



There are a variety of ways to configure the ATR131 and our cold plates. Following is the method we recommend. Before you start, get a small straight-edge (jeweler's) screwdriver for the terminal post screws on the controller and a standard phillips-head screwdriver for the power supply terminal posts. You will also need three additional pieces of wire. One should be about 3 inches (8cm) preferably red, the other two about 2 feet long (60cm) - one red, one black.



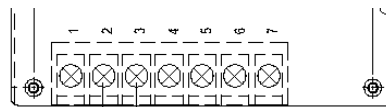
Caution! Risk of electric shock.

Your new ATR131 temperature controller and our cold plates are designed for use from a DC power source. Do not connect directly to 110-120V AC sources.

1. If you purchased a power supply from us check to make sure that the voltage switch, located on the side of the supply or inside the cover but pointed out by decal, is in the correct position for your country. In North America it typically should read "115" and in Europe "230". You may also need to attach a power cord to the power supply. On the back of the supply, locate the two terminal posts in the (AC) input section of the power supply. Typically these are the first two posts on the left hand side of the unit. Connect the white wire from the power cord to the 1st post marked "L" and the black wire to the 2nd or negative post marked "N." Finally connect the green wire to the post marked with the ground symbol \perp in the 3rd terminal post position. Do not plug the power cord in until you have finished all remaining steps.

Terminal Pin. No Assignment

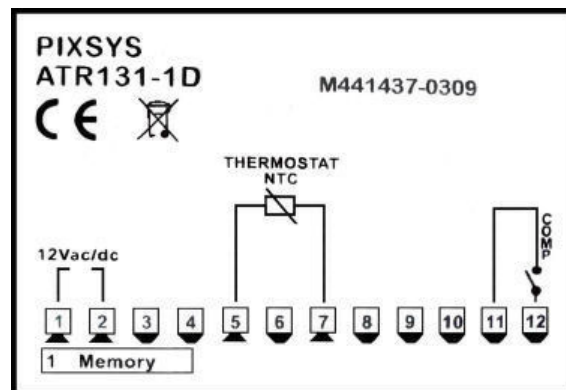
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG \perp		



2. Typically there are two pairs of DC output terminal posts on all of our power supplies rated for 300 Watts or less. Two adjacent posts are marked "-V" or "COM" near the center in positions 4 and 5 and those marked "+V" on the right hand side are numbered 6 and 7. Post numbered 4 and 6, the first from the left of each V- and V+, are a pair and remaining set numbered 5 and 7 are a pair.
3. Connect the fan leads from the cold plate directly to the power supply using post 5 for the black lead and 7 for the red. Our fan leads are typically thinner than the leads for the TEC/s and usually have white shrink wrap protection exiting the cold plate. Connecting the fan/s directly to the power supply will ensure that it is supplied a constant nominal voltage. We will connect the remaining leads

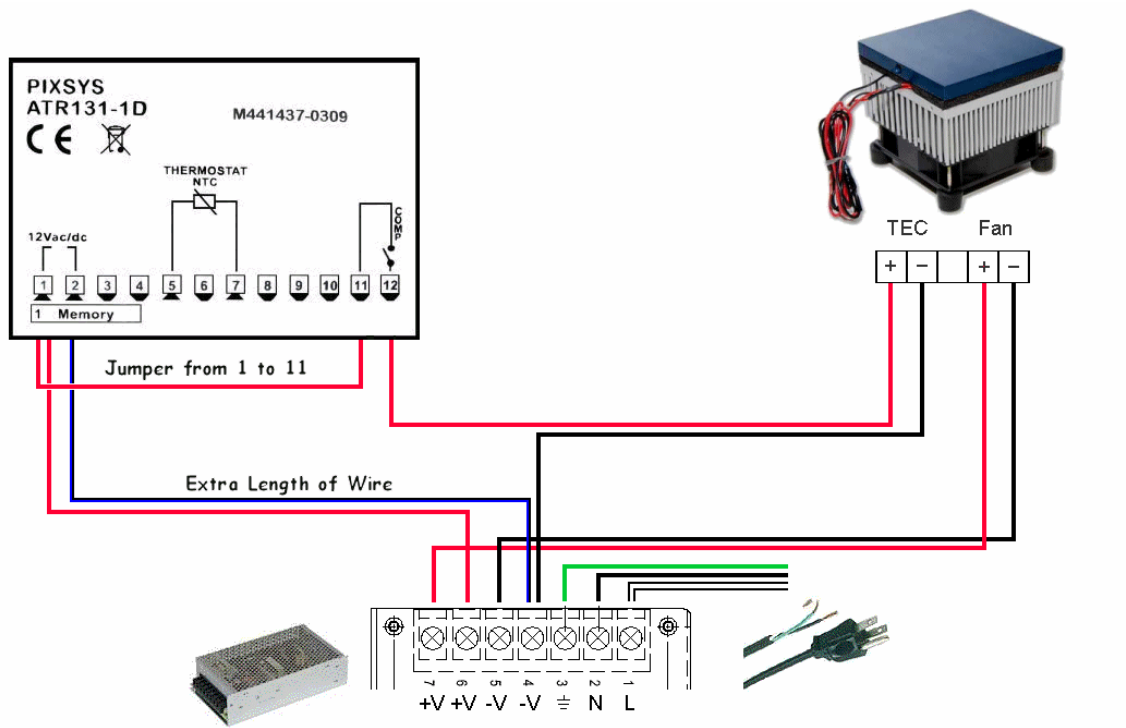
(TECs) shortly however; you may want to confirm that you have the correct leads attached by plugging in the power cord and observing that the fan/s spin. If the fans do not work, unplug the power cord and connect the other pair of leads to the supply in those positions. After confirming the fans are operational unplug the power cord.

- Next, let's set up the ATR131 temperature controller. On the back of the ATR131 you will note this illustration:



- Terminals 1 and 2 are for "12V ac/dc" from the power supply. With a separate piece wire (red) about 2 feet long connect +V output from post 6 (second from right) from the power supply to slot 1 on the ATR131 temperature controller then connect -V output from post 5 of the power supply to input 2 on the ATR131.
- Using a spare piece of wire about 3 inches long make a jumper from ATR131's terminal slot 1 (also connected to the power supply) to terminal slot 11.
- Connect the red, positive lead from the TECs in the cold plate to Terminal post 12 identified by "COMP" on the label above. The TEC leads may be identified as having blue protective shrink wrap exiting the cold plate.
- Connect the two leads from the NTC sensor into posts 5 and 7. Either lead can go into either slot.
- You may now plug in the power cord and begin the programming of the ATR131 for your application. You will find information on the various functions and procedure for setting up the controller in the ATR131 manual located at electracool.com/ATR131Manual.pdf

Wiring Instructions for Temperature Controller ATR131 and Thermoelectric Cold Plates TCP-30 & TCP-50



Layman's Schematic for Connecting Temperature Controller ATR131 and Thermoelectric Cold Plates TCP-30 & TCP-50

If you encounter any problems we are delighted to assist our customers. From the United States, Canada and most of the Caribbean please call us toll-free at:

1-866-665-5434 otherwise e-mail: help@electracool.com