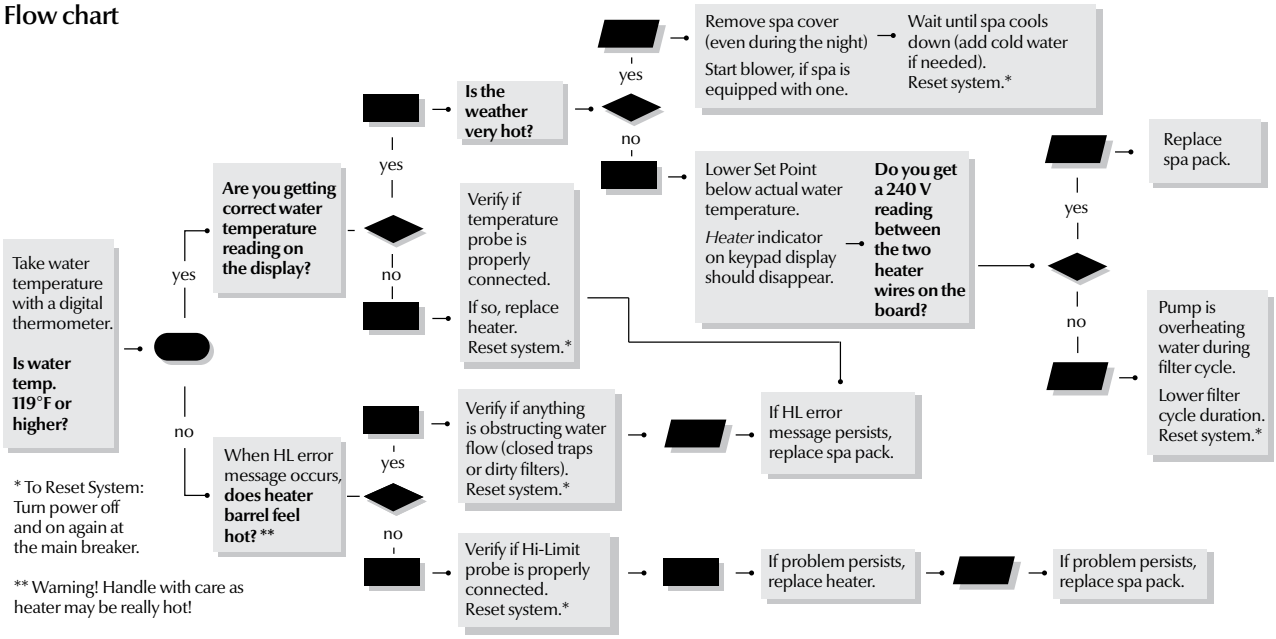


- Replace heater if problem persists.
- Replace spa pack, if problem persists.

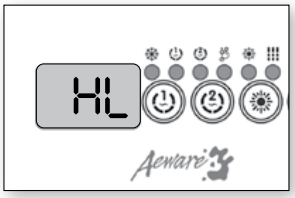
HL error message / flow chart & step-by-step

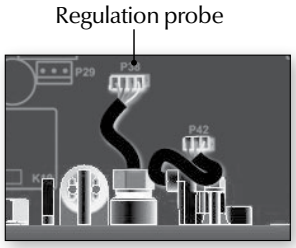
HL The system has shut down because the temperature at the heater has reached 119°F (48°C).

Flow chart



Step-by-Step



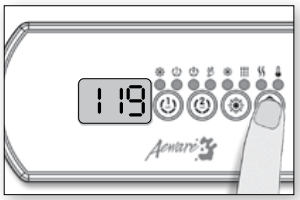


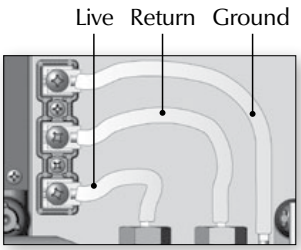
HL
Water temperature at the heater has reached 119°F

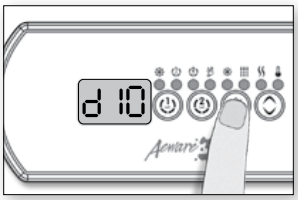
1. Measure the temperature with a DIGITAL thermometer and compare its reading with temp. on the display. Make sure the temp. reading is lower than 119°F.

2. If reading is below 119°F:
   - Carefully check if heater barrel feels hot. If it's hot, verify if anything is obstructing water flow (closed valves or dirty filter).
   - Shut power off and power the spa up again to reset the system.
   - If HL error persists, replace heater.
   - If HL error persists, replace spa pack.

3. If reading is 119°F or higher:
   - Verify if the Temp. & High Limit probes are properly connected.
   - Shut power off and power the spa up again to reset the system.
   - If problem persists, replace heater.
   - If problem persists, replace spa pack.







If weather is very hot:

1. Remove spa cover (even during the night). Start blower if spa is equipped with one. Wait until spa cools down (add cold water if necessary).

   • Shut power off and power the spa up again to reset the system.

If hot weather is not a factor:

2. Lower Set Point below current water temperature.

   The Heater indicator should disappear from keypad display.

3. With a voltmeter, read voltage between the live and ground heater terminals.

4. If you do read 240 V, replace spa pack.

5. If you do not read 240 V, pump may be overheating water during filter cycle.

   Shorten filter cycle duration.

To shorten filter cycle duration:

6. Press and hold the **Light** key for 5 seconds. Display will show a value that represents the filter cycle duration in hours.

7. Use the **Down** arrow key to lower the number of hours.
   0 = no filtration
   12 = continuous filtration

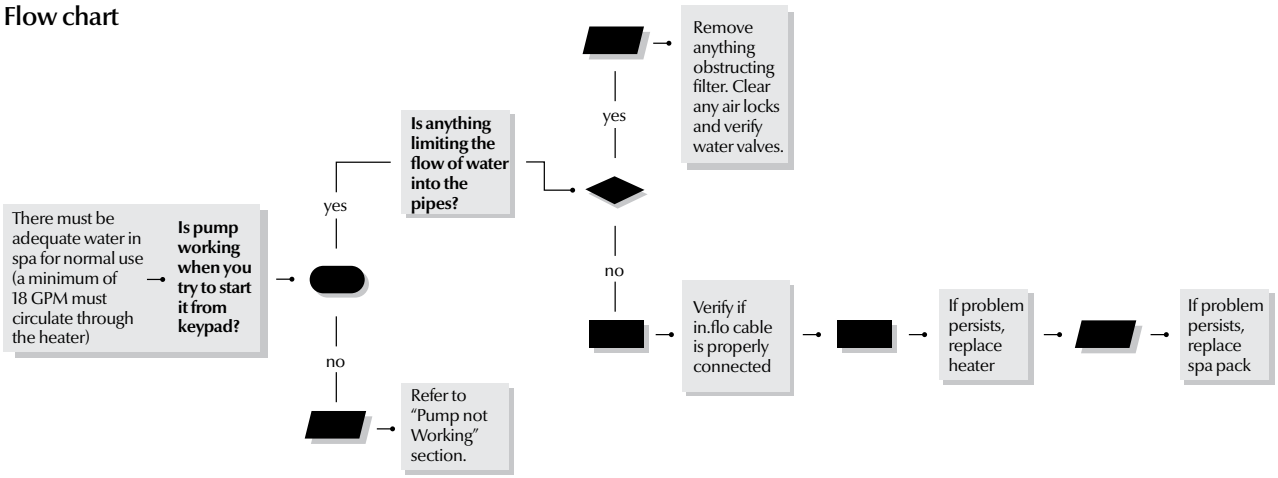
   When the desired setting is displayed, Press the **Light** key again. The filter cycle will start immediately.

FLO & UPL error message / flow chart & step-by-step

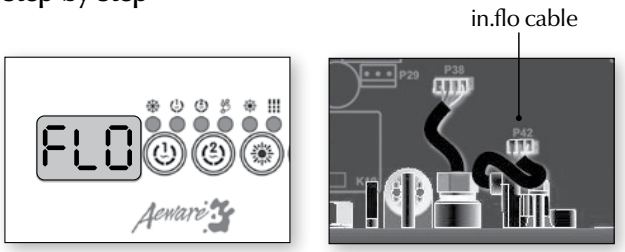
The system did not detect any water flow while the primary pump was running. Follow the troubleshooting flow chart below to identify the problem:

Make sure that the low-level programming has been properly set, with or without circulation pump (depending on your system configuration).

Flow chart



Step-by-Step



FLO

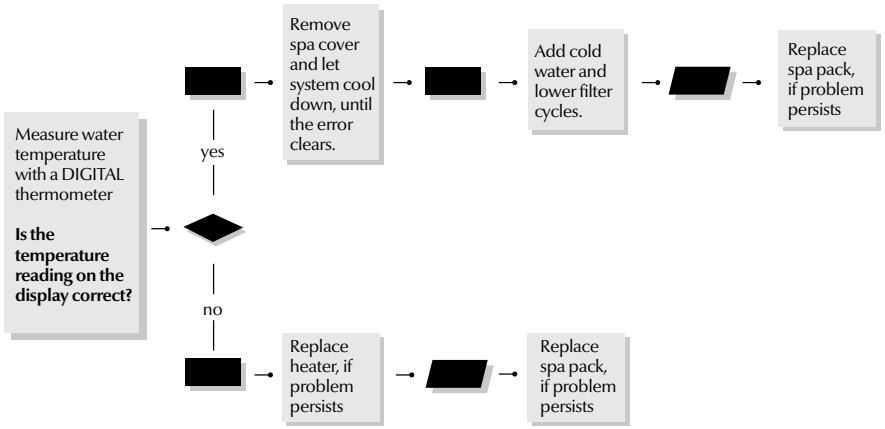
Primary pump is activated, but the system doesn't detect any water flow

- Make sure water valves are open and that water level is high enough.
- Check and remove anything obstructing the filter.
- Make sure there is adequate flow and that no airlocks are trapped in the unit's plumbing. Pumps may make strange noises. If airlocks are formed, start the pump and slowly loosen one of the union nuts to release the air trapped in the plumbing. Tighten the nut again after you are done.
- Make sure that the pump associated to the heater (primary pump) is running.
- Make sure the in.flo cable (located above the heater) is properly connected.
- If problem persists replace heater.
- If the problem is not solved replace the spa pack.

OH error message / flow chart & step-by-step

OH Water temp. in the spa has reached 108°F

Flow chart



Step-by-Step

- Measure water temperature with a DIGITAL thermometer and compare its reading with temp. on the display. If temp. reading is different, replace heater.
- Remove spa cover and let spa cool down.
- Add cold water and lower filter cycles.
- If problem persists replace spa pack.

UPL error message / Step-by-Step

UPL **No low-level configuration software in system!**

Step-by-Step

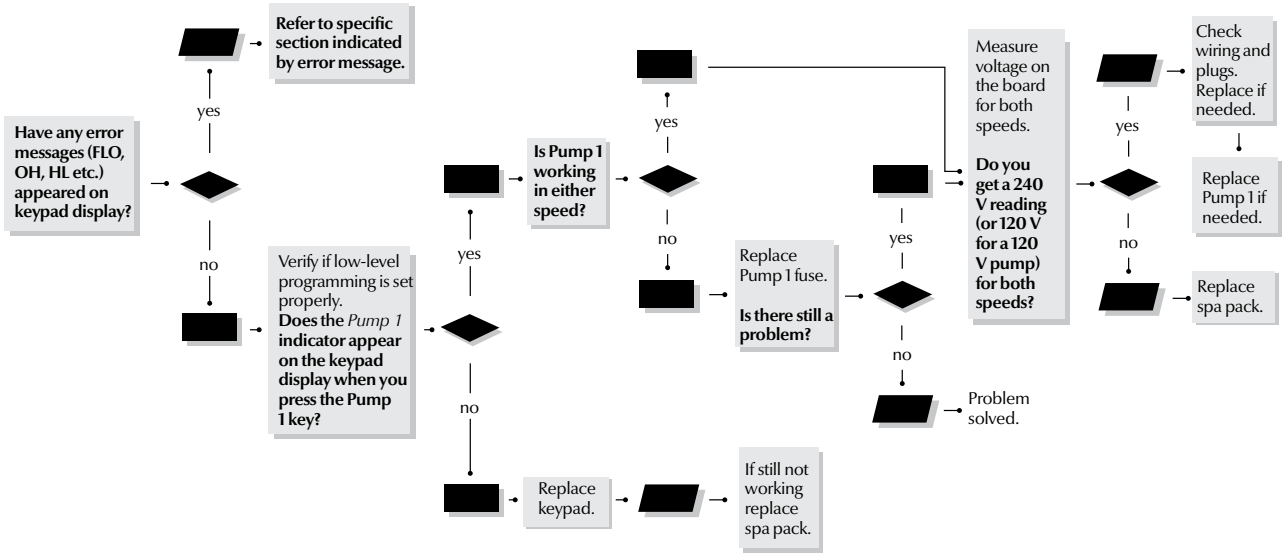
- New low-level configuration software needs to be downloaded into the spa system; without it the system will not be operable.
- Contact our toll free line for technical support **(1-800-784-3256).**

Note: this line is dedicated to assist authorized service technicians and dealers only.

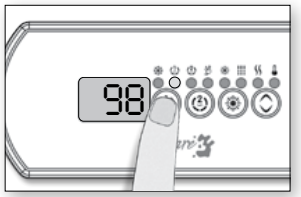
Pump 1 doesn't work / flow chart & step-by-step

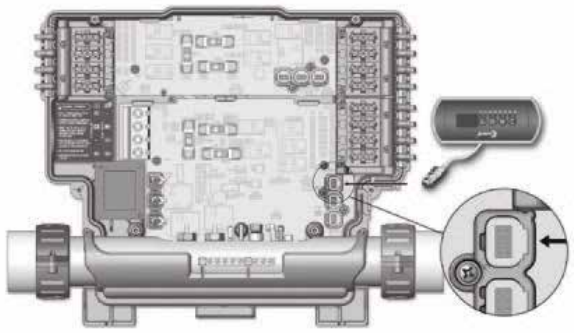
If Pump 1 is not working,
follow this troubleshooting flow chart:

Flow chart



Step-by-Step



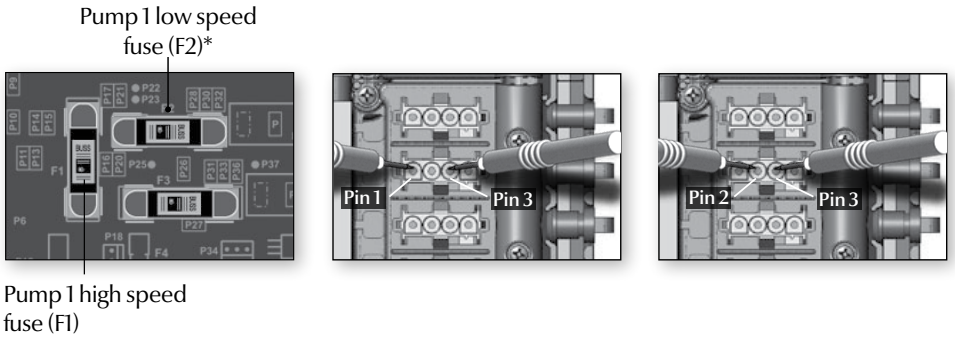


Pump 1 does not work!

- Check for an error message on keypad display. If there is one, refer to the specific section indicated by the error message.
- Verify low-level programming configuration.
- Verify if the Pump 1 indicator appears on keypad display when you press **Key 1**.
- If the Pump 1 indicator does not appear, use a spare keypad to verify if keypad is defective.

  If it is, replace keypad.

  If not, replace spa pack.
- If Pump 1 indicator appears when **Key 1** is pressed, verify if pump works in either speed.



- If Pump 1 does not work in either speed, replace appropriate Pump 1 fuse.
- If replacing the fuse is not effective or if Pump 1 works in only one speed, take voltage reading on the corresponding in.link connector.

**Pump 1 high and low speed are F2 on the CE version.*

- Turn Pump 1 to high speed and take voltage reading between:

  Pin 1 & Pin 3

  Your reading should be:

  240 V for a 240 V pump

  120 V for a 120 V pump

- Turn Pump 1 to low speed and take voltage reading between:

  Pin 2 & Pin 3

  Your reading should be:

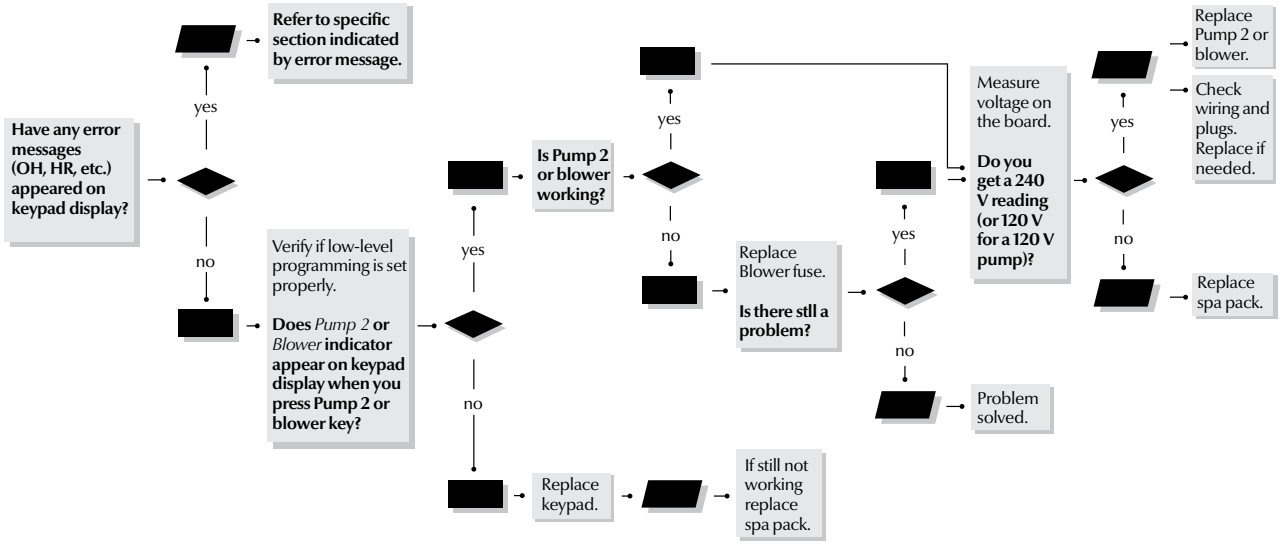
  240 V for a 240 V pump

  120 V for a 120 V pump

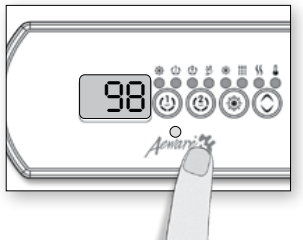
- If voltage is as it should be, replace Pump 1.
- If not, replace spa pack.

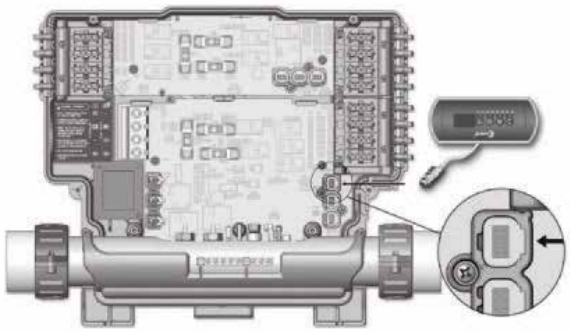
Pump 2 or blower doesn't work / flow chart & step-by-step

If Pump 2 or blower is not working, follow this troubleshooting flow chart:



Step-by-Step



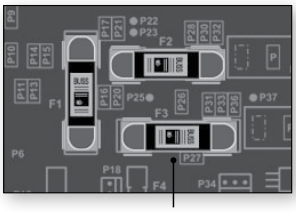


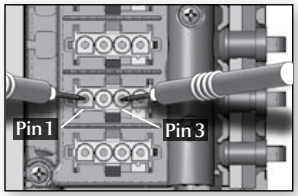
Pump 2 or blower is not working!

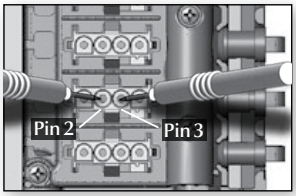
- Check for an error message on keypad display. If there is one, refer to the specific section indicated by the error message.
- Verify low-level programming configuration.
- Verify if Pump 2 or Blower indicator appears on keypad display when you press **Key 2** button.
- If Pump 2 or Blower indicators do not appear, use a spare keypad to verify if keypad is defective.

  If it is, replace keypad.

  If not, replace spa pack.
- If Pump 2 indicator appears when **Key 2** is pressed, verify if pump works in either speed (if dual speed pump).







- If Pump 2 does not work in either speed, replace Pump 2 fuse.
- If replacing the fuse is not effective or if Pump 2 works in only one speed, take voltage reading on the corresponding AMP connector.

- Turn Pump 2 to high speed and take voltage reading between:

  Pin 1 & Pin 3

  Your reading should be:

  240 V for a 240 V pump

  120 V for a 120 V pump

- Turn Pump 2 to low speed and take voltage reading between:

  Pin 2 & Pin 3

  Your reading should be:

  240 V for a 240 V pump

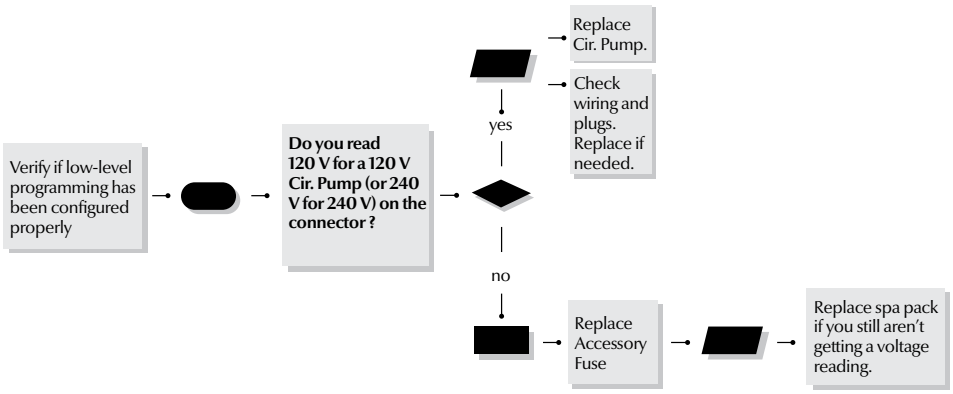
  120 V for a 120 V pump

- If voltage is as it should be, replace Pump 2.
- If not, replace spa pack.

Circulation pump doesn't work / flow chart & step-by-step

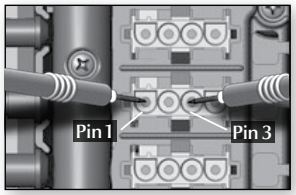
**If circulation pump is not working,
follow this troubleshooting flow chart:**

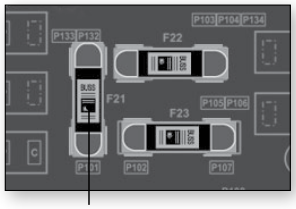
Flow chart



Step-by-Step

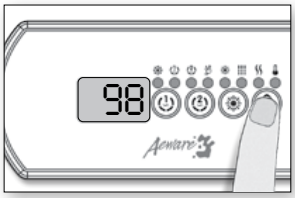
in.yt model

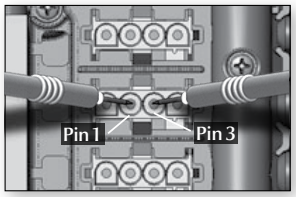


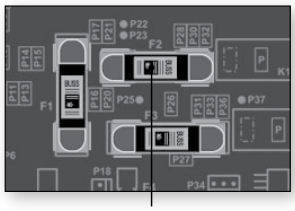


Circulation pump fuse (F21)

in.ye model







Circulation pump fuse (F2)

If circulation pump is not working:

- Verify low-level programming configuration.
- Start circulation pump by setting temperature set point 2 °F higher than actual water temperature.

- Take voltage reading on the corresponding AMP connector:

  Pin 1 & Pin 3

  Your reading should be:
  240 V for
  a 240 V pump

  120 V for a
  120 V pump

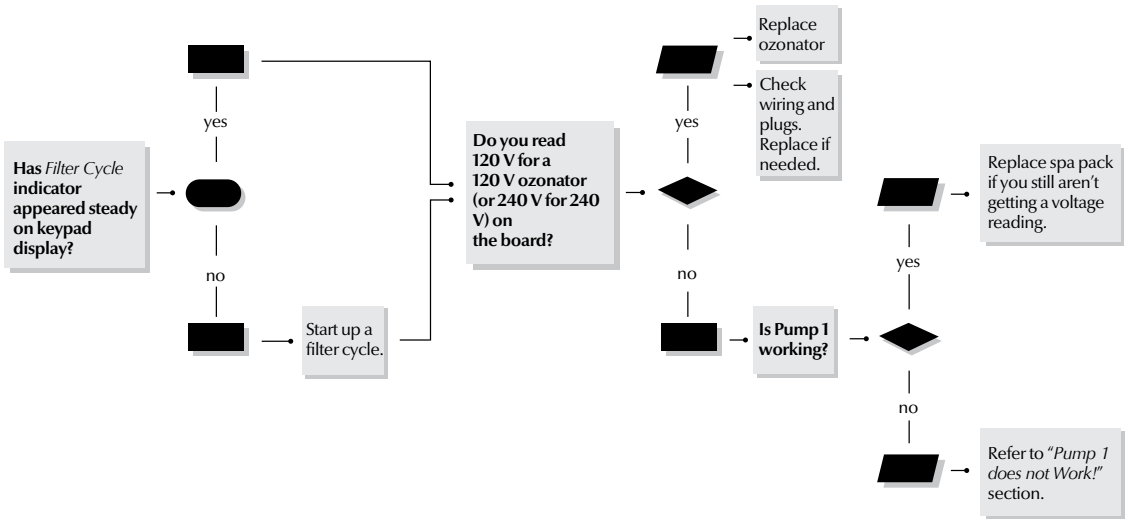
- If you don't get a voltage reading, replace the accessory fuse.
- If changing the fuse does not fix the problem, replace the spa pack.
- If voltage is as it should be, replace circulation pump.

Ozonator doesn't work / flow chart & step-by-step

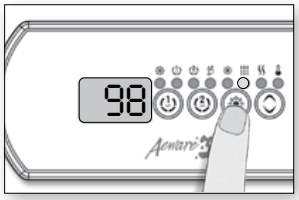
**If the ozonator is not working,
follow this troubleshooting flow chart:**

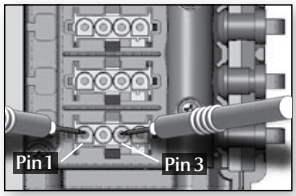
Ozonator output will be shut down when Pump 1, Pump 2 or blower have been turned on manually.

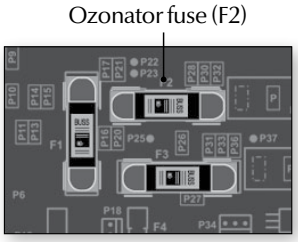
Flow chart



Step-by-Step







If the ozonator is not working:

- Check if Filter Cycle indicator appears steady on keypad.
- If the filter indicator is blinking it indicates that the filter cycle has been interrupted. In that case, reset the breaker by turning the power off and on again to resume cycle.
- If not, start up a filter cycle (see Programming Filter Cycles section).
- If ozonator does not work even when filter cycle indicator is on, take voltage reading on the corresponding AMP connector:

  Pin 1 & Pin 3

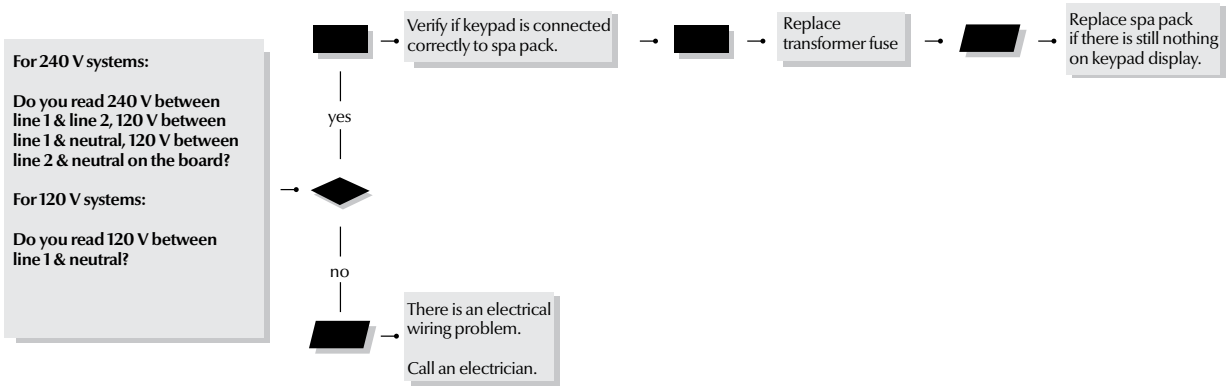
  Your reading should be:
  240 V for
  a 240 V pump

  120 V for a
  120 V pump
- If you don't get a voltage reading, replace the accessory fuse.
- If changing the fuse does not fix the problem, replace the spa pack.
- If voltage is as it should be, replace ozonator.

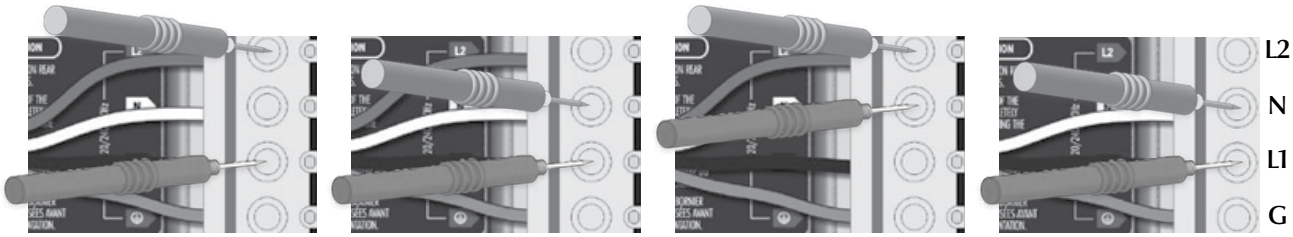
Nothing seems to work / flow chart & step-by-step

If nothing seems to work, turn off the main breaker and visually inspect power input cable, gently pulling on it to make sure is properly tightened. Turn the main breaker back on and follow this troubleshooting flow chart:

Flow chart
For North American systems



Step-by-Step for North American version



Nothing seems to work!

- Verify that all screws are properly tightened on the terminal block. Turn power off and make sure that all cables hold firmly in the terminal block if you pull on them. Once done, turn power back on.
- On the terminal block, measure voltage between line 1 and line 2.
- You should get 240 V.
- Measure voltage between line 1 and neutral.
- You should get 120 V.
- Measure voltage between line 2 and neutral.
- You should get 120 V.
- If you do not get good readings, this indicates an electrical wiring problem.

Call an electrician!

For 120 V systems

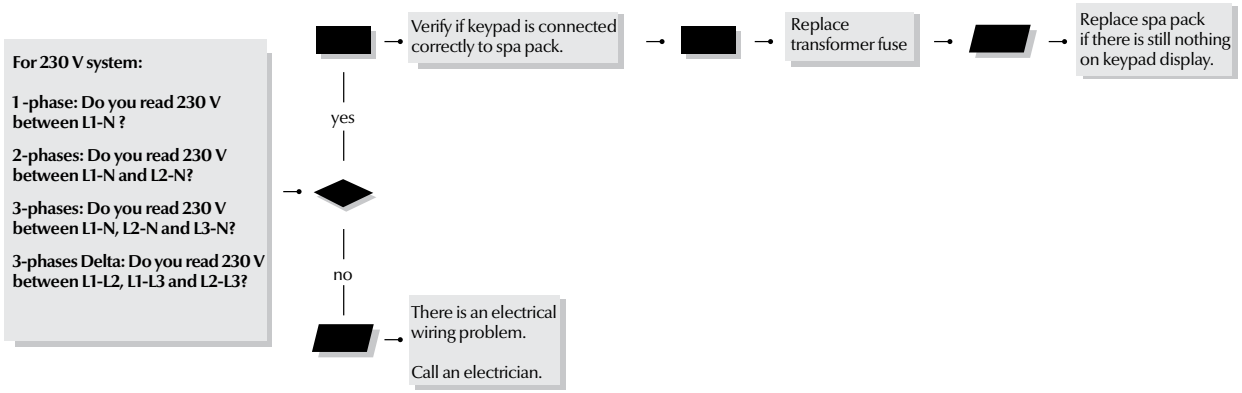
- Measure voltage between line 1and neutral.
- You should get 120 V.
- If you do not get good readings, this indicates an electrical wiring problem.

Call an electrician!

Nothing seems to work (European version)/ flow chart

If nothing seems to work, turn off the main breaker and visually inspect power input cable, gently pulling on it to make sure is properly tightened. Turn the main breaker back on and follow this troubleshooting flow chart:

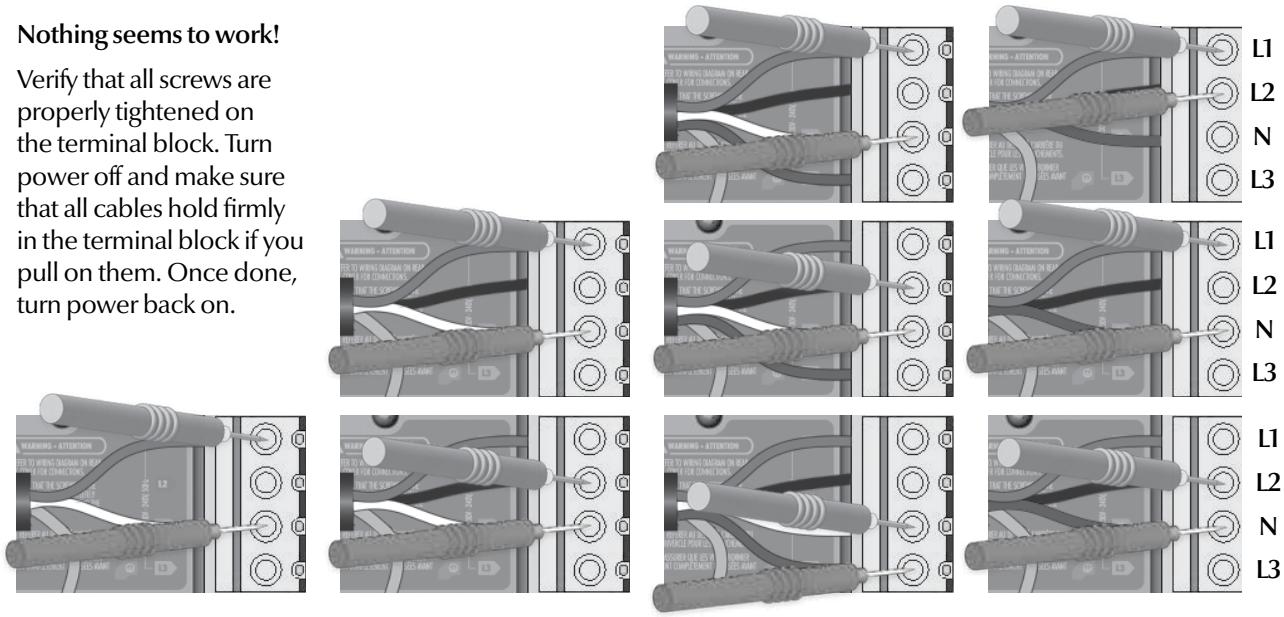
Flow chart
For European systems



Step-by-Step

Nothing seems to work!

Verify that all screws are properly tightened on the terminal block. Turn power off and make sure that all cables hold firmly in the terminal block if you pull on them. Once done, turn power back on.



For 1-phase system

- On the terminal block, measure voltage between line 1 and neutral.
- You should get 230 V.
- If you do not get good readings, this indicates an electrical wiring problem.

Call an electrician!

For 2-phase system

- Measure voltage between line 1 and neutral and between line 2 and neutral.
- You should get 230 V on both readings.
- If you do not get good readings, this indicates an electrical wiring problem.

Call an electrician!

For 3-phase system

- Measure voltage between line 1 and neutral, between line 2 and neutral and between line 3 and neutral.
- You should get 230 V for each reading.
- If you do not get good readings, this indicates an electrical wiring problem.

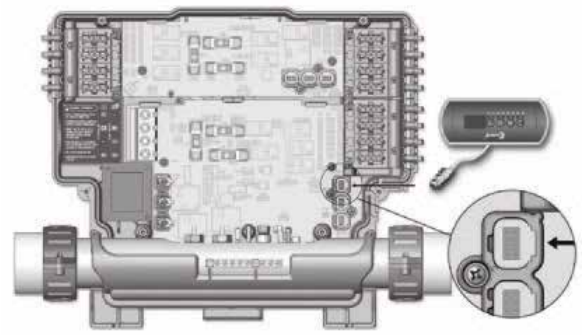
Call an electrician!

For 3-phase Delta system

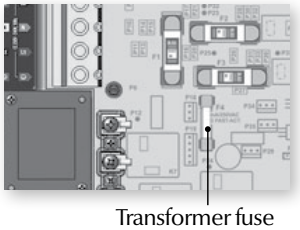
- Measure voltage between line 1 and line 2, between line 1 and line 3 and between line 2 and line 3.
- You should get 230 V for each reading.
- If you do not get good readings, this indicates an electrical wiring problem.

Call an electrician!

If the voltage reading are OK then:



- Verify if keypad is correctly connected to the spa pack.

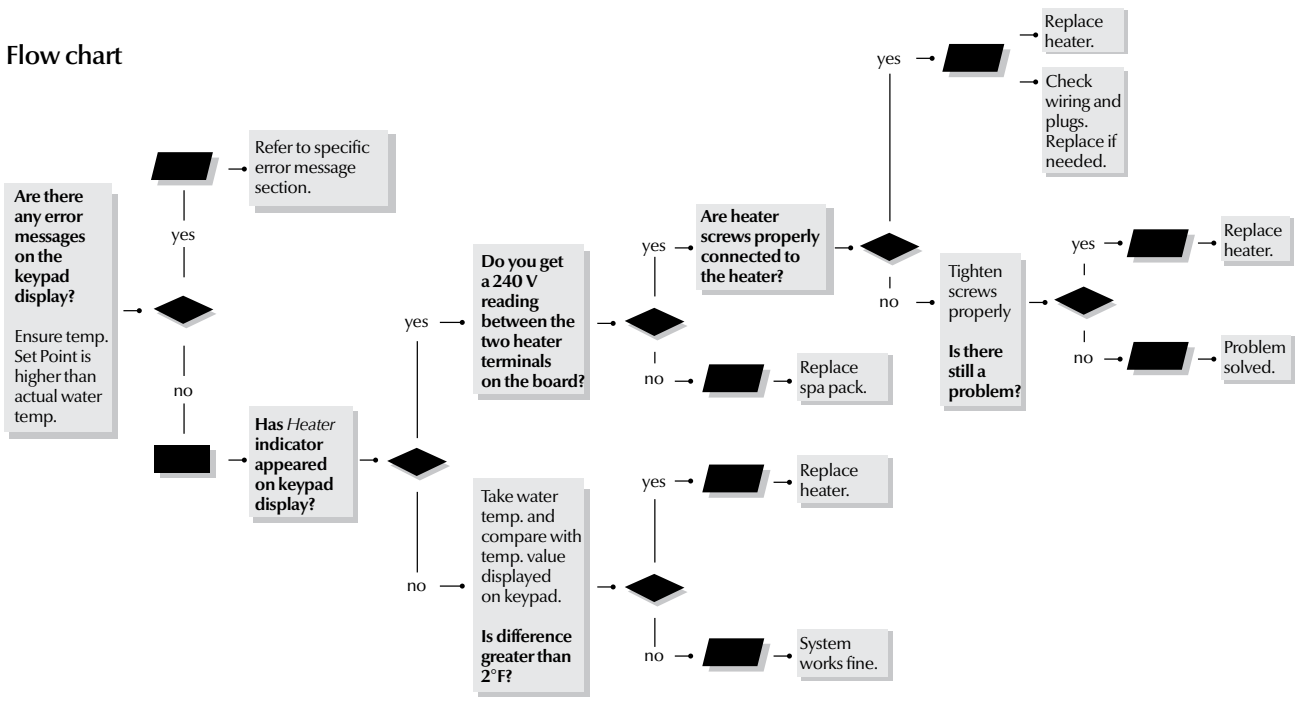


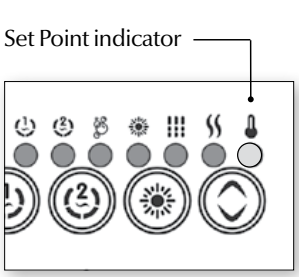
- Verify the transformer fuse.
- Replace transformer fuse if neccessary.
- If problem persists, replace spa pack.

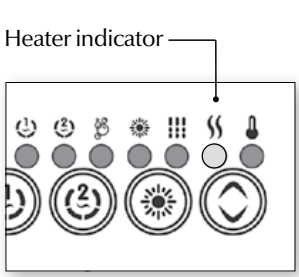
Spa not heating / flow chart & step-by-step

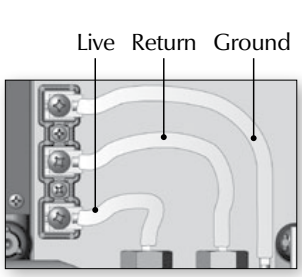
If spa is not heating,
follow this troubleshooting flow chart:

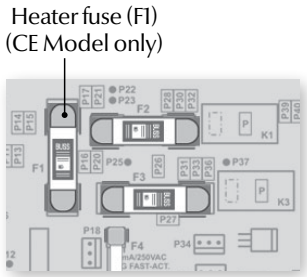
Flow chart











Spa not heating!

- Check for an error message on keypad display. If there is one, refer to specific section indicated by the error message.
- If there is no error message, try to raise water temperature by increasing the Set Point 2°F higher than actual water temperature. Press Up key to increase Set Point.

- Verify if Heater indicator appears on keypad display.
- The heater indicator will be on when heater is on. It will flash if more heat has been requested, but heater has not started yet.

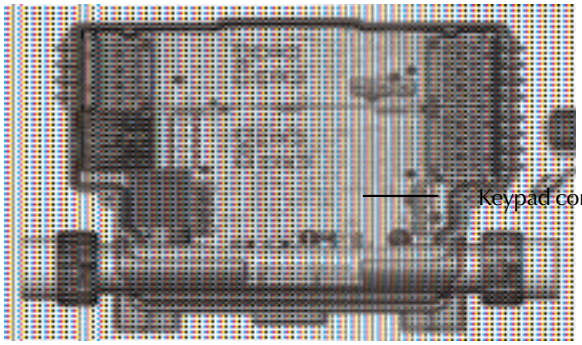
- If heater indicator lights up on the display, take voltage reading between the heater live and return terminals.

Your reading should be:

240 V: for 240 V heaters
120 V: for 120 V heaters

- If voltage reading is not as it should be, verify if heater terminals are properly connected .
- If it is, replace spa pack.
- In the case of the European model in.yt.ce only, replace accessory fuse.
- If problem persists, replace spa pack.

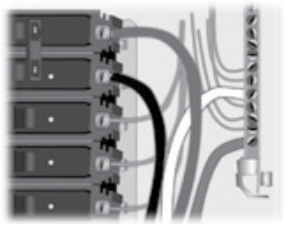
Keypad doesn't seem to work step-by-step

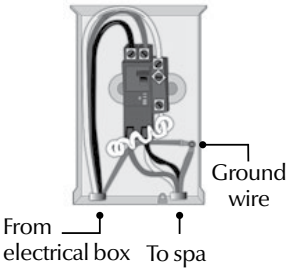


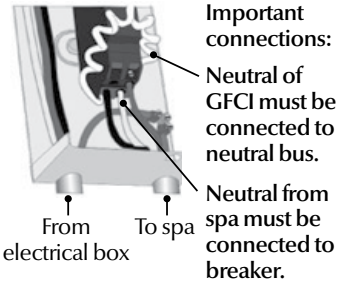
If a keypad doesn't work:

- Verify keypad connections and try spare keypad.
- Replace keypad if problem is corrected.
- Replace pack if problem is not corrected.

GFCI trips



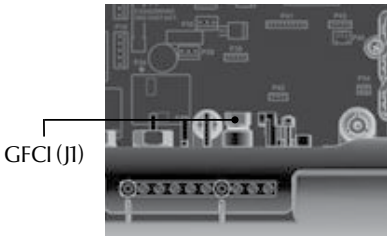




⚠ Warning!

Total current output cannot exceed total current input rating!

There are different GFCI models used on the market. See manufacturer's instructions that come with the GFCI for specific information. Note that all illustrations are examples only.



The Y Series packs are equipped with a GFCI tripper circuit in case an HL error occurs.

- Find the GFCI tripper circuit (J1) on the board located behind the temperature probe and remove the jumper.
- Activate the GFCI and see if an error occurs. If HL appears, follow the HL error troubleshooting chart (in the Troubleshooting section).
- If no error occurs, re-install the jumper.

  If the GFCI trips again replace the pack.

If the GFCI is still tripping, the error doesn't come from the GFCI tripper circuit.

- Verify that the GFCI circuit is properly connected.
- If it's not, reconnect it.
- Verify the spa pack wiring (make sure that the neutral and the ground have not been inverted)

If the GFCI is properly connected but still tripping,

- Unplug all outputs from the spa pack (pumps, blower, heater, ozonator etc).
- If it doesn't trip while all outputs are unplugged, reconnect one output at a time until the GFCI trips again.
- Replace defective component.

Note: Incorrect GFCI wiring may lead to a condition where the GFCI may NOT trip when it should, causing electrical shock hazard. All electrical installations should be done by qualified personnel only.

Specifications

Environmental ratings:

Operating temperature:	32°F (0°C) to 136°F (58°C)
Storage temperature:	-13°F (-25°C) to 185°F (85°C)
Humidity:	Up to 85% RH, non condensing
IPx5 level of waterproofing	

Mechanical:

in.ye	
Weight:	Up to 9.7 lbs (4.4 kg)
Dimensions (W x H x D):	19.598" x 10.75" x 4.98" (497 x 273 x 126 mm)
in.yt	
Weight:	Up to 12 lbs (4.45 kg)
Dimensions (W x H x D):	19.58" x 14.5" x 5.1" (497 x 368 x 130 mm)

Model Y Series UL/CSA electrical specifications

Input rating:	120/240 V nominal (+5/-10%) (2 lines required with neutral) 48 A Max,
or (in.ye-3 only):	120 V nominal only (+5/-10%) (single line with neutral) 16 A Max,
	60 Hz nominal (+1.5 / -1.0 Hz)
Heat.wav rating:	
Voltage:	120 or 240 V, 60Hz
Wattage:	4 kW at 240 V, 1 kW at 120 V (Also available: 5.5 kW at 240 V)
Flow rate:	Minimum of 18 GPM (68 LPM) is required

UL 1563 Sixth Ed.
UL File: E182156
CSA No. 22.2 - 218.1-M89.

Model Y Series TUV electrical specifications

Input rating:	230/240 V nominal (+5/-10%) (2-phase system with neutral) 20 A Max per phase,
	(3-phase system with neutral) 16A Max per phase.
or (in.ye-3 only):	240 V nominal only (+5/-10%) (single-phase system with neutral) 48 A Max,
	50 Hz nominal (+1.5 / -1.0 Hz)
Heat.wav rating:	
Voltage:	240 V, 50Hz
Wattage:	3.8 kW at 230 V
	2.8 kW at 230 V
Flow rate:	Minimum of 18 GPM (68 LPM) is required

EN/IEC 60335 - 2 - 60/A2: 2008 - EN/IEC 60335 - 1: 2010
EN55014-1
EN55014-2
EN61000-3-2
EN61000-3-3

North American Models

Device	Voltage	Maximum current	ye-3*1
Pump 1 (2-spd)	120 or 240 V	15 FLA/60 LRA (inrush)	●
Pump 2 (2-spd)	120 or 240 V	15 FLA/60 LRA (inrush)	●*2
Pump 3 (2-spd)	120 or 240 V	15 FLA/60 LRA (inrush)	
Pump 4 (2-spd)	120 or 240 V	15 FLA/60 LRA (inrush)	
Pump 5 (1-spd)	120 or 240 V	15 FLA/60 LRA (inrush)	
O3/CP	120 or 240 V	6 FLA/10 A	●*3
A1	120 or 240 V	15 FLA/60 LRA (inrush)	
Blower	120 or 240 V	15 FLA/60 LRA (inrush)	
CP	120 or 240 V	6 FLA/10 A	
O3	120 or 240 V	6 FLA/10 A	
Direct out 1	120 or 240 V	10 A (always on)	
Direct out 2	120 or 240 V	10 A (always on)	

*1 This model can be converted to a dedicated 120 V model.

*2 Pump #2 can only be installed if Pump #1 is a single-speed pump.

*3 Total of Pump #1-low (or Pumps #2) and O3/ CP cannot exceed 15 FLA.

*7 If CP is used, Pump 3 must be 1-speed
Total of pump 1-low, O3 and Di1 must not exceed 15 FLA
Total of P3, CP, and Di2 must not exceed 15 FLA

*8 If A1 is used, Pump 4 must be 1-speed
Total of O3 and Di1 must not exceed 15 FLA
Total of P3, CP, and Di2 must not exceed 15 FLA
Total of P5, and B must not exceed 15 FLA
Total of P4, and A1 must not exceed 20 FLA

European Models

Device	Voltage	Maximum current	ye-3*
Pump 1 (2-spd)	230 V	15 FLA/60 LRA (inrush)	●
Pump 2 (2-spd)	230 V	15 FLA/60 LRA (inrush)	●*1
Pump 3 (2-spd)	230 V	15 FLA/60 LRA (inrush)	
Pump 4 (2-spd)	230 V	15 FLA/60 LRA (inrush)	
Pump 5 (1-spd)	230 V	15 FLA/60 LRA (inrush)	
O3/CP	230 V	6 FLA/10 A	●*2
A1	230 V	15 FLA/60 LRA (inrush)	
Blower	230 V	15 FLA/60 LRA (inrush)	
CP	230 V	6 FLA/10 A	
O3	230 V	6 FLA/10 A	
Direct out 1	230 V	10 A (always on)	
Direct out 2	230 V	10 A (always on)	

*1 Pump #2 can only be installed if Pump #1 is a single-speed pump.

*2 Total of Pump #1-low (or Pumps #2) and O3/ CP cannot exceed 20 FLA.

Alaskan & Midnight Sun WARRANTY

Spa Shell ~ 7 years
Arctic Spas® warrants the spa shell to the customer against water loss due to structural failure for a period of 7 years.

Equipment & Plumbing ~ 3 year parts and 1 year labour
Arctic Spas® warrants the spa's electrical equipment components ~ specifically the pump(s) *(please refer to detailed pump warranty below), factory installed ozone system, heater (including the Tru-Guard™ Heater) and control system against malfunctions due to defects in materials and workmanship for a period of 3 years to the original purchaser from the original date of delivery. Includes parts necessary to repair. Labour is included for a period of 1 year.

Other Components ~ 3 years
Arctic Spas® warrants the fuses, lights, jet inserts, topside control overlays, cabinet material, filter baskets and weir assemblies, diverter handles and caps, air control handles and caps, plastic cover clips, chrome trim and all other unmentioned components to be free of defects in workmanship and materials for a period of 3 years to the original purchaser from the original date of delivery. Includes only parts necessary to repair, not labour.

Shell Surface ~ 3 years
Arctic Spas® warrants the interior surface to the customer against water loss due to material failure including cracks, blisters, peeling and delaminating for a period of 3 years to the original purchaser from the original date of delivery. Includes parts and labour necessary to repair.

Standard Cover ~ 1 year
Arctic spas® warrants the standard Bear Essentials cover against malfunctions due to defects in materials and workmanship for one year to the original owner from the original date of delivery. Includes parts necessary to repair.

Upgraded Mylovac Cover ~ 3 years
Arctic spas® warrants the upgraded MYLOVAC™ cover against malfunctions due to defects in materials and workmanship for three years to the original owner from the original date of delivery. Includes parts necessary to repair. (Normal wear and tear is not included in this warranty, when used with a cover lifter seam damage will be considered normal wear and tear.

Arctic Spas® extends this limited warranty solely to the original customer of any Arctic self-contained spa installed by an approved Arctic Spas Dealer and within 3 years or 4 years from the date of manufacture, whichever comes first. For the purpose of this document "customer" shall mean the original purchaser of the spa.

engineered for the world's harshest climates®...
(wherever you happen to live)