

# 3S HEATER INSTALLATION GUIDE

|                             |        |        |        |       |       |
|-----------------------------|--------|--------|--------|-------|-------|
| Balboa Generic Model Series | BP2000 | BP2100 | BP6013 | BP501 | BP601 |
| Agency Prefix               | B20    | BP21   | BP21   | BP501 | BP6   |

## ⚠ WARNING

There are no user serviceable parts inside the system. All connections must be made by a qualified electrician in accordance with the country or local electrical codes in effect at the time of installation.

## Installation Precautions

**1** - Make sure the system pack is powered Off at the GFCI or circuit breaker before starting the installation process.

**2** - These instructions apply to system packs with one of the following agency prefixes: BP20, BP21, BP501, BP6. The agency prefix is noted on the system pack identification label (view page 2).

**3** - The M7 temperature sensor connector has a locking tab (A). Depress the tab before disconnecting the sensor from the circuit board. When installing the new heater, make sure the locking tab is aligned properly with the circuit board connector. Misalignment may cause damage. The connectors are small, so a flashlight and magnifying glass can help with alignment.

**4** - The third temperature sensor switch connector has alignment tabs (E). Make sure the tabs are aligned properly with the circuit board connector. Misalignment may cause damage. The connectors are small, so a flashlight and magnifying glass can help with alignment.

**5A** - Find J29 on the wiring diagram (H). The wiring diagram is on the inside surface of the system pack cover. J29 may be at the bottom right of the diagram of the board, or more toward the bottom center of the board.

**5B** - Confirm that on the wiring diagram "HTR DISBL" or "HTR DSBL" is written near J29 (I). It may be above or below the "J29" text and may be on the same side of the jumper picture or on the other side

of the jumper picture. If "HTR DISBL" or "HTR DSBL" (abbreviations for Heater Disable) is not near J29, then the 3S heater is incompatible with this system pack.

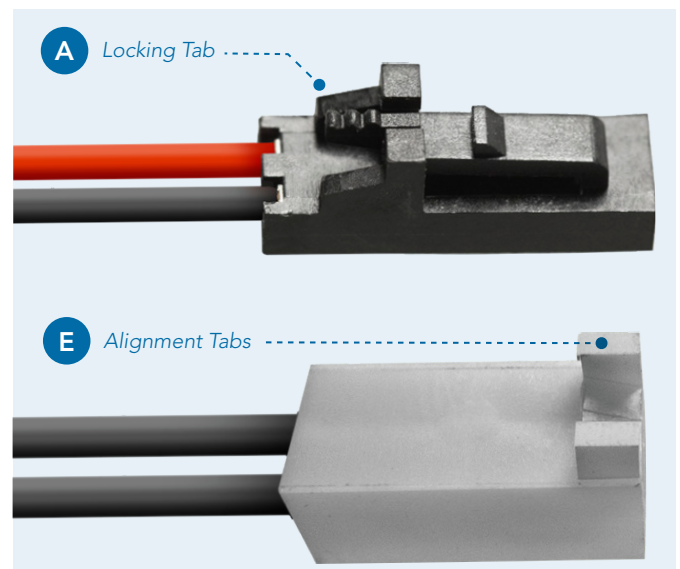
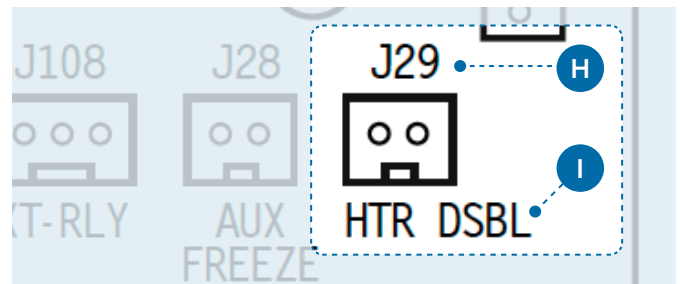
**5C** - If something is already connected to J29, please contact our technical support at [techsupport@balboawater.com](mailto:techsupport@balboawater.com).

**6** - Each connector is labeled on the system pack circuit board. The text is small, so a flashlight and magnifying glass can help with identification.

**7** - Do not bump or bend the heater posts.

**8** - Do not pull or apply unnecessary pressure to the heater connector wires.

Wiring Diagram

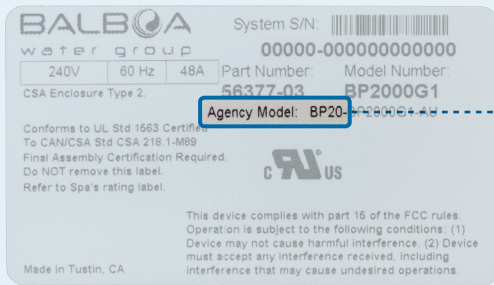


### 3S Heater Installation

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**BALBOA**  
water group

## Nomenclature



Identification label

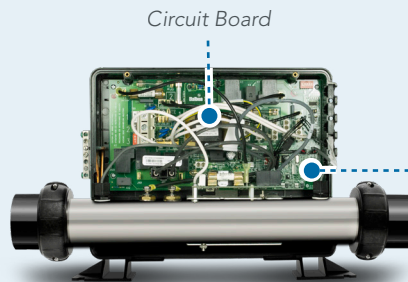
### AGENCY PREFIX

The agency prefix is noted on the identification label, which is on the top surface of the system pack. In this example the agency prefix is BP20.

Each connector is labeled on the circuit board. In this example the label is J29. The location of J29 may vary depending on which system pack model you have. All other connector locations vary, depending on the system pack model.



System Pack  
Agency Prefixes: BP20, BP21, BP501, BP6

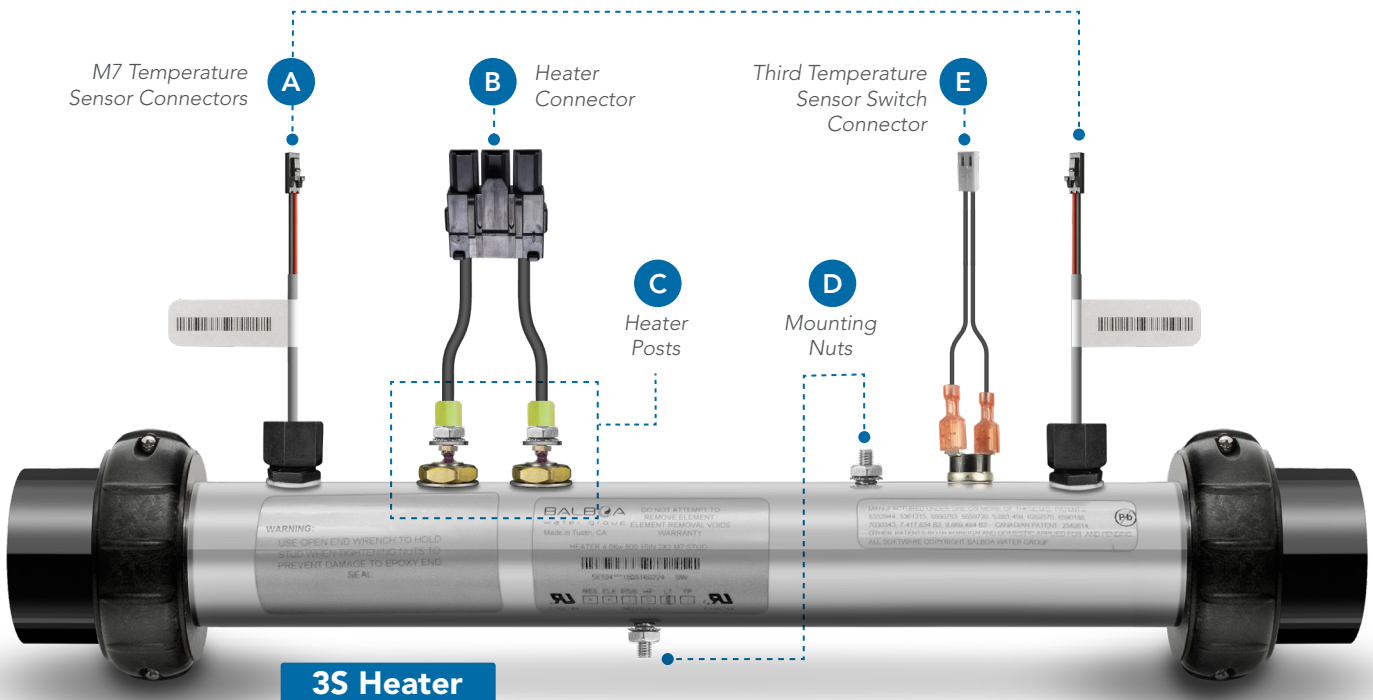


System Pack Without Cover

Circuit Board Label



J29 is a heater disable switch input.



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# Installation Instructions

## Step 1

Power Off the system pack at the GFCI or circuit breaker.

## Step 2

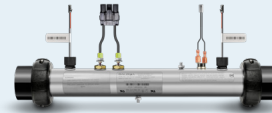
Remove the system pack cover by loosening two screws (F) with a phillips head screwdriver.

## Step 3

If the agency prefix is BP501 or BP6, disconnect the heater connector (B) from J46 on the circuit board.

If the agency prefix is BP20 or BP21, disconnect the heater connector (B) from J44 on the circuit board.

## Tools / Supplies



3S Heater



Wrench, 3/8" (9.5mm), open end



Phillips screwdriver



Nyogel 760G



Applicator stick for Nyogel



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## Step 4

Disconnect both M7 temperature sensors (A) from J16 and J17 on the circuit board. The connectors have locking tabs (refer to page 1). Depress the locking tab before disconnecting the sensor from the circuit board.

## Step 5

Remove the heater from the system pack. The heater is mounted to the system pack with two nuts on mounting posts (D). Loosen the nuts with an open ended 3/8" (9.5mm) wrench, and remove the heater.

## Step 6

Install the new heater into the system pack, and tighten the two mounting nuts (D).

## Step 7

Connect the M7 temperature sensors (A) to J16 and J17 on the circuit board. The locking tabs only align one way on the J16 and J17 connectors (refer to page 1). Misalignment may cause damage.

## Step 8

Connect the third temperature sensor switch (view "E" on page 2) to the circuit board at J29. The connector has alignment tabs that only align one way on the J29 connector (view "E" on page 1). Misalignment may cause damage.

Confirm that "HTR DISBL" or "HTR DSBL" is written near J29 on the wiring diagram (view "H" and "I" on page 1). If J29 isn't thus labeled as Heater Disable, the 3S heater is incompatible with this system pack.

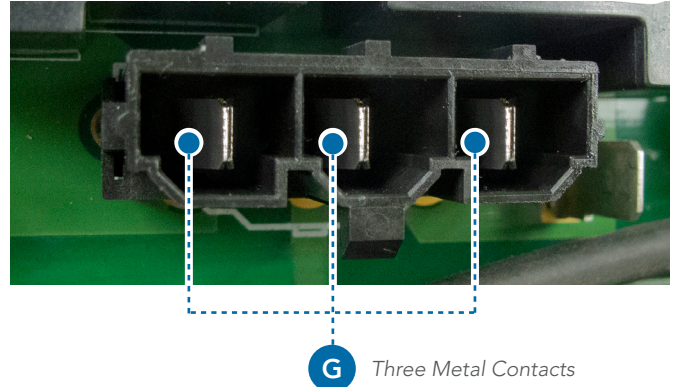
If something is already connected to J29, please contact our technical support at [techsupport@balboawater.com](mailto:techsupport@balboawater.com).

## Step 9

If the agency prefix is BP501 or BP6, use an applicator stick to apply Nyogel 760G to the three metal contacts (G) on J46.

If the agency prefix is BP20 or BP21, use an applicator stick to apply Nyogel 760G to the three metal contacts (G) on J44.

Cover all surfaces of the metal contacts. Nyogel provides corrosion protection.



## Step 10

If the agency prefix is BP501 or BP6, connect the heater connector (B) to J46 on the circuit board.

If the agency prefix is BP20 or BP21, connect the heater connector (B) to J44 on the circuit board.

You will hear a click when the connection is secure.

## Step 11

Install the system pack lid and tighten the two mounting screws (F).

## Step 12

Power On the system pack at the GFCI or circuit breaker.



System pack with cover

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