



Table 1

| Parameter        | Display            | Options                                                                                                                     | Description                                                                                                                                                                                                                                                                                                                                                                       |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
|------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------|----------|----------|----|-----------|----|----|---------|--------|----|----|---------|-----------|----|----|---------|----|----|----|
| Cool down        | C. _ _             | 30 to 240 seconds                                                                                                           | Cool down of the heating element in seconds                                                                                                                                                                                                                                                                                                                                       |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 1 current | 1. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 1 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 2 current | 2. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 2 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 3 current | 3. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 3 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 4 current | 4. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 4 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 5 current | 5. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 5 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 6 current | 6. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 6 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 7 current | 7. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 7 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 8 current | 8. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 8 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output 9 current | 9. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 9 accessory                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output A current | A. _ _             | 0 to 15 amperes                                                                                                             | Current draw of Output 10 accessory                                                                                                                                                                                                                                                                                                                                               |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output B current | b. _ _             | 1 to 15 amperes                                                                                                             | Current draw of Output 11 accessory                                                                                                                                                                                                                                                                                                                                               |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output C current | C. _ _             | 1 to 15 amperes                                                                                                             | Current draw of Output 12 accessory                                                                                                                                                                                                                                                                                                                                               |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output D current | d. _ _             | 1 to 5 amperes                                                                                                              | Current draw of Direct output 1 accessory                                                                                                                                                                                                                                                                                                                                         |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output E current | E. _ _             | 0 to 5 amperes                                                                                                              | Current draw of Direct output 2 accessory                                                                                                                                                                                                                                                                                                                                         |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Output H current | H. _ _             | 0 to 17 amperes                                                                                                             | Current draw of the heater                                                                                                                                                                                                                                                                                                                                                        |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| CE Configuration | CE. _              | UL = 0<br>CE = 1                                                                                                            | CE or UL setup                                                                                                                                                                                                                                                                                                                                                                    |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Number of phases | P. _ _             | 1 or 2 (UL)<br>1, 2 or 3 (CE)                                                                                               | Number of Phases / Breakers<br><div>Number of Phases selection</div> <table><tr><td>UL</td><td colspan="3">Menu not available</td></tr><tr><td>CE</td><td colspan="3">1, 2 or 3</td></tr><tr><td>UL Swim</td><td colspan="3">1 or 2</td></tr><tr><td>CE Swim</td><td colspan="3">1, 2 or 3</td></tr></table>                                                                      | UL | Menu not available |          |          | CE | 1, 2 or 3 |    |    | UL Swim | 1 or 2 |    |    | CE Swim | 1, 2 or 3 |    |    |         |    |    |    |
| UL               | Menu not available |                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                   |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| CE               | 1, 2 or 3          |                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                   |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| UL Swim          | 1 or 2             |                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                   |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| CE Swim          | 1, 2 or 3          |                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                   |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| Input current    | b. _ _             | 10 to 60A Single Phase (UL and CE)<br>10 to 48A Dual Phase (UL)<br>10 to 40A Dual Phase (CE)<br>10 to 20A Triple Phase (CE) | Available household current<br><div>Maximum Input Current</div> <table><tr><th></th><th>1 phase</th><th>2 Phases</th><th>3 Phases</th></tr><tr><td>UL</td><td>48</td><td>na</td><td>na</td></tr><tr><td>CE</td><td>48</td><td>20</td><td>16</td></tr><tr><td>UL Swim</td><td>60</td><td>48</td><td>na</td></tr><tr><td>CE Swim</td><td>60</td><td>40</td><td>20</td></tr></table> |    | 1 phase            | 2 Phases | 3 Phases | UL | 48        | na | na | CE      | 48     | 20 | 16 | UL Swim | 60        | 48 | na | CE Swim | 60 | 40 | 20 |
|                  | 1 phase            | 2 Phases                                                                                                                    | 3 Phases                                                                                                                                                                                                                                                                                                                                                                          |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| UL               | 48                 | na                                                                                                                          | na                                                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| CE               | 48                 | 20                                                                                                                          | 16                                                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| UL Swim          | 60                 | 48                                                                                                                          | na                                                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |
| CE Swim          | 60                 | 40                                                                                                                          | 20                                                                                                                                                                                                                                                                                                                                                                                |    |                    |          |          |    |           |    |    |         |        |    |    |         |           |    |    |         |    |    |    |

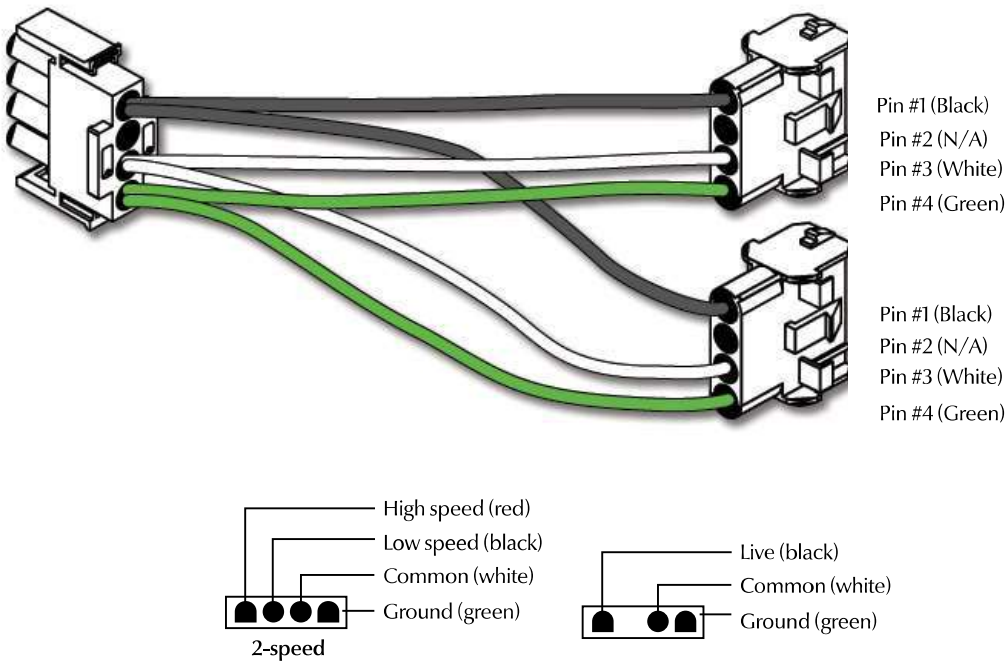


## AMP pins and housings

Industry standard AMP pins and housings are supported as well. Also, a special PP-1 splitter can be ordered and used to split an output into 2 parallel outputs (i.e. a single O3 output could be used for an ozonator and UV generator, O3 or CP.)

Depending on the specific model ordered, different numbers of AMP housings are supported. Note that in some instances, a specific output is in reality the low-speed output of the last unused 2-spnd accessory. For example, in an in.yt-7, if Pump #3 is a single-speed pump, the unused low speed output can be used as a circulation pump. Both accessories thus driven must be of the same voltage (120 V or 240 V.)

A floating connector is a connector that's not attached to a side bracket. Note that all optional PP-1 splitters are floating (the male end is attached though.)



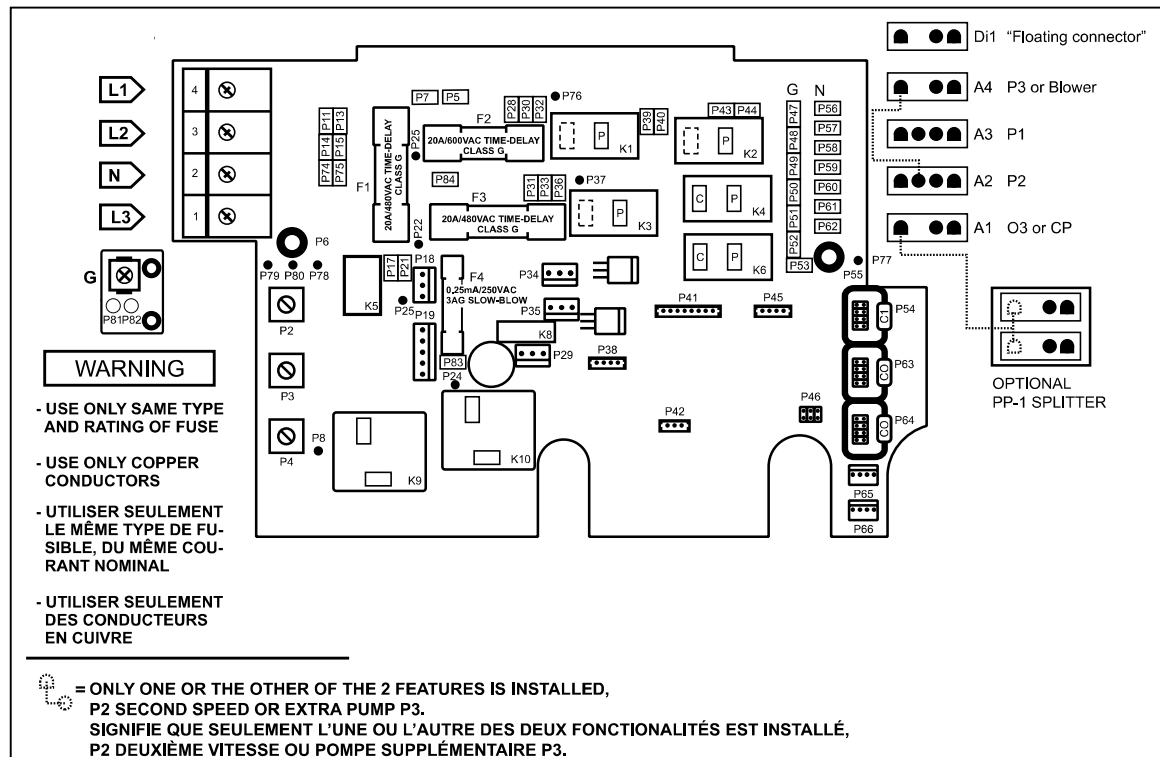


## High voltage accessory connections

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

### In.ye-ce 230 V

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 PCB and 230 V accessories are supported. Refer to the following tables for correct connections. Note that all female terminals must be correctly and completely seated on the PCB tab for proper current ratings.



| Direct output 1 (in.ye-5 ce only)<br>(Floating connector) |       | Pump 1 (A3)       |       | Pump 3 (A4) (in.yt-5 ce only) |       | Ozonator* (A1) |       |
|-----------------------------------------------------------|-------|-------------------|-------|-------------------------------|-------|----------------|-------|
| Voltage                                                   | 230 V | Voltage           | 230 V | Voltage                       | 230 V | Voltage        | 230 V |
| Green / ground                                            | P47   | Green / ground    | P49   | Green / ground                | P48   | Green / ground | P52   |
| Black / line                                              | P32   | Black / low speed | K2-P  | Black / low speed             | K6-P  | Black / line   | K4-P  |
| White / common                                            | P56   | Red / high-speed  | K1-P  | White / common                | P57   | White / common | P62   |
|                                                           |       | White / common    | P59   |                               |       |                |       |

| Pump 2 (A2)       |       | Circ. pump* (A1) |       | Blower (A4) (in.ye-5 ce only) |       | Light (12 V AC, 1A Max.) |     |
|-------------------|-------|------------------|-------|-------------------------------|-------|--------------------------|-----|
| Voltage           | 230 V | Voltage          | 230 V | Voltage                       | 230 V | Voltage                  |     |
| Green / ground    | P51   | Green / ground   | P52   | Green / ground                | P48   | Always on                | P34 |
| Black / low speed | K6-P  | Black / line     | K4-P  | Black / line                  | K6-P  | Relay                    | P35 |
| Red / high-speed  | K3-P  | White / common   | P62   | White / common                | P57   |                          |     |
| White / common    | P60   |                  |       |                               |       |                          |     |

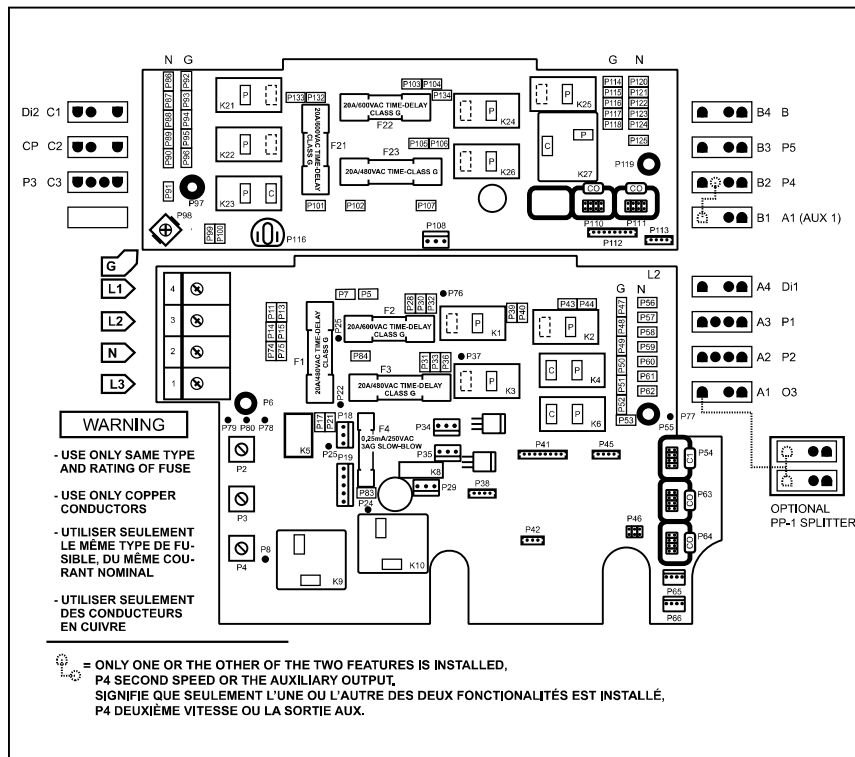
\* Ozonator and circ pump can be combined on the same output via the optional splitter PP1.

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



## in.yt-ce 230 V

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.yt PCB and 230 V accessories are supported. Refer to the following tables for correct connections. Note that all female terminals must be correctly and completely seated on the PCB tab for proper current ratings.



### Direct output 1 (A4)

| Voltage        | 230 V |
|----------------|-------|
| Green / ground | P47   |
| Black / line   | P32   |
| White / common | P56   |

### Direct output 2 (C1) (in.yt only)

| Voltage        | 230 V |
|----------------|-------|
| Green / ground | P92   |
| Black / line   | P133  |
| White / common | P86   |

### Auxiliary (B1) (in.yt-12 only)

| Voltage        | 230 V |
|----------------|-------|
| Green / ground | P118  |
| Black / line   | K26-P |
| White / common | P124  |

| Pump 1 (A3)       |       |
|-------------------|-------|
| Voltage           | 230 V |
| Green / ground    | P49   |
| Black / low speed | K2-P  |
| Red / high-speed  | K1-P  |
| White / common    | P58   |

| Pump 3 (C3) (in.yt-7 and in.yt-12) |       |
|------------------------------------|-------|
| Voltage                            | 230 V |
| Green / ground                     | P94   |
| Black / low speed                  | K22-P |
| Red / high-speed                   | K21-P |
| White / common                     | P88   |

| Pump 5 (B3) (in.yt-12 only) |       |
|-----------------------------|-------|
| Voltage                     | 230 V |
| Green / ground              | P115  |
| Black / line                | K24-P |
| White / common              | P121  |

| Ozonator (A1)  |       |
|----------------|-------|
| Voltage        | 230 V |
| Green / ground | P52   |
| Black / line   | K4-P  |
| White / common | P61   |

| Pump 2 (A2)       |       |
|-------------------|-------|
| Voltage           | 230 V |
| Green / ground    | P51   |
| Black / low speed | K6-P  |
| Red / high-speed  | K3-P  |
| White / common    | P60   |

| Pump 4 (B2) (in.yt-12 only) |       |
|-----------------------------|-------|
| Voltage                     | 230 V |
| Green / ground              | P118  |
| Black / low speed           | K26-P |
| Red / high-speed            | K27-P |
| White / common              | P123  |

| Circ. pump (C2) (in.yt-7 and in.yt-12) |       |
|----------------------------------------|-------|
| Voltage                                | 230 V |
| Green / ground                         | P93   |
| Black / line                           | K23-P |
| White / common                         | P87   |

| Blower (B4) (in.yt-12 only) |       |
|-----------------------------|-------|
| Voltage                     | 230 V |
| Green / ground              | P114  |
| Black / line                | K25-P |
| White / common              | P120  |

### Light (12 V AC, 1A Max.)

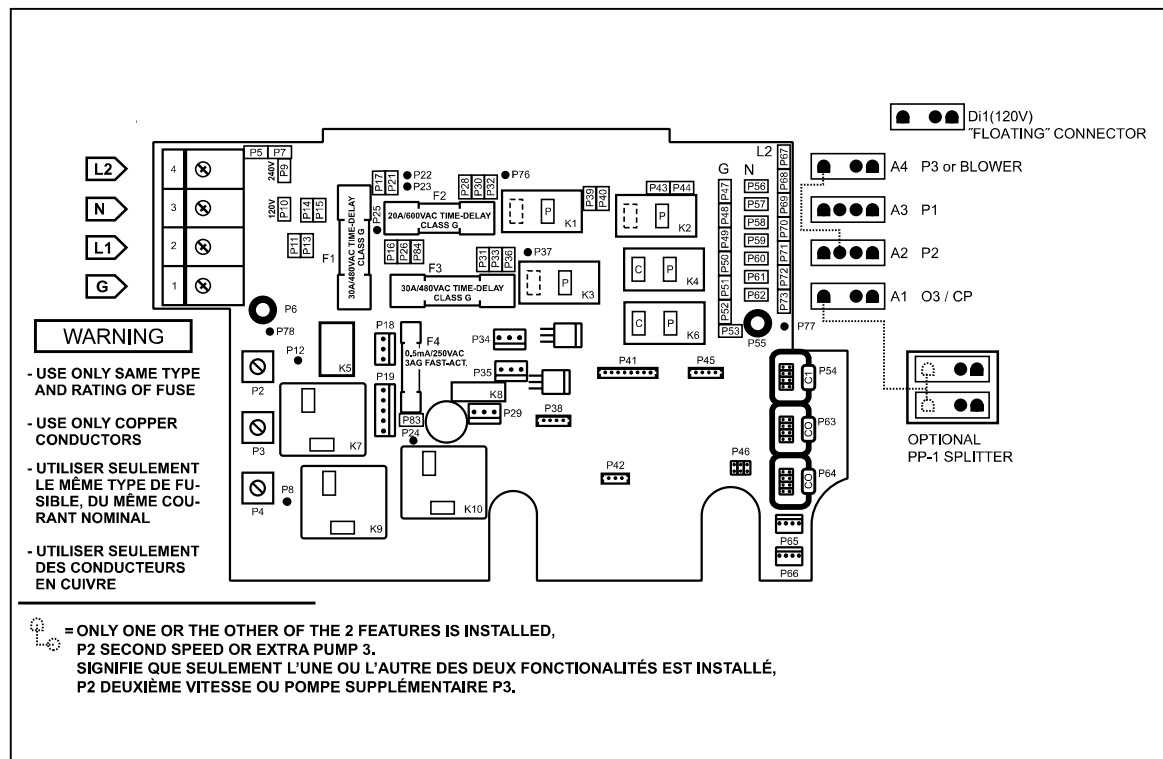
| Voltage   |     |
|-----------|-----|
| Always on | P34 |
| Relay     | P35 |

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



## in.ye 120 V and 240 V

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 terminals 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 | 240V |
|----------------|-------|------|
| Green / ground | P47   | P47  |
| Black / line   | P32   | P32  |
| White / common | P56   | P67  |

Pump 1 (A3)

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

Ozonator\* (A1)

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

Pump 2 (A2)

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

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

| Voltage        | 120 V | 240V |
|----------------|-------|------|
| 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 |

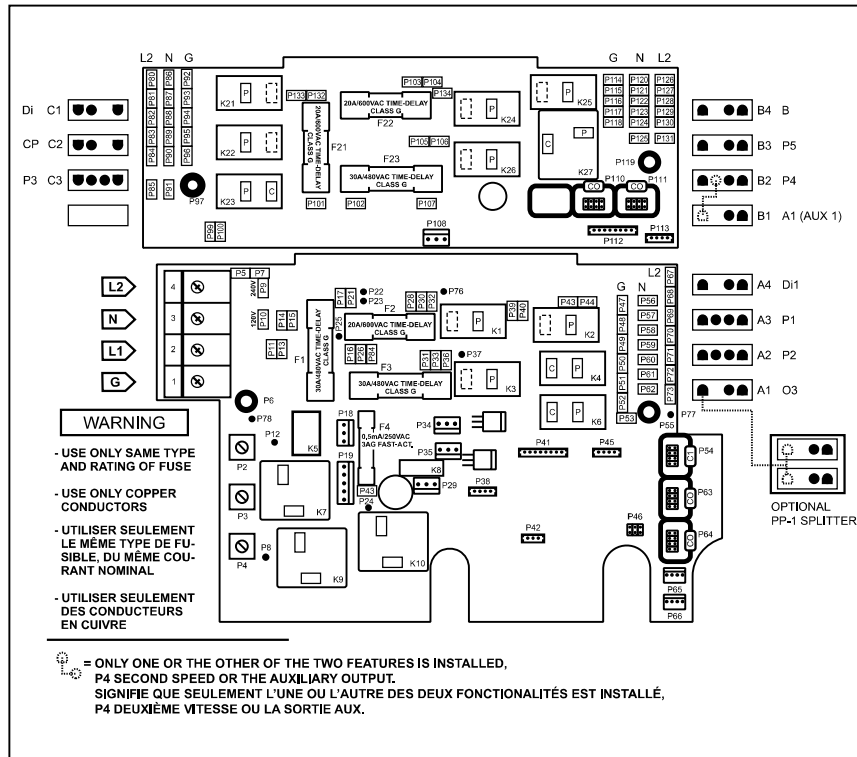
\* Ozonator and circ pump can be combined on the same output via the optional splitter PP1.

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



## in.yt 120 V and 240 V

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 spa pack PCB, 120 V and 240 V accessories are supported. Refer to the following tables for correct connections. Note that all female terminals must be correctly and completely seated on the PCB tab for proper current ratings.



### Direct output 1 (A4)

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

### Direct output 2 (C1) (in.yt only)

| Voltage        | 120V | 240V |
|----------------|------|------|
| Green / ground | P92  | P92  |
| Black / line   | P133 | P133 |
| White / common | P86  | P80  |

### Auxiliary (B1) (in.yt-12 only)

| Voltage        | 120V  | 240V  |
|----------------|-------|-------|
| Green / ground | P118  | P118  |
| Black / line   | K26-P | K26-P |
| White / common | P124  | P130  |

### Pump 1 (A3)

| Voltage           | 120 V | 240 V |
|-------------------|-------|-------|
| Green / ground    | P49   | P49   |
| Black / low speed | K2-P  | K2-P  |
| Red / high-speed  | K4-P  | K4-P  |
| White / common    | P58   | P69   |

### Pump 3 (C3) (in.yt-7 and in.yt-12)

| Voltage           | 120 V | 240 V |
|-------------------|-------|-------|
| Green / ground    | P94   | P94   |
| Black / low speed | K22-P | K22-P |
| Red / high-speed  | K21-P | K21-P |
| White / common    | P88   | P82   |

### Pump 5 (B3) (in.yt-12 only)

| Voltage        | 120 V | 240 V |
|----------------|-------|-------|
| Green / ground | P115  | P115  |
| Black / line   | K24-P | K24-P |
| White / common | P121  | P127  |

### Ozonator (A1)

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

### 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   |

### Pump 4 (B2) (in.yt-12 only)

| Voltage           | 120 V | 240 V |
|-------------------|-------|-------|
| Green / ground    | P118  | P118  |
| Black / low speed | K26-P | K26-P |
| Red / high-speed  | K27-P | K27-P |
| White / common    | P123  | P129  |

### Circ. pump (C2) (in.yt-7 and in.yt-12)

| Voltage        | 120 V | 240 V |
|----------------|-------|-------|
| Green / ground | P93   | P93   |
| Black / line   | K23-P | K23-P |
| White / common | P87   | P81   |

### Blower (B4) (in.yt-12 only)

| Voltage        | 120 V | 240 V |
|----------------|-------|-------|
| Green / ground | P114  | P114  |
| Black / line   | K25-P | K25-P |
| White / common | P120  | P126  |

### Light (12 V AC, 1A Max.)

| Voltage   |     |
|-----------|-----|
| Always on | P34 |
| Relay     | P35 |

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



## In.k200 keypad overview



### in.k200

Compact series of entry-level keypads that gives complete control to wet fingers!

The in.k200 is a compact keypad designed to be used with Aquare's Y Series spa systems.

This new series of entry-level keypads comes in a waterproof plastic enclosure and is available in single pump, dual pump; dual pump/blower, or pump/blower configurations.

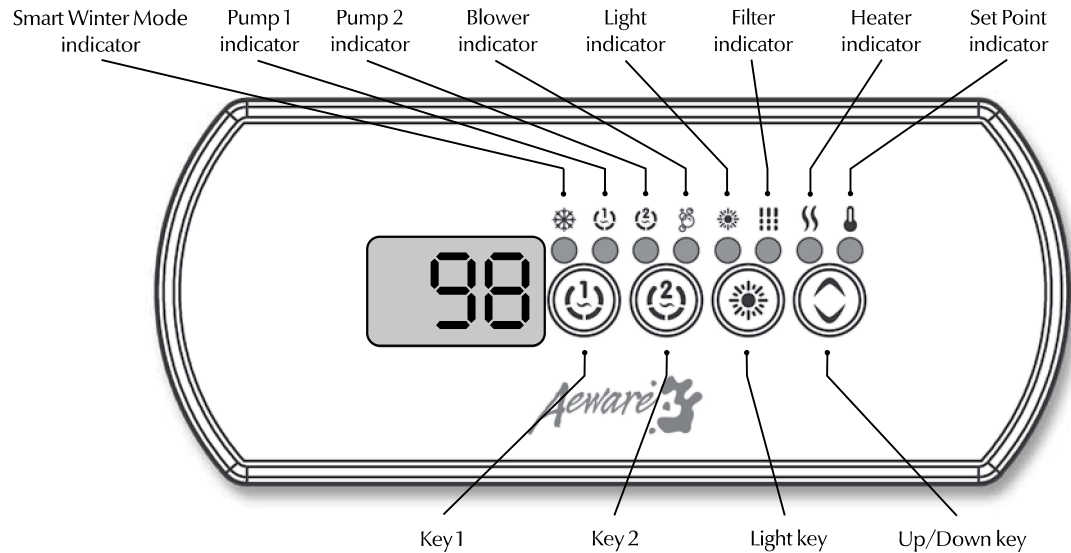
Easy to install, in.k200 comes with an in.link connector.

*Note: The Y Series spa control is also compatible with the following keypads: in.k400, in.k450, in.k600 (streamlined). In.k19, in.k35 and in.k8 (with in.link connector).*

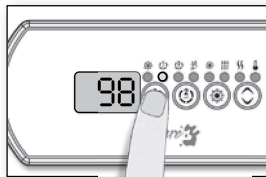
*Note: The following instructions are generic and provide a quick overview of the main functions. Please refer to your own QRC for specific functions.*



## Function description



## Instructions

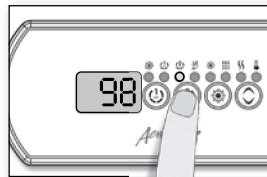


### Key 1

Press **Key 1** 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 a predetermined period of time, unless it has been manually deactivated.

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



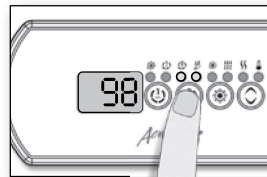
### Key 2 (single pump or blower)

Press **Key 2** to turn Pump 2 or Blower on. Press a second time to turn pump or blower off.

A built-in timer automatically turns pump off after a predetermined period of time, unless it has been manually deactivated.

The *Pump 2* and/or *Blower* indicator lights up when the corresponding output is on.

*Note: with dual-speed pump, the indicator will flash when Pump 2 is on at low speed.*

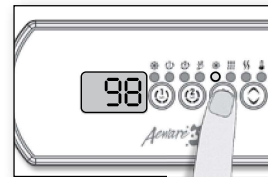


### Key 2 (single pump & blower)

Press **Key 2** to turn Pump 2 on at high speed. Pressing a second time turns blower on. A third press turns Pump 2 off but leaves blower on. A final press turns blower off.

A built-in timer automatically turns pump/blower off after a predetermined period of time, unless it has been manually deactivated.

The *Pump 2* and/or *Blower* indicator lights up when the corresponding output is on.



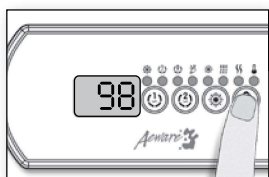
### Light key

Press **Light key** to turn light on. Press **Light key** a second time to turn light off.

A built-in timer automatically turns light off after a predetermined period of time, unless it has been manually deactivated.

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

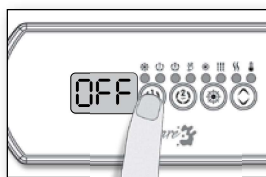




### Up/Down key

Use **Up** or **Down** key to set desired water temperature. The temperature setting will be displayed for 5 seconds to confirm your new selection.

The *Set Point* indicator indicates that the display shows the desired temperature, NOT the current water temperature!



### Off Mode

This mode allows you to stop all outputs for 30 minutes to perform a quick spa maintenance.

Press and hold **Key 1** for 5 sec. to activate the Off mode. Quick press **Key 1** to reactivate the system before the expiration of the 30 minute delay.

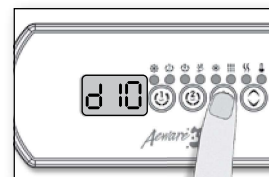
While the Off mode is engaged, the display will toggle between **OFF** and the water temperature.

### Programming the system

Depending on system configuration the system performs either purge cycles or filter cycles.

#### Programming filter cycles

To program the filter cycles, you must enter the duration and frequency. During a filter cycle, pumps & blower run at high speed for one minute to purge the plumbing. Pump 1 or CP then runs at low speed for the remainder of the cycle.



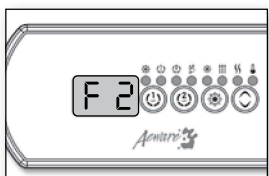
### Setting filter cycle duration

Press and hold **Prog** or **Light** key until the display shows **dx**, with "xx" representing the duration in hours.

Use **Up** or **Down** key to change setting.

0 = no filtration  
24 = continuous filtration

*Note: it's not recommended to set this to "0".*



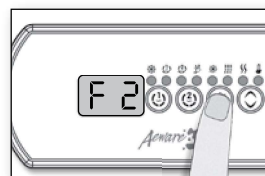
### Filter cycle frequency

Press **Prog** or **Light** key again. The display will show **Fx**, with "x" representing the number of filter cycles per day (up to 4).

Use **Up** or **Down** key to change setting.

When the desired setting is displayed, press **Light** key to confirm. A filter cycle will start immediately.

The *Filter* indicator lights up when a filter cycle is on.



### Programming purge cycles

To program the purge cycles, you must select the frequency. During a purge cycle, all pumps and the blower run for one minute.

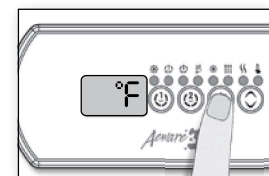
### Purge cycle frequency

Press and hold **Light** key until the display shows **Fx**, with "x" representing the number of purge cycles per day (up to 4).

Use **Up** or **Down** key to change setting.

When the desired setting is displayed, press **Light** key to confirm. A purge cycle will start immediately.

The *Filter* indicator lights up when a purge cycle is on.



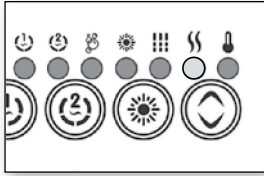
### Setting the temperature display units

Quick press **Light** key again. The display will show either °F or °C.

Use **Up** or **Down** key to change units.

Press **Light** key a last time to go back to normal mode.

°F = Fahrenheit  
°C = Celsius



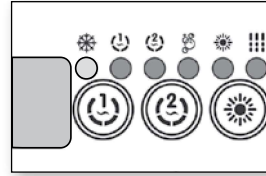
### Water temperature regulation

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.

The system verifies periodically that all parameters are within normal range.

If the readings received from the system are not valid, blanks ( - - ) will be displayed until normal readings have been successfully found.

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.

### Cool down

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 certain amount of time to ensure adequate cooling of the heating element, prolonging its life.

The *Heater* icon flashes during this time.

### Typical settings

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| Adjustable Regulating Set Point: | 59°F (15°C) to 104°F (40°C)             |
| Factory Default Set Point:       | Typical 95°F (35°C) / Max 100°F (38°C)  |
| Filter Cycle Duration:           | 0 to 24 hrs / Factory set at 2hrs       |
| Filter Cycle Frequency:          | 1 to 4 times a day / Factory set at 2   |
| Filter Cycle Start:              | 00:00 to 23:59 / Factory set at 12:00   |
| Pump Runtime:                    | 1 to 255 min. / Factory set at 20 min.  |
| Light Timeout:                   | 1 to 255 min. / Factory set at 120 min. |

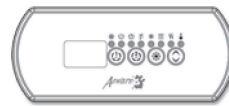
### Keypads available for the Y Series:



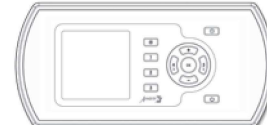
in.k19



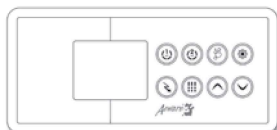
in.k35



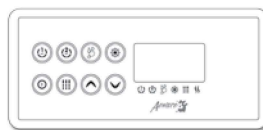
in.k200 (LED display, 4 keys, 8 light indicators)



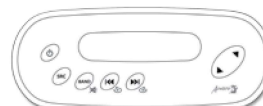
in.k600 (streamlined)



in.k4



in.k8



in.k450 (LCD display, 6 keys, 10 function icons)

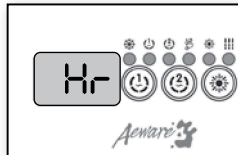


## Y Series error codes

### Y Series error codes summary

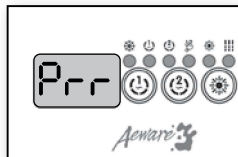
Error codes indicate a failure condition or a problem which needs to be corrected to ensure proper functioning of the system. Both the error code and the water temperature are alternatively displayed.

All errors codes will be displayed on the keypad display.



#### Hr

An internal hardware error has been detected in the spa pack.



#### Prr

The Prr error message indicates a problem with the regulation probe. The system is constantly verifying if temperature probe reading is within normal limits.



#### HL

Water temperature at the heater has reached 119°F.  
Do not enter spa water!



#### FLO

The system did not detect any water flow while the main pump was running.



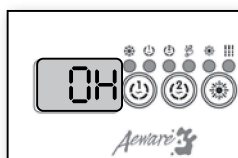
#### UPL

No low-level configuration software has been downloaded into the system.



#### AOH

Temperature inside the spa skirt is too high, causing the internal temperature in the spa pack to go above normal limits.



#### OH

Water temperature in the spa has reached 108°F.  
Do not enter spa water!

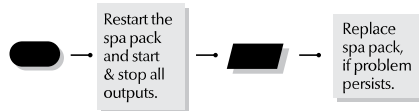


## Hr error message / flow chart &amp; step-by-step

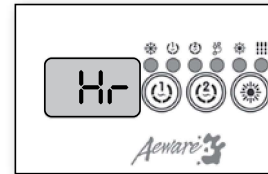


An internal hardware error has been detected

## Flow chart



## Step-by-Step



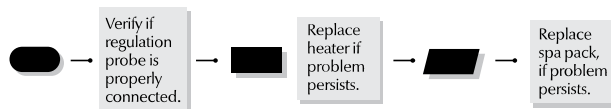
- Restart the spa pack and start & stop all pumps and blower.
- If error reappears, replace the spa pack.

## Prr error message / flow chart &amp; step-by-step

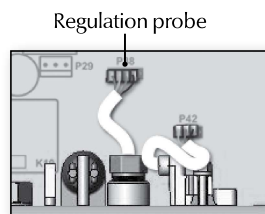
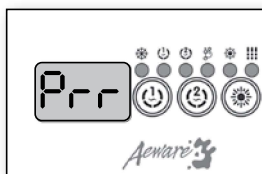


Regulation probe issue

## 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.

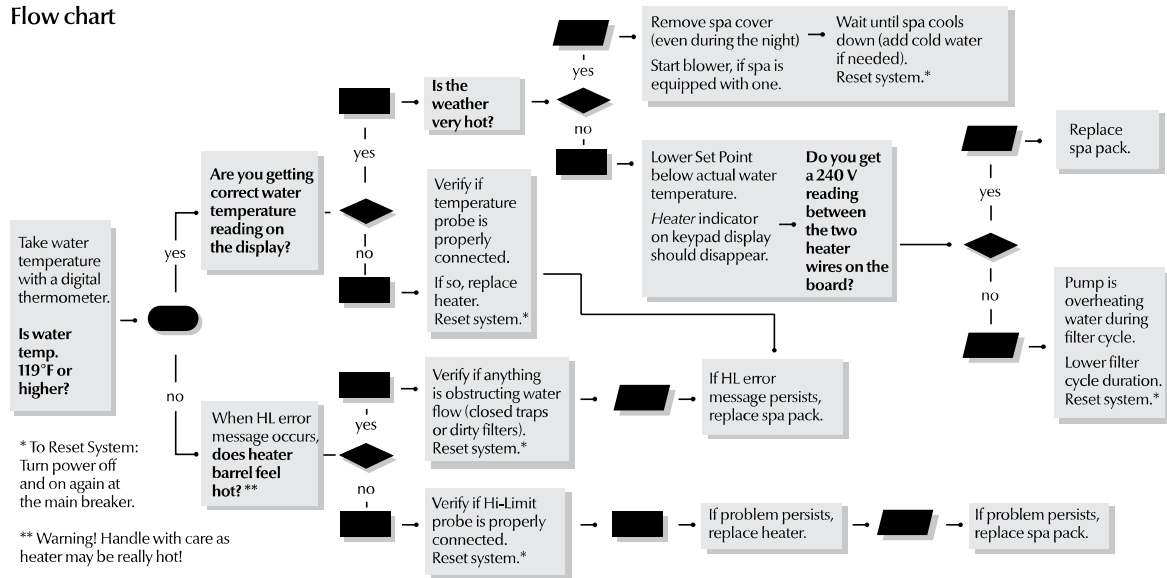


## HL error message / flow chart & step-by-step

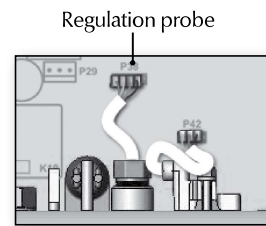
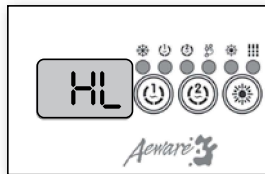


The system has shut down because the temperature at the heater has reached 119°F (48°C).

### Flow chart



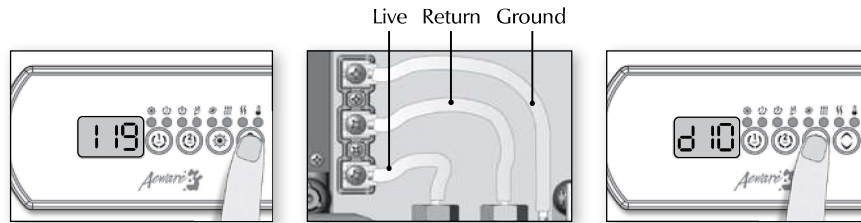
### Step-by-Step



### 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 **Light** key again. The filter cycle will start immediately.



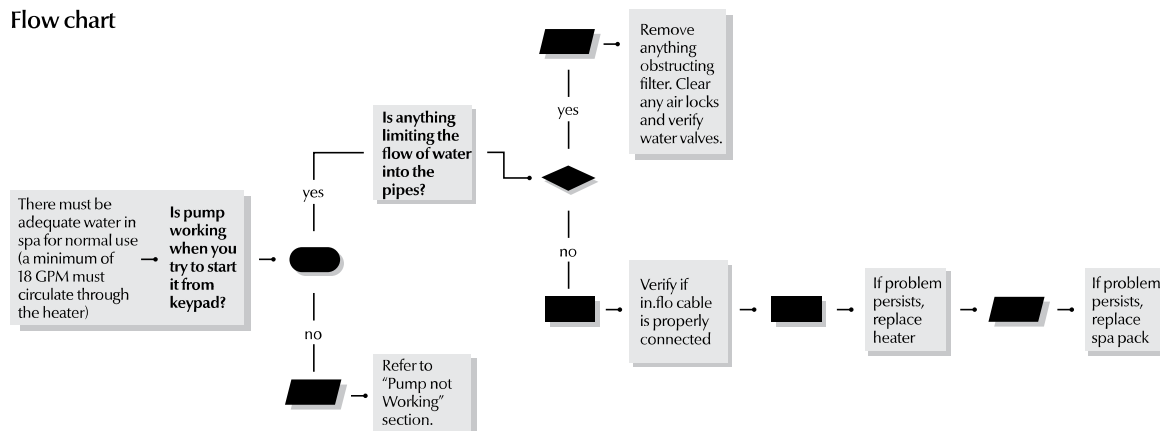
## FLO & UPL error message / flow chart & step-by-step

**FLO**

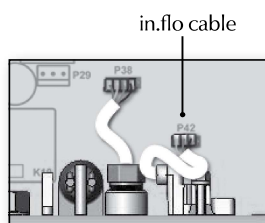
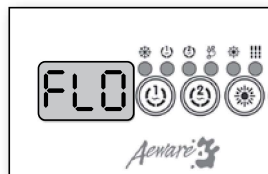
The system did not detect any water flow while the primary pump was running. Follow the troubleshooting flow chart below to identify the problem:

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


**UPL**

No low-level configuration software in system!

### 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 are no air locks (or that no object obstructs the passage of water in the heater channel). Pumps may make strange noises. Follow air lock procedure to clear them.
- 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.

- 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.*

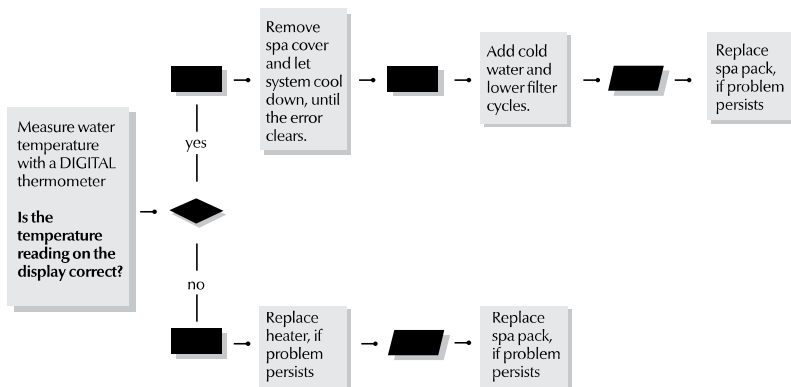


## OH error message / flow chart &amp; step-by-step

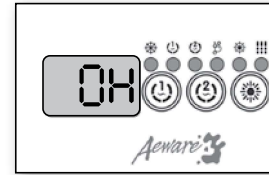


Water temp. in the spa has reached 108°F

## 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.



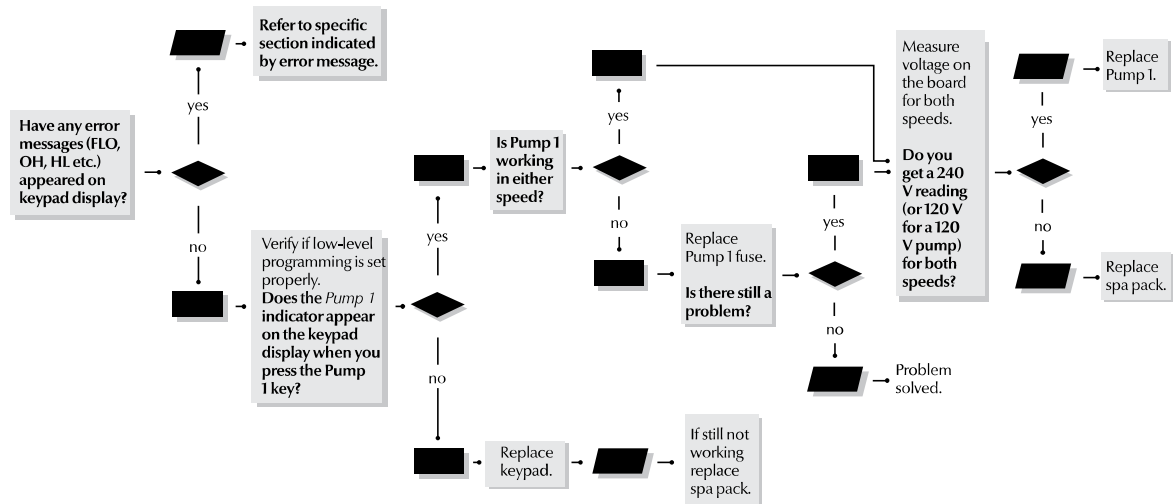


## Troubleshooting

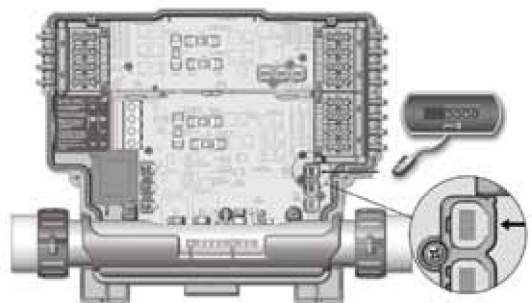
### Pump 1 doesn't work / flow chart & step-by-step

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

#### Flow chart

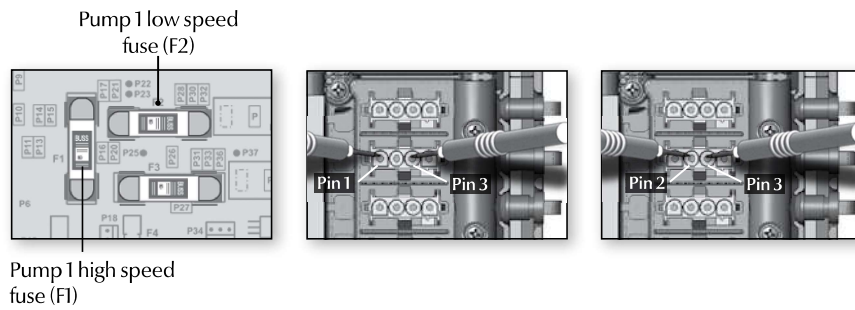


#### Step-by-Step



#### 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.

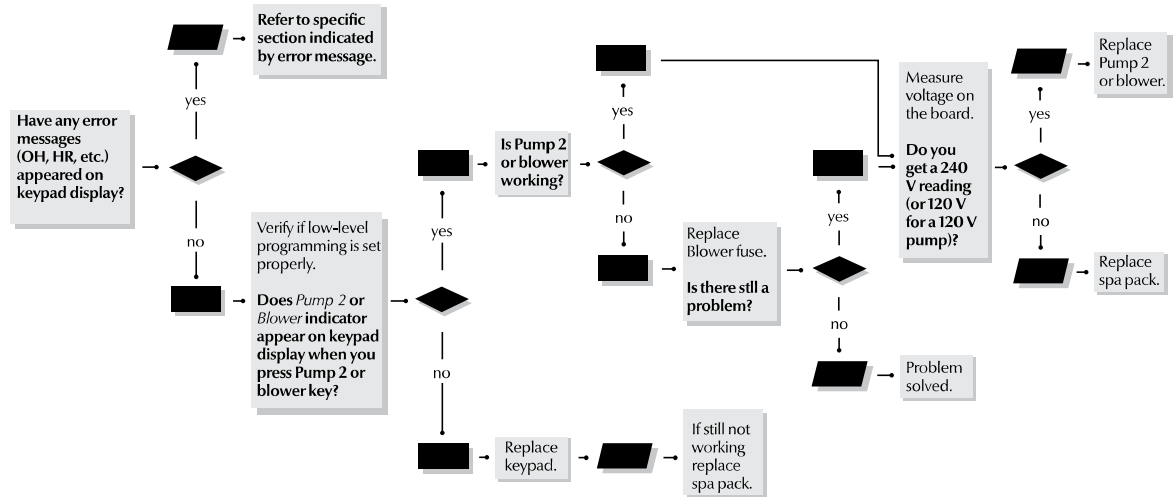


- If Pump 1 does not work in either speed, replace appropriate Pump 1 fuse.
  - If replacing the fuse is not effective or if Pump 1 works in only one speed, take voltage reading on the corresponding in.link connector.
- Turn Pump 1 to **high speed** and take voltage reading between:  
Pin 1 & Pin 3  
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.

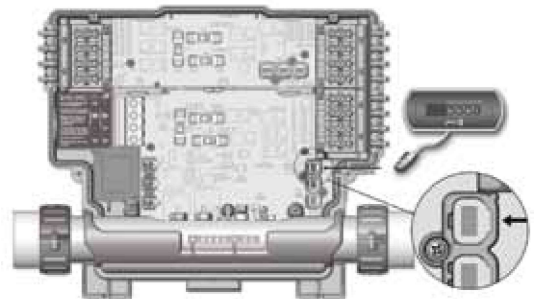
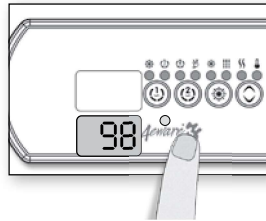


## Pump 2 or blower doesn't work / flow chart & step-by-step

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).