

WIRING DIAGRAM - W2000, W2001

W2000, W2001



OVERVIEW

Probe connectors
(heat.wav's low voltage
cable or regulation probe
and overheat captor
model-re)

Light output (12 V DC)

Communication link
(in.touch or in.stik)

Main keypad
connector

Power output drivers

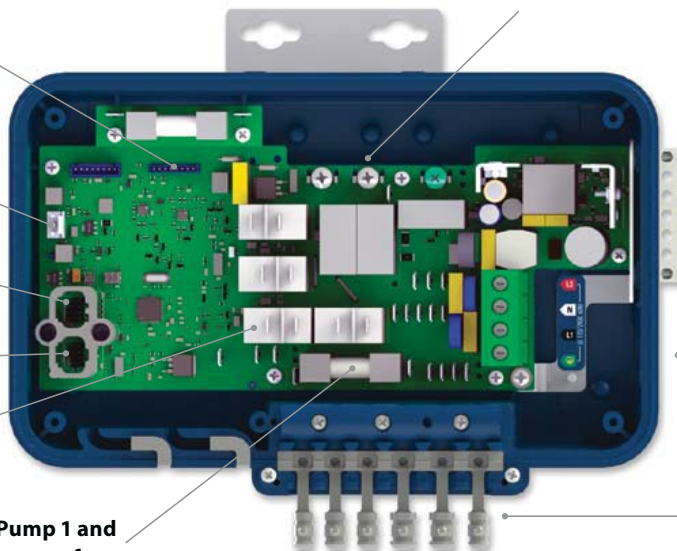
Pump 1 and
accessory fuse

heat.wav power con-
nection

Bonding lugs

Main power entry
connection

Watertight strain
relief system



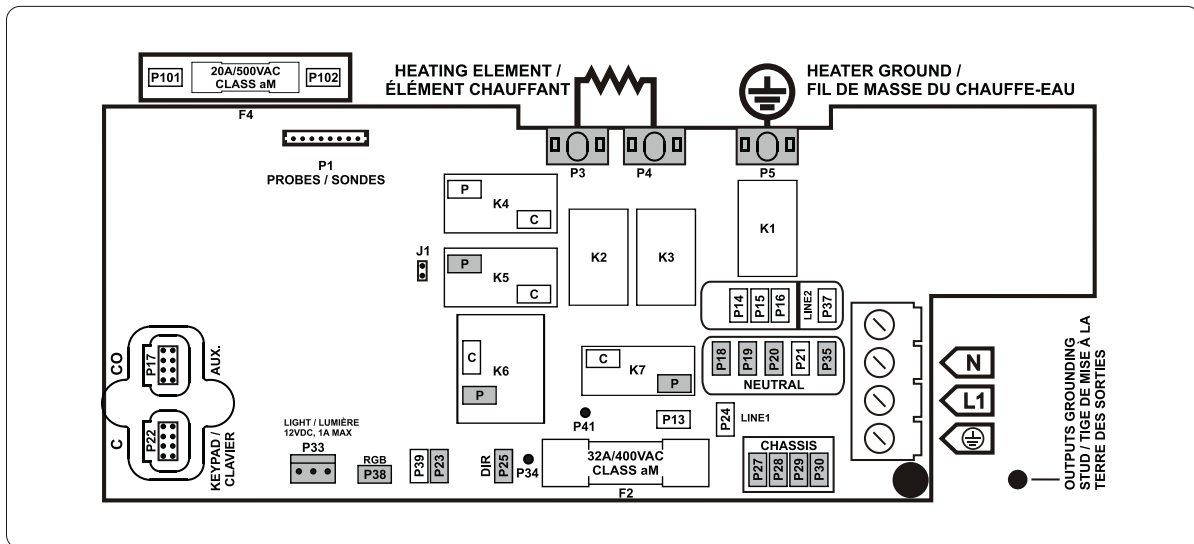
WIRING DIAGRAM - W2000, W2001

CONNECTIONS

CONNECTING HIGH VOLTAGE ACCESSORIES: NORTH AMERICAN MODEL IN.YJ

Wires to connect high voltage accessories must have 0.25" quick-connect terminals.

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.yj 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.



Make sure all accessories are linked to the bonding lug connector located on the side of the hot tub pack.

DIRECT OUTPUT

Voltage 120 V 240 V

Green / ground	P27	P27
Black / line	P25	P25
White / common	P18	P14

DIRECT OUTPUT

Voltage 120 V 240 V

Green / ground	P28	P28
Black / low speed	K6-P	K6-P
Red / high-speed	K7-P	K7-P
White / common	P19	P15

PUMP 2 (IN.YJ-3 ONLY)

Voltage 120 V 240 V

Green / ground	P29	P29
Black / low speed	K5-P	K5-P
White / common	P20	P16

OZONE

(WORKING WITH PUMP 1 LOW SPEED)
Voltage 120 V 240 V

Green / ground	P30	P30
Black / line	P23	P23
White / common	P35	P37

LIGHT (12 V DC, 1A)*

Switch P33

HEAT.WAV-YJ

Green / ground	P5
Black / line	P3
White / common	P4

RGB LEDs IN.LU.ME (1A)*

Switch P38

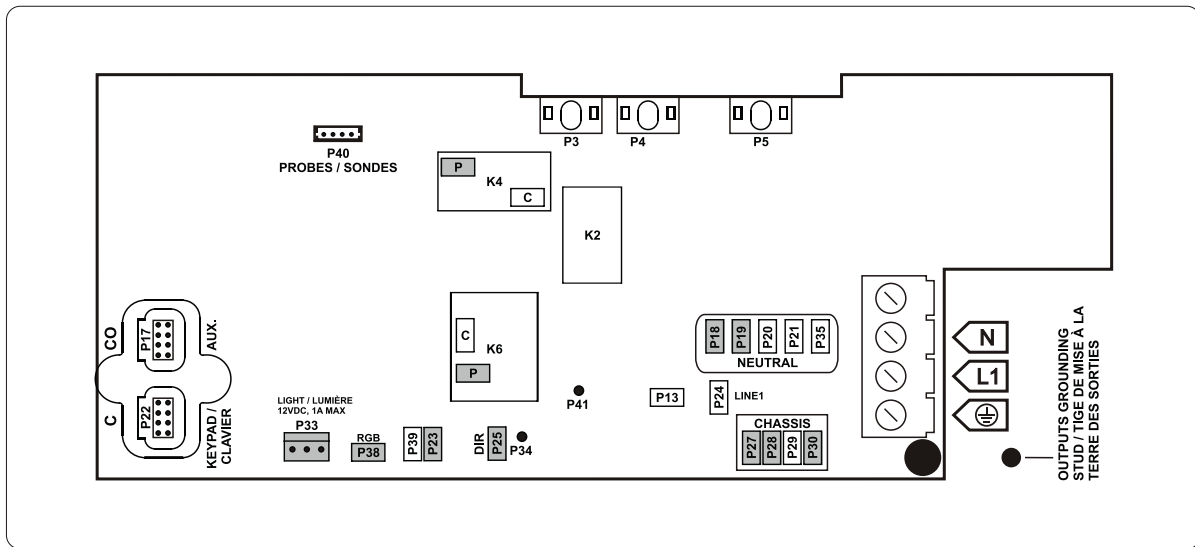
* Combination of both outputs is limited to 1A.
This table shows typical connections. OEMs may have a different connection scheme.

WIRING DIAGRAM - W2000, W2001

CONNECTIONS

CONNECTING HIGH VOLTAGE ACCESSORIES: NORTH AMERICAN HEAT RECOVERY MODEL IN.YJ-RE

These tabs require high-voltage accessories to have straight, non-insulated, female quick-connect terminals for all connections, including ground. 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.



Make sure all accessories are linked to the bonding lug connector located on the side of the hot tub pack.

DIRECT OUTPUT

Voltage	120 V
Green / ground	P27
Black / line	P25
White / common	P18

DIRECT OUTPUT

Voltage	120 V
Green / ground	P28
Black / low speed	K6-P
Red / high-speed	K4-P
White / common	P19

OZONATEUR

Voltage	120 V
Green / ground	P30
Black / line	P23
White / common	P35

Light (12 V DC, 1A)*

Switch	P33
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RGB LEDs IN.LU.ME (1A)*

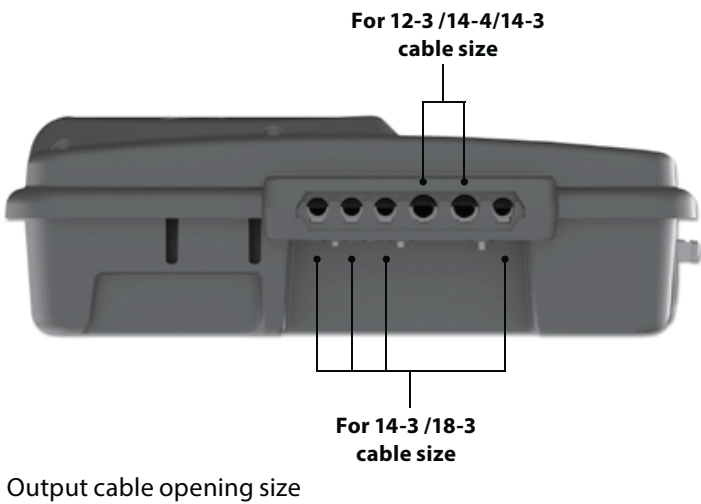
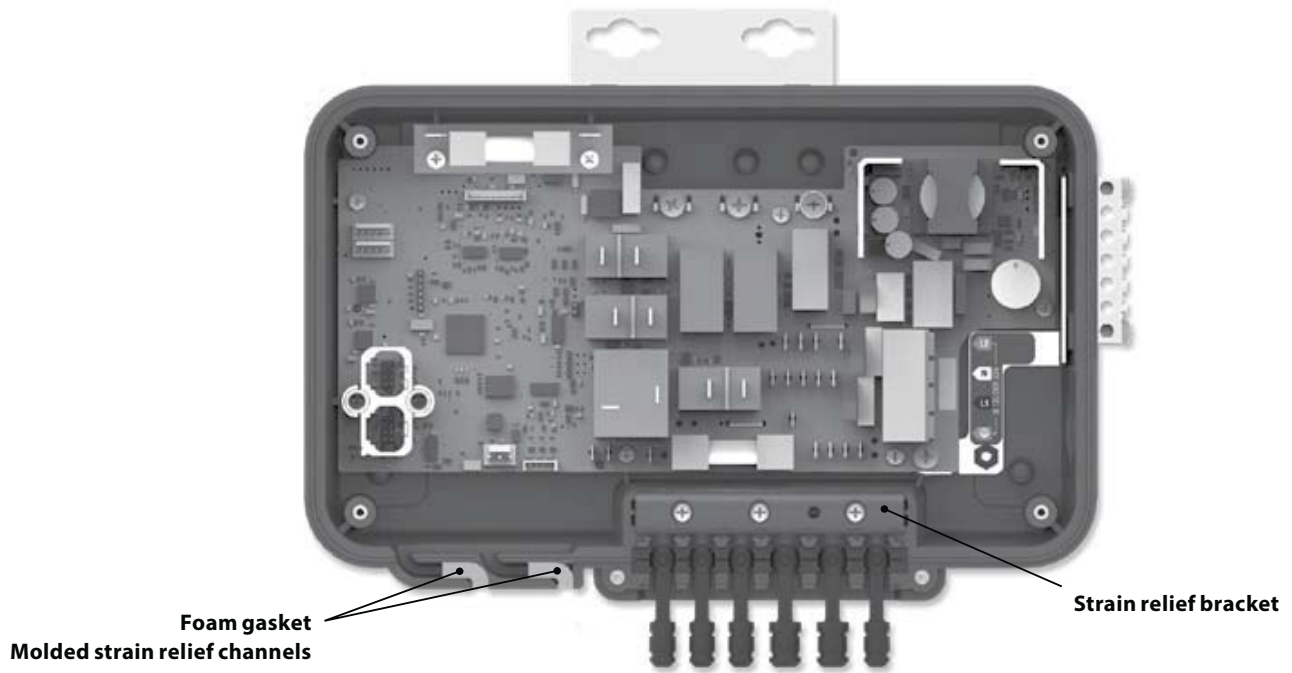
Switch	P38
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* Combination of both outputs is limited to 1A.
This table shows typical connections. OEMs may have a different connection scheme.

WIRING DIAGRAM - W2000, W2001

CONNECTIONS

COMPLETING THE INSTALLATION



Output cable opening size

WIRING DIAGRAM - W2000, W2001

ELECTRICAL WIRING

ELECTRICAL WIRING: ALL MODELS



WARNING!

Disconnect power before starting electrical work. Wiring must be completed by a qualified electrician and must be done in accordance with the local electrical code.

Do not use a wire gauge bigger than 8 AWG.

To complete the electrical connections of the in.yj control system you will need a Phillips screwdriver and a flat-head screwdriver.

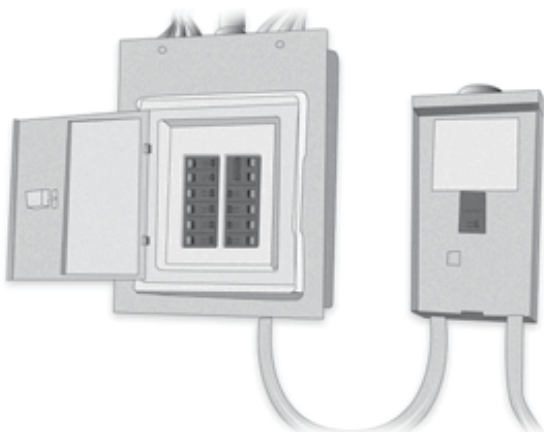
Remove the screws from the system control lid and remove it.

Remove 5 1/2" (142 mm) of cable insulation.

Strip away 1/2" (15 mm) of insulation from each wire.

Pull the cable through the cutout of the box and secure it with a 3/4" NPT strain relief* (hole diameter 1.09" {27.6 mm}). Ensure that the NPT strain relief clamps around the outer sheath of the cable.

*** For CE/AUS/NZ use an IEC certified plastic bushing that will maintain the IPX5 rating.**



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.yj terminal block is essential!

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

Disposal of the product



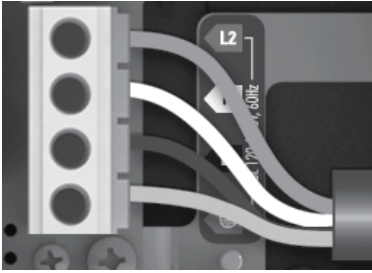
The appliance (or the product) must be disposed of separately in accordance with the local waste disposal legislation in force.

WIRING DIAGRAM - W2000, W2001

ELECTRICAL WIRING

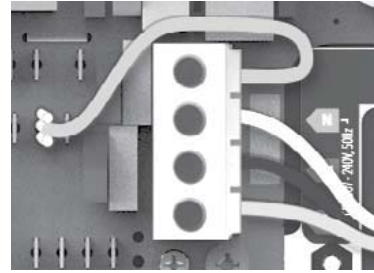
ELECTRICAL WIRING: NORTH AMERICAN MODEL

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



120 V (3 WIRES)

DO NOT REMOVE THE BROWN WIRE. Insert each wire into the appropriate socket of the main entry terminal block according to the color code indicated on the sticker. Use a flat screwdriver to tighten the screws on the terminal.



240 V (4 WIRES)

Remove the brown wire and insert each wire into the appropriate socket of the main entry terminal block according to the color code indicated on the sticker. Use a flat screwdriver to tighten the screws on the terminal.

After making sure wires are securely connected, push them back into the box and replace the cover. Do not over tighten cover screws (torque to 8 in.lb max {0.9 N.m.}). Connect the bonding conductor to the bonding lug on the side of the hot tub pack (a grounded electrode conductor should be used to connect the equipment grounding conductors).

WIRING DIAGRAM - W3000

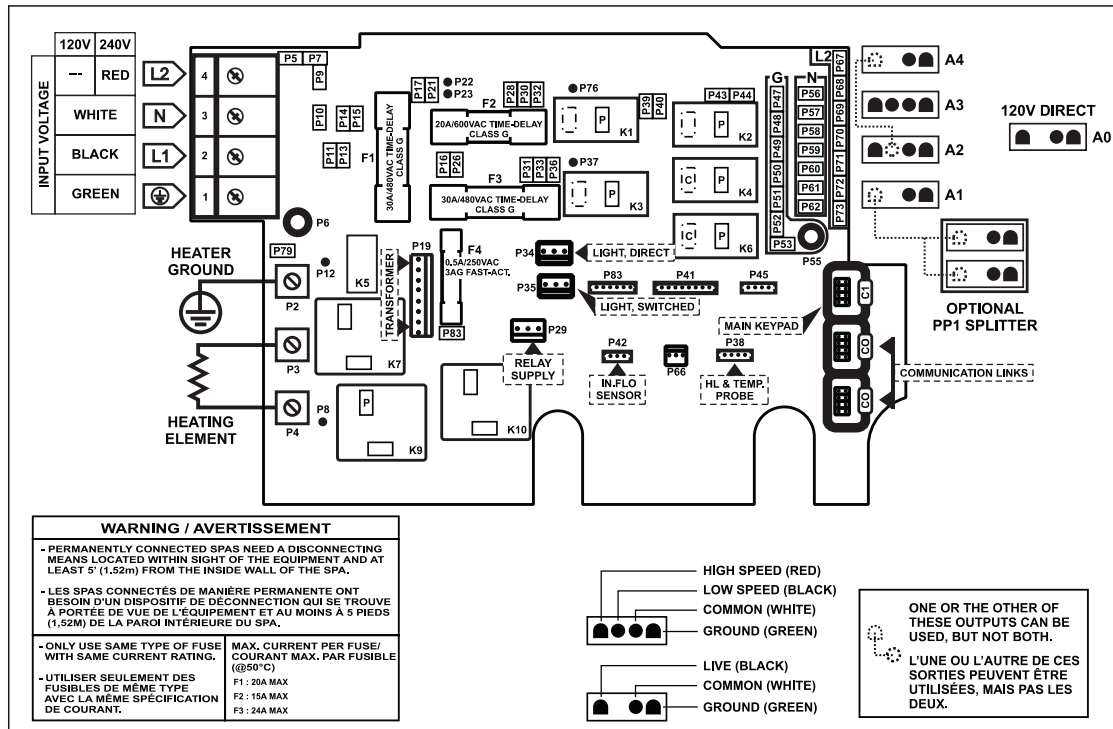
CONNECTIONS

CONNECTING HIGH VOLTAGE ACCESSORIES: ALL MODELS

Two options are available with Y Series hot tub packs for connecting high voltage accessories: 0.250" quick-connect terminals, or AMP connectors conform to industry standards.

CONNECTING HIGH VOLTAGE ACCESSORIES: NORTH AMERICAN MODEL IN.YE

For the connection to the 0.250 inch terminals, the high voltage accessories must be provided with female quick connect terminals, straight and non-insulated for all types of connections, including the ground. Accessories of 120 V or 240 V may be connected to the corresponding terminals of the printed circuit of the in.ye. Refer to the following tables for correct connections. Note that all female terminals must be correctly and completely seated on the printed circuit terminals for proper current ratings.



DIRECT OUTPUT 1

(A0 / Floating connector) (in.ye-5 only)

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
Red / high speed	K4-P	K4-P
White / common	P58	P69

PUMP 2 (A2)

(in.ye-5 only)

Voltage	120 V	240 V
Green / ground	P50	P50
Black / low speed	K6-P	K6-P
Red / high speed	K3-P	K3-P
White / common	P59	P70

PUMP 3 (A4)

(in.ye-5 only)

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

CIRCULATION PUMP* (A1)

Voltage	120 V	240 V
Green / ground	P51	P51
Black / line	K1-P	K1-P
White / common	P60	P71

PUMP 2 (A2)

(in.ye-3 only)

Voltage	120 V	240 V
Green / ground	P50	P50
Black / low speed	K2-P	K2-P
White / common	P59	P70

LIGHT (12 V AC, 1A MAX.)

Always on	P34
Relay	P35

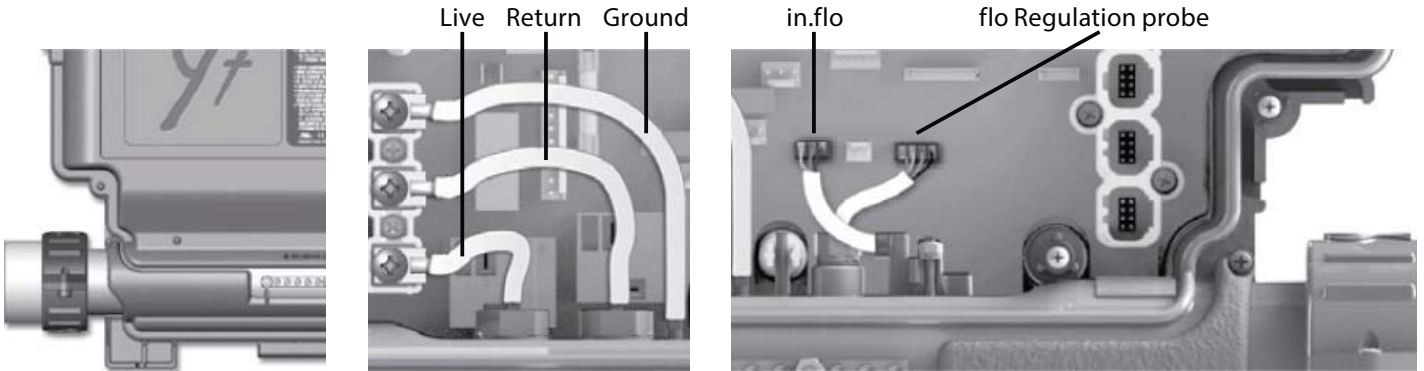
* Ozonator and circulation pump can be combined on the same output via the optional splitter PP1.

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

WIRING DIAGRAM - W3000

CONNECTIONS

HEAT.WAV WATER HEATER CONNECTIONS



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. (120 V conversion is available on North American in.ye-3 models only).

The heat.wav heater is also offered in 240 V / 5,5 kW or 240 V / 2 kW versions.

heat.wav specification summary:

- Supports 120 V or 240 V
- Incoloy® heater element
- Protected by external breaker (not fused)*

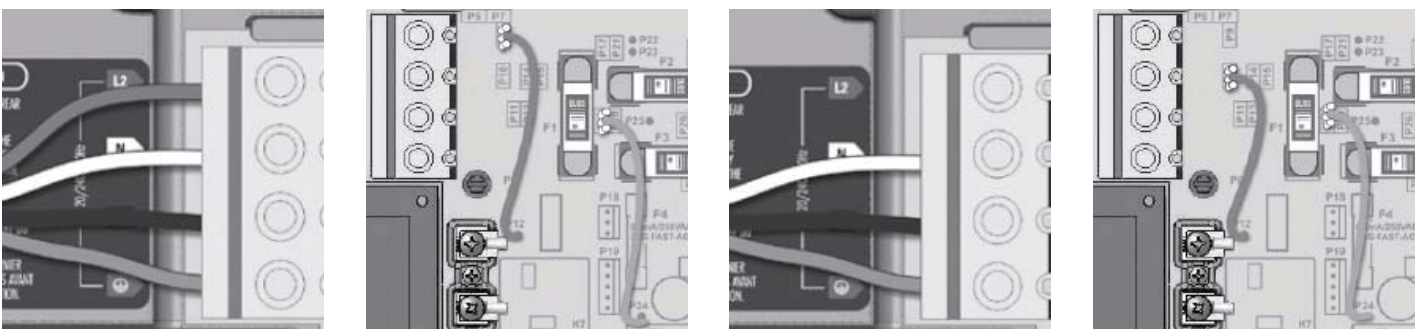
* Note: European models are 230-240 V only and are fuse protected.

Part numbers:

9917-101959 (cable for conversion)

9920-101449 (5.5 kW heat.wav heater)

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 120 V heaters (1 kW)

BROWN wire must be correctly connected between P12 and P10.

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 240 V heaters (North American installations only).

BROWN wire must be correctly connected between P12 and P9.

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

BREAKER SETTING

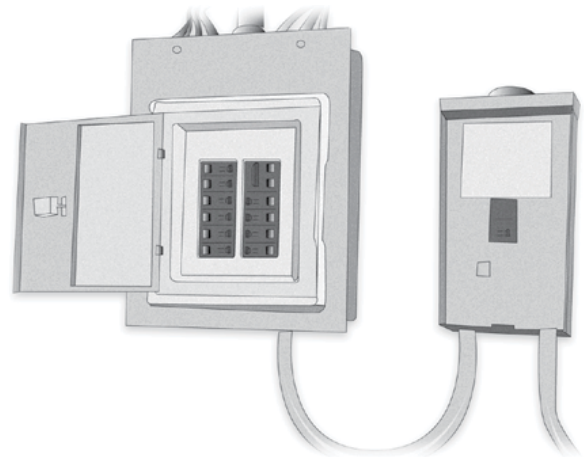
POWER UP AND BREAKER SETTING

IMPORTANT Please read the following before starting the device.

Verify that all accessories are linked to the ground lug and connected to the to the control system.

A minimum flow of 68 LPM (18 GPM) is required. Make sure that all valves are open in the hot tub plumbing and that the water flow is sufficient between the main pump and the water heater.

Turn on the breaker.



IN.FLO DRY-FIRE PROTECTION

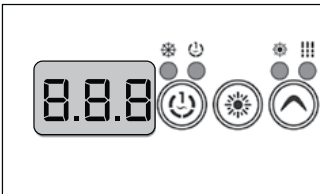
At start up, the in.flo's detector verifies the water flow according to the following sequence:

The Pump 1 or the circulation pump runs for a period of 2 to 5 minutes.

The display will show "--" during the flow verification. After this time, the system confirms if flow is adequate or not.

If the flow is sufficient, the temperature of the water is displayed on the keypad screen. When the water has reached the consigned temperature plus 0.45°C (0.8°F), the water heater turns off.

DISPLAY SEQUENCE AT START UP (EVERY PARAMETER IS DISPLAYED FOR 2 SECONDS)

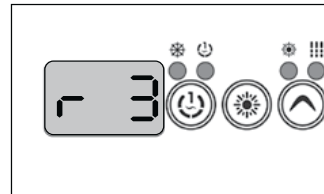


Lamp test

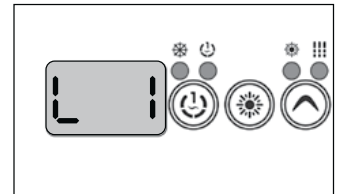
All segments and LEDs light up.



Software number



Software revision



Low-level selected

Low-level selected from the low-level menu.

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