



Linac

Watlow Temperature Controller Instruction Manual

# Watlow Temperature Controller Installation



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Version 1.00



Linac

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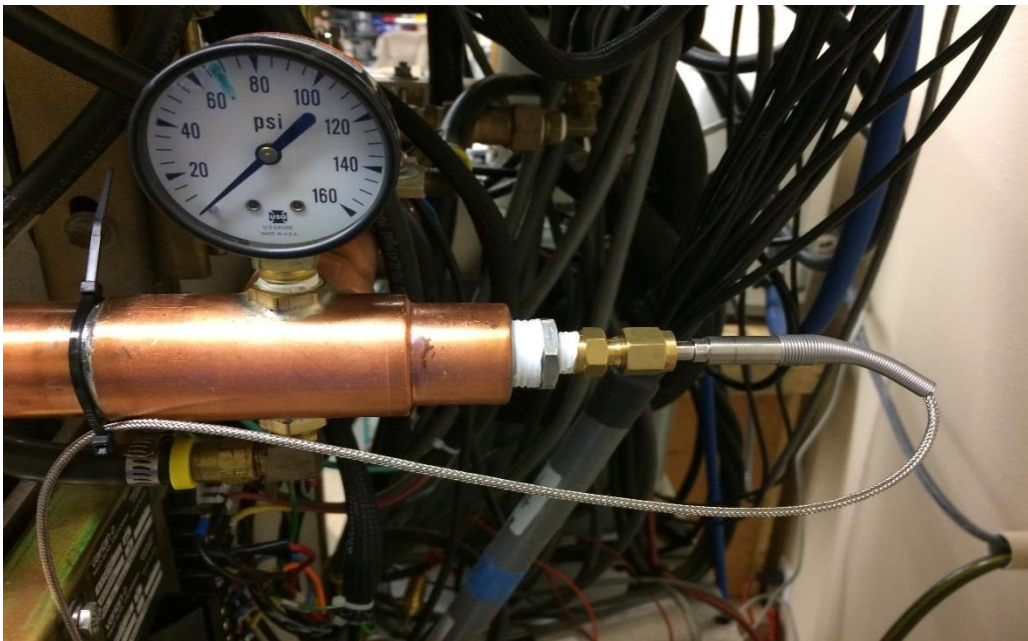
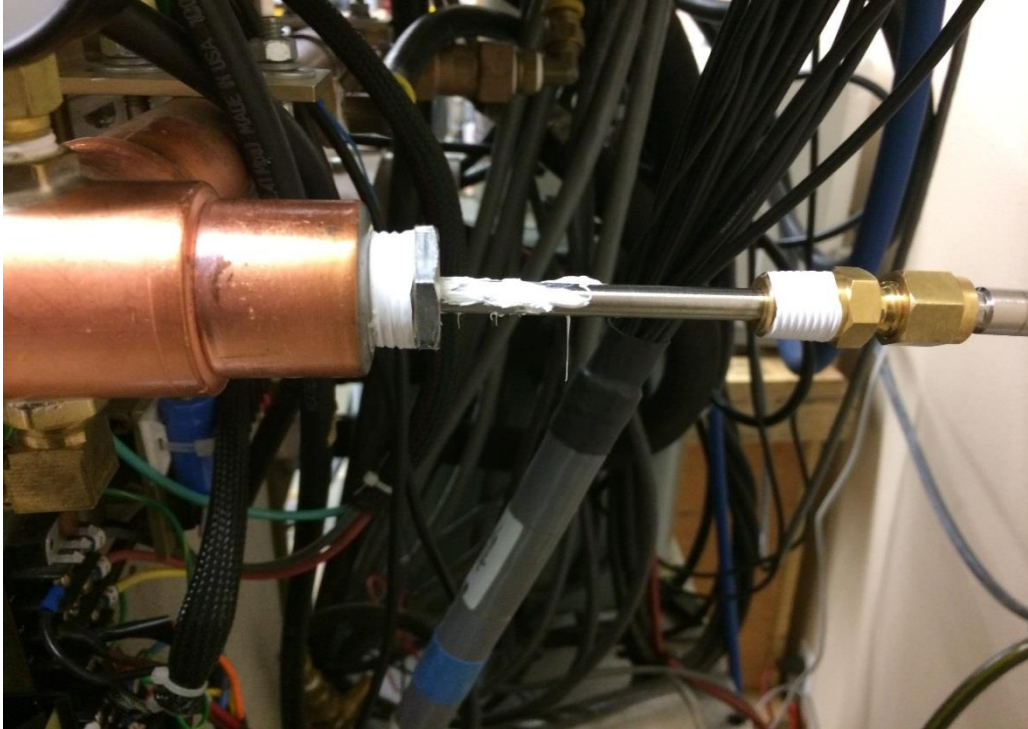
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**The Watlow Temperature Controller Replaces the Barber Coleman Temperature Controller that has been discontinued. These instructions are intended to assist with the installation of the new Watlow Temperature Controller. The wiring is similar to the Barber Coleman Temperature Controller; a schematic has been included.**

- 1) **Emergency Off the Linac and verify power is off.**
- 2) **Disconnect and remove Barber Coleman controller and remove the RTD from the well.**
- 3) **Slide the new Watlow Controller into the old Barber Coleman retainer.**

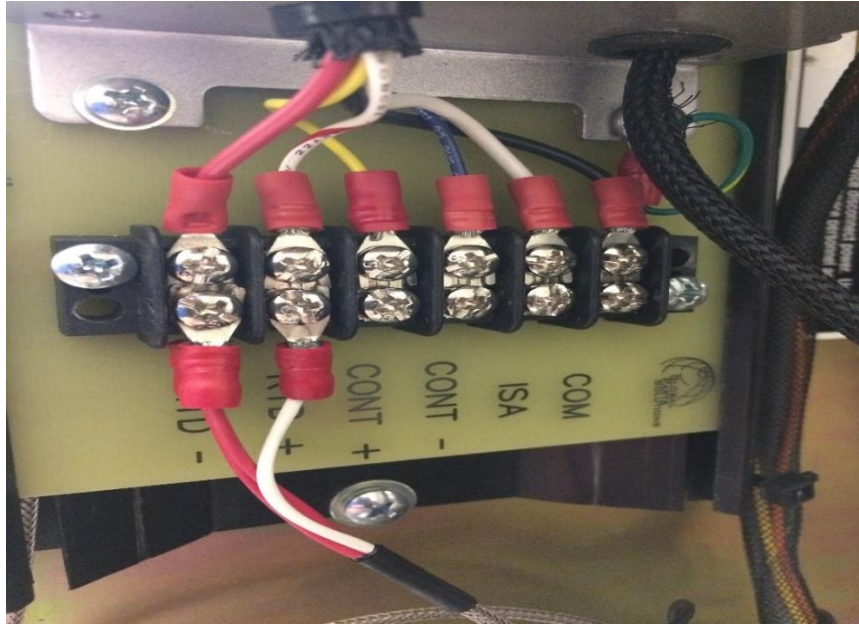


- 4) Slide the brass bushing provided over the RTD.
- 5) Apply thermal transfer paste to the new RTD and install in the well. Tighten the brass bushing to hold RTD in place.



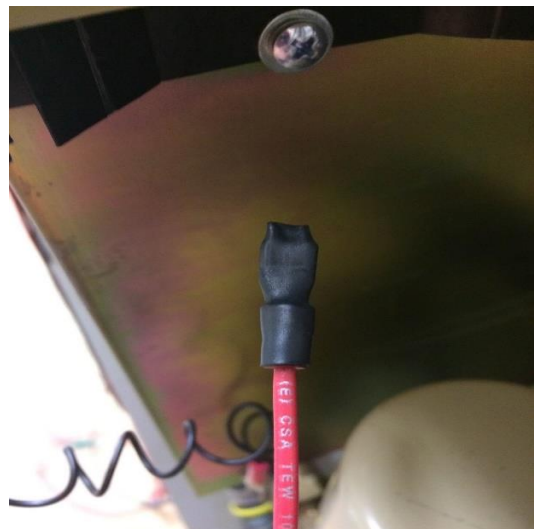
6) **RTD Wire Termination:**

Terminate the two red wires from the RTD on the terminal strip located under the controller to RTD-. Terminate the white wire from the RTD to RTD+ located on the terminal strip.



7) **Three-way Valve Actuator Wire Termination:**

These are three wires located on the Three-way Valve Actuator that were lifted when old Barber Coleman Actuator was removed. The red wire is no longer used, but will still be hot wire with 24VDC. To prevent a short circuit, cut off the lug and cover the end of the wire with the heat shrink provided. Terminate the yellow wire on the controller terminal strip labeled CONT+. Terminate the blue wire on CONT-.



8) **Linac Readout Connection:**

Terminate the black and white wire from A-6 Temp. controller cable to the terminal strip located under the Watlow Temperature Controller.

Black wire to COM and the white wire to ISA.



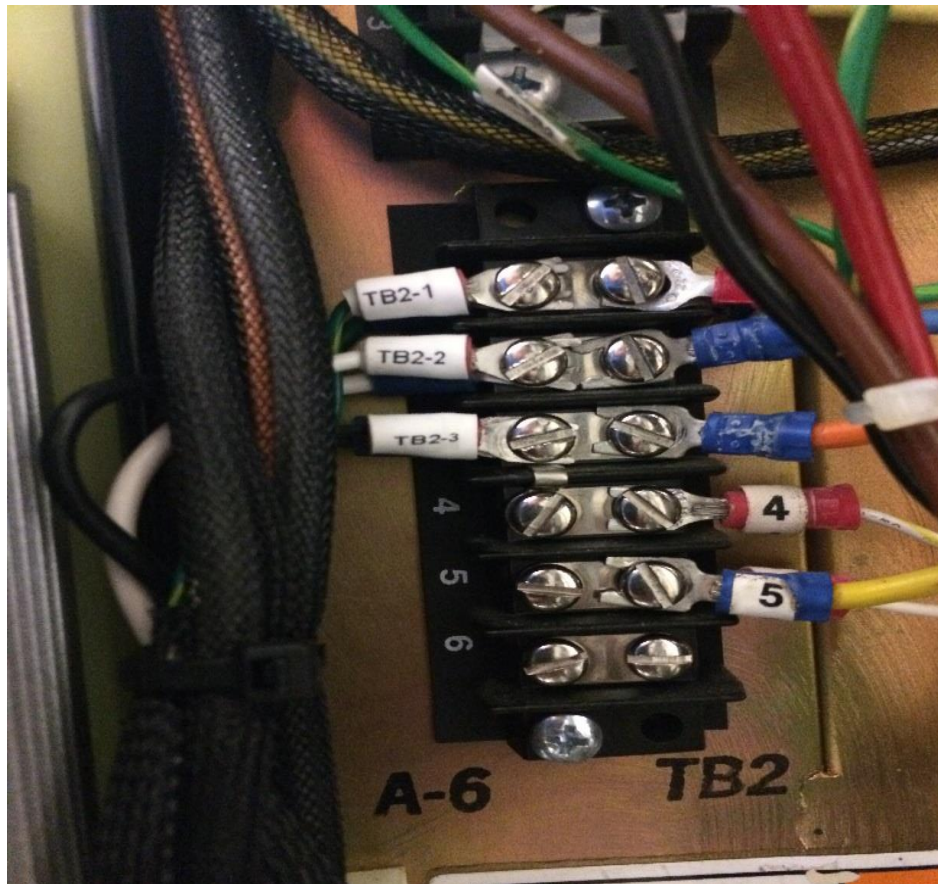
9) **Watlow Controller Power Termination:**

There is a power cable from the controller that will be terminated on TB2.  
This is the AC power to the controller.

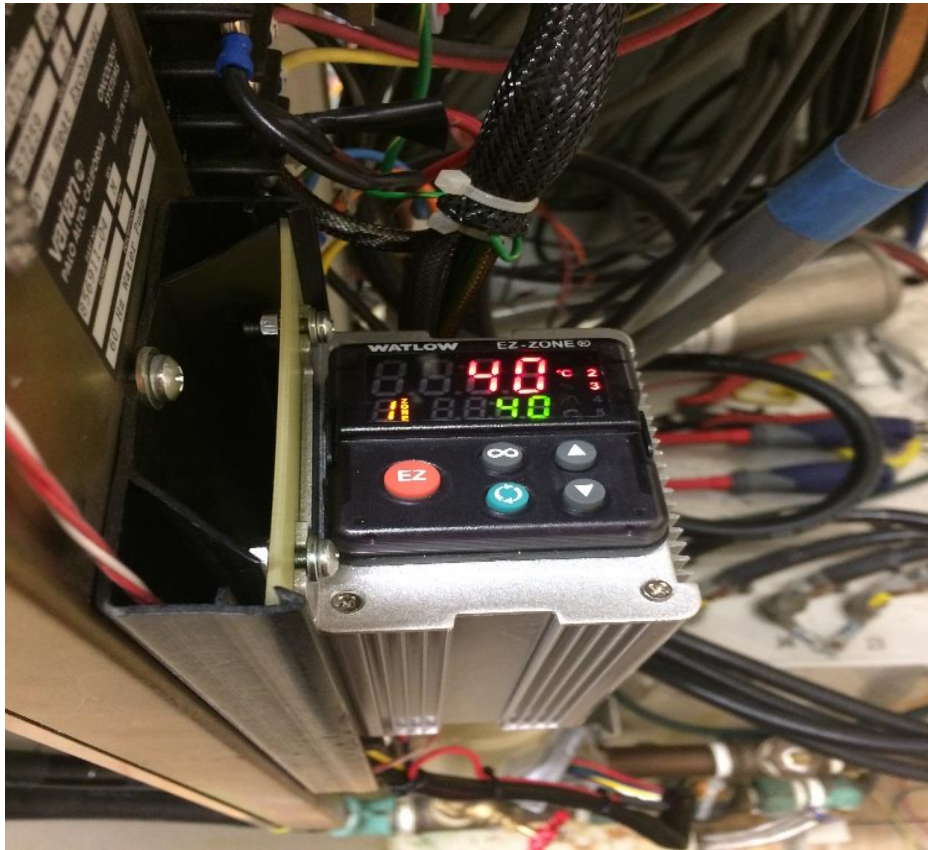
**TB2-1 Green**

**TB2-2 White**

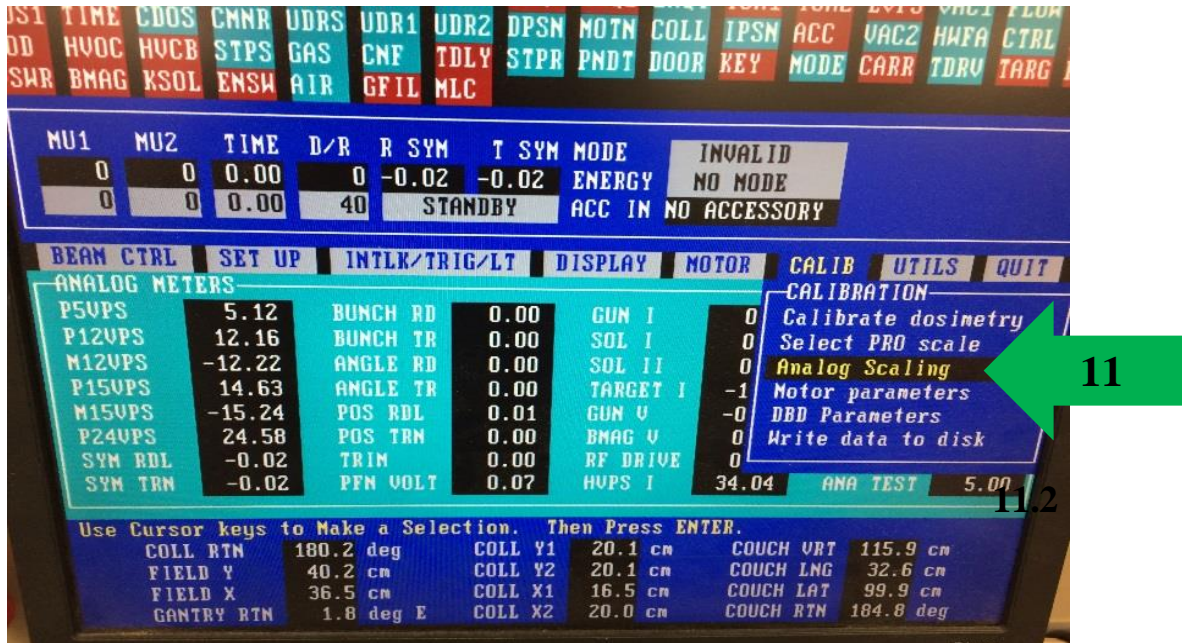
**TB2-3 Black**



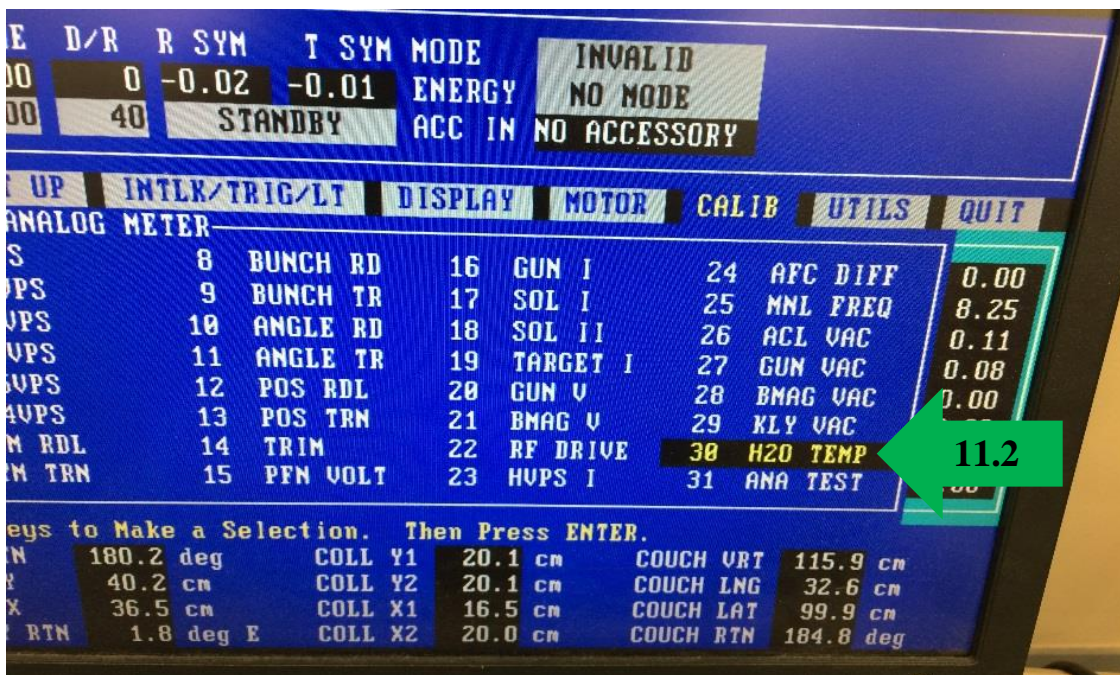
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- 10) Power up the Linac and verify the Watlow Controller is on. Verify the set point is 40 degrees. The temperature set point can be changed by pressing the up and down arrows on the controller.

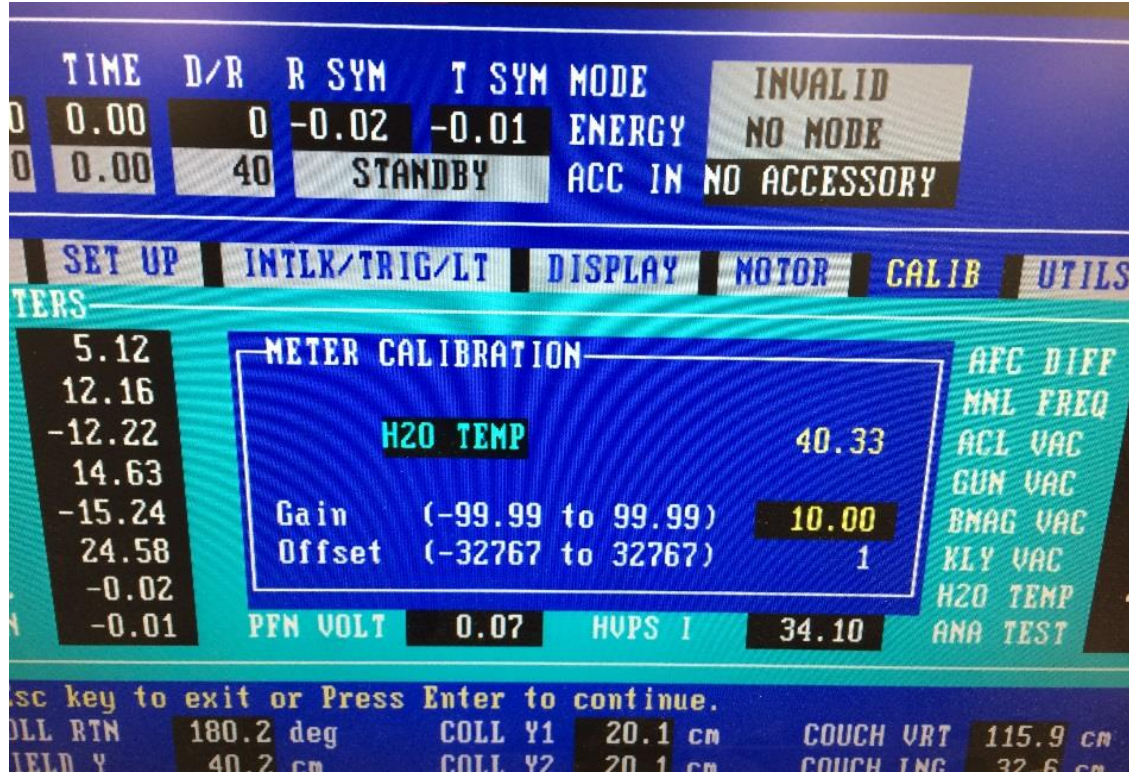


11) At the console go to Service Mode. Verify that the Gain and Offset for the H2O Meter Calibration is per this chart. Calibrate the Meter Calibration if needed





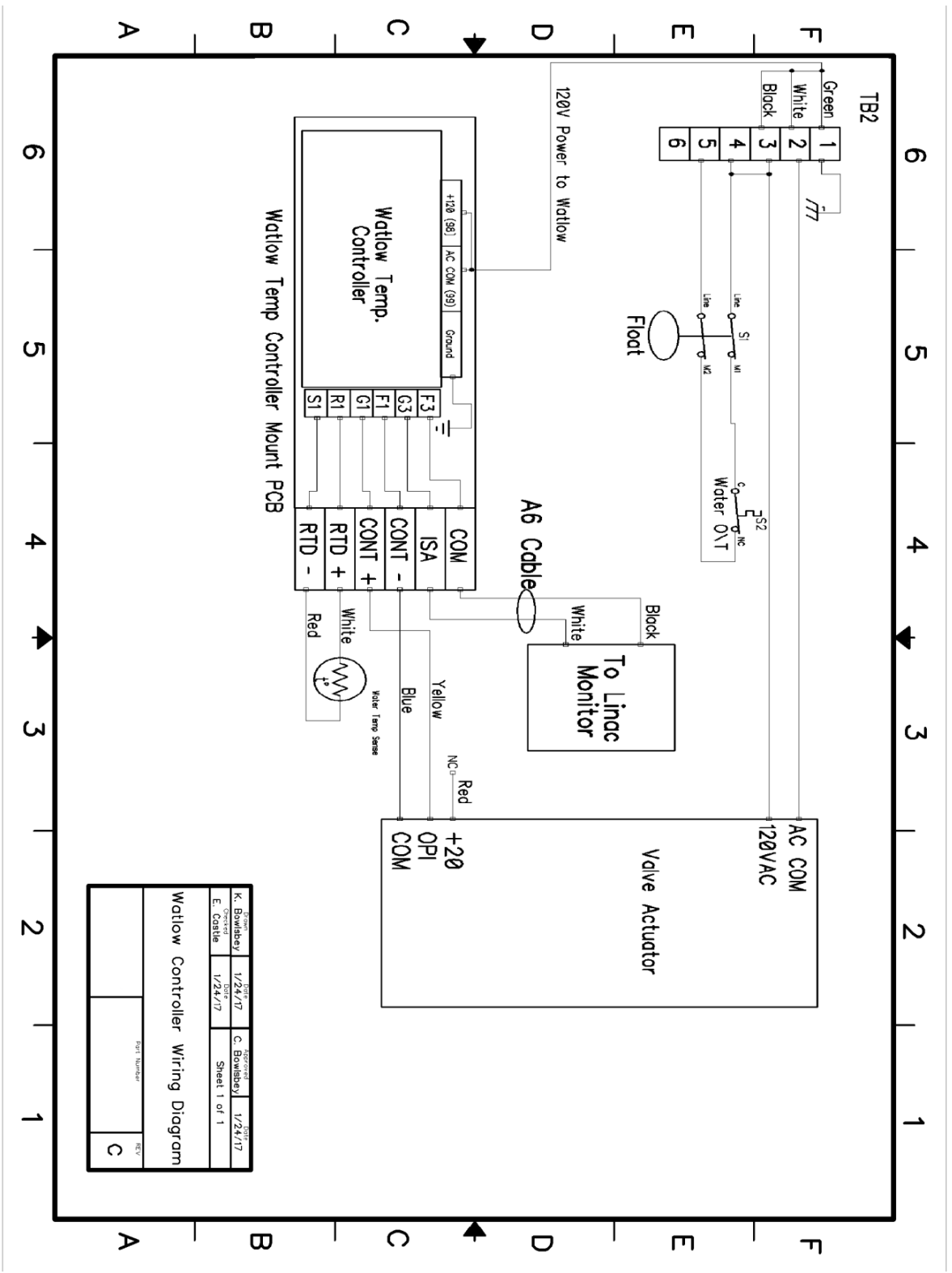




<b>Clinac</b>	Gain of 10
	Offset of 1
<b>Clinac Silhouette</b>	Gain of 15.25
	Offset of -50

12) Mode up and test run. Verify the meter screen and Watlow Controller track consistently.

*Note: The over temperature function of the Clinac was not changed and it is still monitored by the temperature switch on the Clinac.*



Approved by <b>K. Bomshøj</b> 1/24/17 Checked by <b>E. Caille</b> 1/24/17		Approved by <b>C. Bomshøj</b> 1/24/17 Sheet 1 of 1	
<b>Watlow Controller Wiring Diagram</b>			
Part Number		Rev	
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