

AquaCal®

APPLICATION BULLETIN

#0001

***REUSING RELAYS FROM AN EXISTING THIRD-PARTY EXTERNAL
CONTROLLER***

Phase 2 Application

1 - Connections

! DANGER

Failure to heed the following will result in injury or death.

- Deactivate power while routing wiring to control board.
- Follow all National Electric Codes (NEC) and/or State and Local guidelines.

! WARNING

Failure to heed the following may result in injury or death.

- Installation of this equipment by anyone other than a qualified installer can result in a safety hazard.
- The information contained throughout the "Installation" section is intended for use by qualified installation technicians familiar with the swimming Pool/Spa safety standards.

Required Materials

1. 18-22 gauge two conductor stranded wire (suitable for site location).
2. 18-22 gauge fork connectors that are the appropriate size for the wire selected.
3. 18-22 gauge spade butt splices that are the appropriate size for the wire selected.
4. Use wire connectors for each relay that will fit the expansion board relay ports.

Wiring

1. Turn off power to heat pump and external control panel at breaker panel. Wait two (2) minutes for power to discharge from capacitors.
2. Remove access panels.
3. Leave relays in their existing enclosure. Disconnect coil wires leading from relay to control board. See Figure 1.

Disconnecting Control Wire

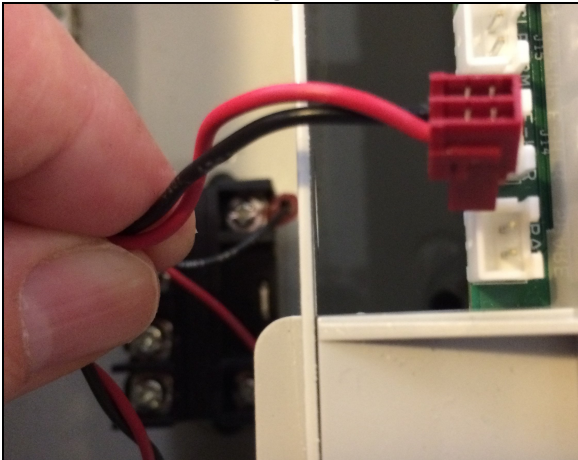


Figure 1

- Cut control wire directly at relay (NOT NEAR CONNECTOR). See Figure 2.

Cut wire at relay

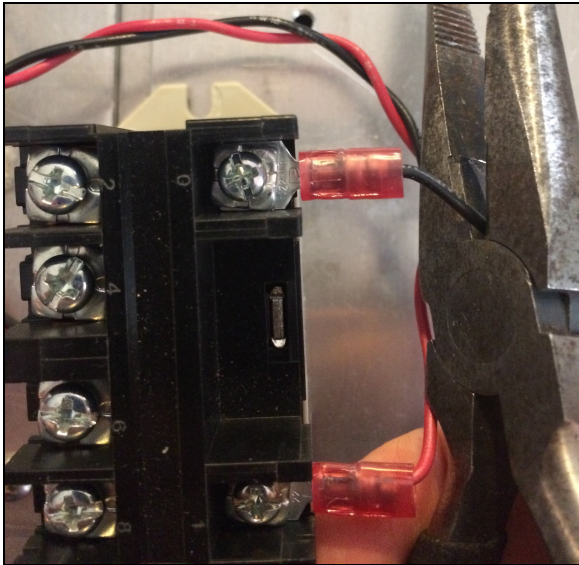


Figure 2

- Route the new control wiring to the heat pump.
- Crimp fork connectors to the new wire.
- Attach the new wire with fork connectors to the relay coil. See Figure 3.

Longer wire with spade connectors



Figure 3

Control wiring to heat pump

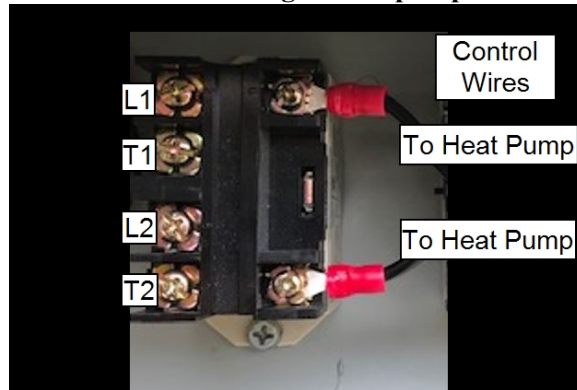


Figure 4

7. If the control connectors that were removed in step 4 appear as shown in Figure 5, connect them to the new wire at the heat pump control panel using butt connectors. See Figure 6.
8. If the control wire connectors are different then shown in Figure 5, then purchase new connectors as specified in required parts list and use as shown in 1.

Detached Control Wire

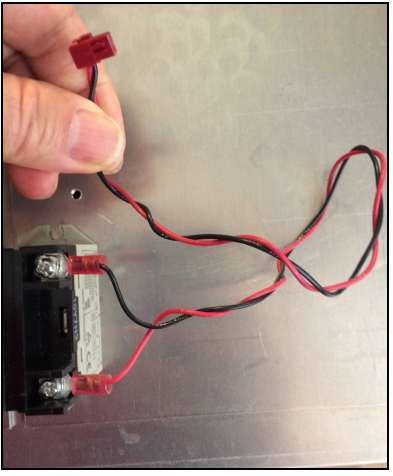


Figure 5

Butt connectors

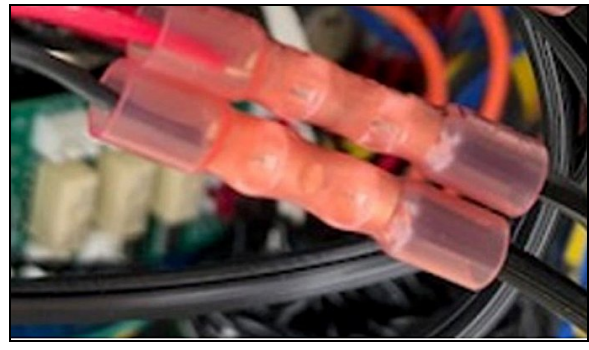


Figure 6

7. Connect control wire to heat pump expansion board relay ports. See Figure 7 and Figure 8.

Control wire connected to relay ports

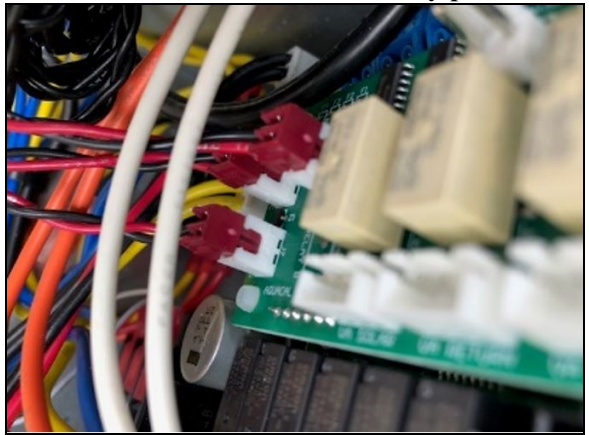


Figure 7

Diagram showing relay ports

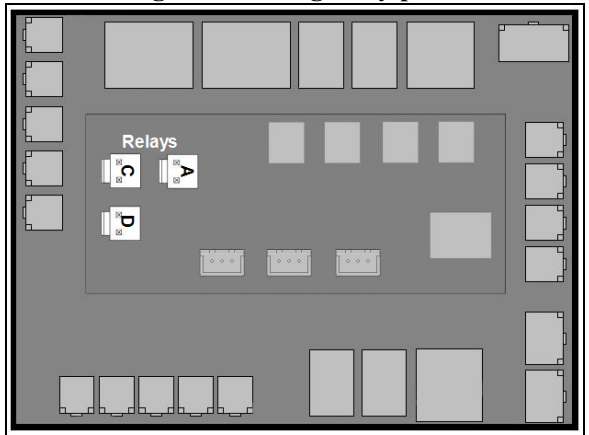


Figure 8

2 - Configure Device

Connected equipment can be configured manually in the system.


In the following example a single speed circulation pump connected to the control board on relay "A" is configured to be used.

<p>IF UNIT IS ASLEEP, SWIPE TO WAKE UP</p>  <p>KEYPAD LOCKED</p> <p>Pool Spa Menu Mode Enter</p>	<p>A PRESS MENU BUTTON</p>  <p>WATER TEMP ##°F HEAT SETPOINT ##°F</p> <p>Pool Spa Menu Mode Enter</p>	<p>B USE ARROWS TO "EQUIPMENT"</p>  <p>EQUIPMENT ENTER</p> <p>Pool Spa Menu Mode Enter</p>
<p>C PRESS "ENTER"</p>  <p>EQUIPMENT ENTER</p> <p>Pool Spa Menu Mode Enter</p>	<p>1 USE ARROWS TO MENU "NEW EQUIPMENT"</p>  <p>NEW EQUIPMENT SETUP</p> <p>Pool Spa Menu Mode Enter</p>	<p>2 ENTER TO SELECT</p>  <p>NEW EQUIPMENT ENTER</p> <p>Pool Spa Menu Mode Enter</p>
<p>3 USE ARROWS TO "RELAY"</p>  <p>EQUIPMENT TYPE RELAY</p> <p>Pool Spa Menu Mode Enter</p>	<p>4 ENTER TO SELECT</p>  <p>EQUIPMENT TYPE RELAY</p> <p>Pool Spa Menu Mode Enter</p>	<p>5 USE ARROWS TO SELECT DEVICE NAME</p>  <p>NAME CIRCULATION PUMP</p> <p>Pool Spa Menu Mode Enter</p>
<p>6 ENTER TO SAVE</p>  <p>NAME CIRCULATION PUMP</p> <p>Pool Spa Menu Mode Enter</p>	<p>7 USE ARROWS TO SELECT RELAY TYPE</p>  <p>RELAY TYPE 24VDC RELAY</p> <p>Pool Spa Menu Mode Enter</p>	<p>8 ENTER TO SAVE</p>  <p>RELAY TYPE 24VDC RELAY</p> <p>Pool Spa Menu Mode Enter</p>
<p>9 USE ARROWS TO SELECT DEVICE PORT</p>  <p>PORT INTERNAL RELAY A</p> <p>Pool Spa Menu Mode Enter</p>	<p>10 ENTER TO SELECT</p>  <p>PORT INTERNAL RELAY A</p> <p>Pool Spa Menu Mode Enter</p>	<p>11 PRESS BUTTON UNDER "YES" TO SAVE</p>  <p>SAVE EQUIPMENT SETUP? YES NO</p> <p>Pool Spa Menu Mode Enter</p>
<p>MENU TO EXIT, PRESS & HOLD TO STATUS</p>  <p>WATER TEMP ##°F HEAT SETPOINT ##°F</p> <p>Pool Spa Menu Mode Enter</p>		


2.1 Editing a Group

The example below shows the "POOL" group being edited. A single speed circulation pump connected to the heat pump's relay "A" is to be activated when the pool group is activated.


IF UNIT IS ASLEEP, SWIPE TO WAKE UP




A PRESS "MENU" BUTTON




B USE ARROWS TO "GROUPS"




C PRESS "ENTER"




1 USE ARROWS TO GROUP TO EDIT




2 ENTER TO EDIT




3 USE ARROWS TO "ADD EQUIPMENT"




4 ENTER TO SELECT




5 USE ARROWS TO CHOOSE EQUIPMENT



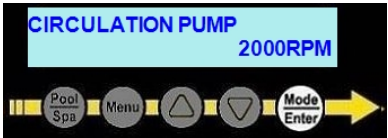
6 ENTER TO SELECT



7 USE ARROWS FOR OPTIONS WHEN ACTIVE



8 ENTER TO SAVE



MENU TO EXIT, PRESS & HOLD TO STATUS

