

Warning!

Line voltage exists on this unit, only qualified personnel should attempt to troubleshoot the controller.
Use extreme caution when taking measurements.

Additional ideas for troubleshooting.

1. Do you have a spare controller or firing circuit that you could swap? Or do you have multiple zones and could swap loads between controllers? If the problem stays with the load (i.e. does not follow the controller) then the problem is not the controller.
2. If your load can handle full line voltage, connect the two heavy wires from the USD block (the output terminal block) together. This removes the controller and puts full line voltage to the load.
3. When running multiple solid state relays from one card, the maximum current draw from the firing circuit is 12mA.

You are now ready to start the troubleshooting questions. Click on the correct answer for each question, you may use the [BACK](#) link to see the previous screen. Click [HERE](#) to start.

Turn the power on and run the system.

Looking at the firing circuit on the controller; is the LED on at least part of the time?

[NO](#) [YES](#) [BACK](#)

Is there voltage to the load?
[NO](#) [YES](#) [BACK](#)

Does the LED blinking vary as you vary the command signal?

NO YES BACK

Is there voltage across the USD block?
[NO](#) [YES](#) [BACK](#)

It appears that the solid state relay has failed. Please call 1-800-765-2799 for spare parts, warranty service or further troubleshooting help.

It appears that either the line or load is not wired correctly. Because of the many different loads that are possible, this troubleshooter can not help you any further. If you need more help after you verify that your load is correct, please call Control Concepts, Inc. at 1-800-765-2799 for further troubleshooting help.

It appears that the command is not wired correctly. Double-check the command source, command polarity and how it is connected to the controller. If you need more help after you verify that your command is correct, please call Control Concepts, Inc. at 1-800-765-2799 for further troubleshooting help.

It appears that the firing circuit has failed. Please call 1-800-765-2799 for spare parts, warranty service or further troubleshooting help.

It appears that power is not getting to the controller or not getting from the controller to the load. Check for open fuses or circuit breakers. Verify that the wiring is correct. If you need more help after you verify that your wiring, fusing and circuit breakers are correct, please call Control Concepts, Inc. at 1-800-765-2799 for further troubleshooting help.

Is there voltage to the load?
[NO](#) [YES](#) [BACK](#)

With the command at 100%, the DC voltage across P1 should be between 6.8VDC and 7.3VDC. Also, verify that the polarity matches what is shown on the board.

Are both of the above OK?

[NO](#) [YES](#) [BACK](#)

With the command at 100%, the DC voltage across P1 should be between 6.8VDC and 7.3VDC. Also, verify that the polarity matches what is shown on the board.

Are both of the above OK?

[NO](#) [YES](#) [BACK](#)

Is there voltage across the USD block?
[NO](#) [YES](#) [BACK](#)

Is the output what you expected?
[NO](#) [YES](#) [BACK](#)

With the command at 100%, the DC voltage across P1 should be between 6.8VDC and 7.3VDC. Also, verify that the polarity matches what is shown on the board.

Are both of the above OK?

[NO](#) [YES](#) [BACK](#)

With the command at 100%, is the DC voltage across the USD block less than 2 volts?
[NO](#) [YES](#) [BACK](#)

With the command at 0% (off), is the AC voltage across the USD block equal to the line voltage?

[NO](#) [YES](#) [BACK](#)

With the command at 0% (off), the LED should be OFF and not blinking.

With the command at 100%, the LED should be ON and not blinking.

Are both of the above statements true?

[NO](#) [YES](#) [BACK](#)

1. With the command at 0% (off), turn the ZERO pot. CW until the LED just starts to blink, then turn the ZERO pot. CCW until the LED just stops blinking and is off.
2. With the command at 100%, turn the SPAN pot. CCW until the LED just starts to blink, then turn the SPAN pot. CW until the LED just stops blinking and is on.
3. There is some interaction between the ZERO and SPAN pots. so you must repeat the above steps until no further adjustment is needed.

[BACK](#)

We have not found the answer to your problem with this troubleshooter.
Please call 1-800-765-2799 and we will help you with further troubleshooting.