Particulars

Temperature controler for TCT setups

USER'S GUIDE

Introduction

The temeperature controller is designed to steer Peltier element. It can provide up to 8 A at maximum power of around 80 W (power rating will depend on the model). It was targeted for the application in the Transient Current Technique systems, but it can be used in different applications. The controller can be operated independently, but it can also be controller remotly through PC via USB.

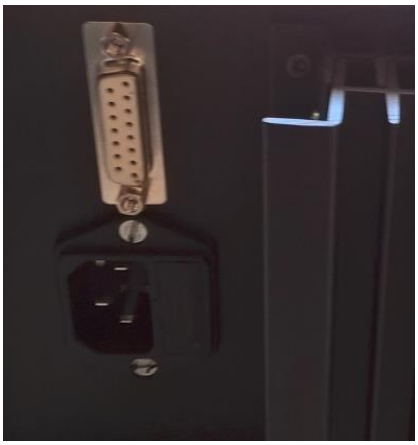
Description of operation

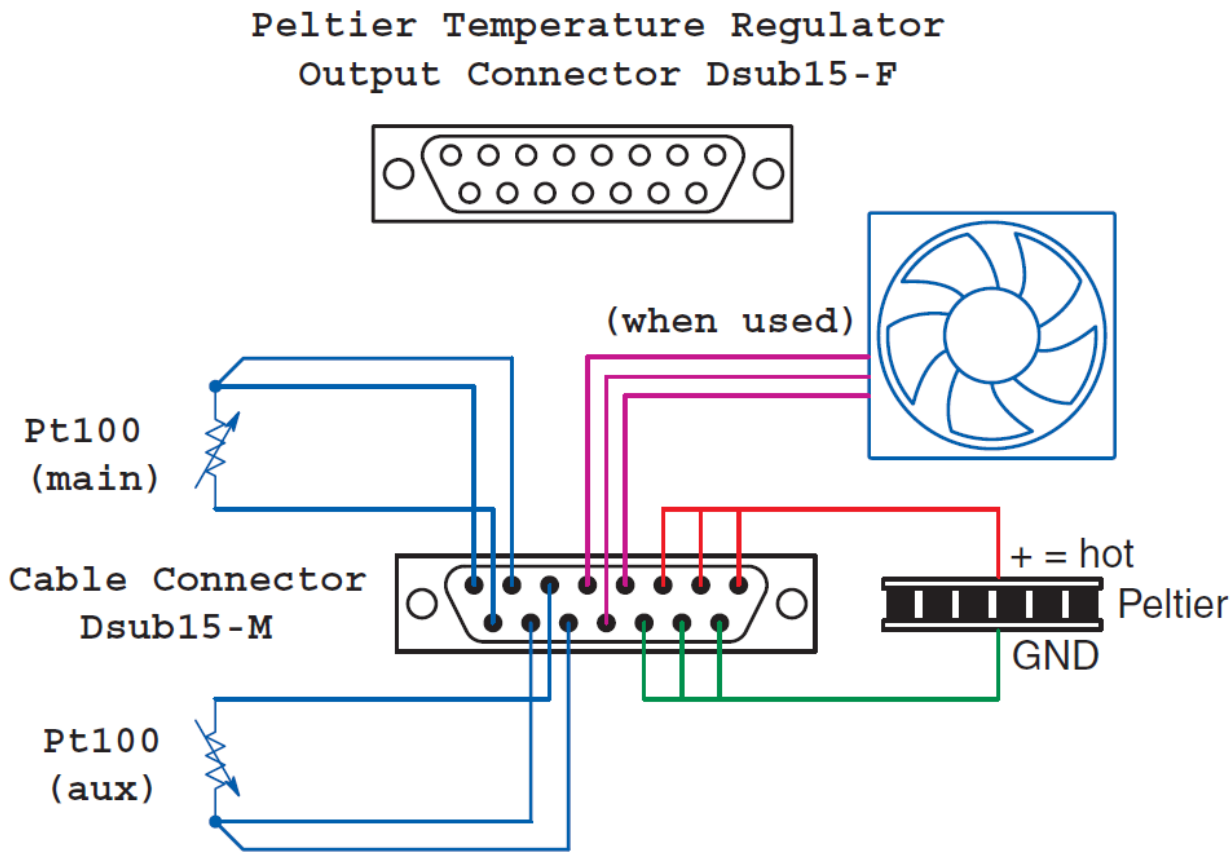
There are several control buttons located in the front panel. To start the device first switch on the power section of the controller and then microcontroller MCU. The functional buttons (numbered from left to write 1-4) to set the temeperature, read the temperature, power output and also buffer are located underneath the LCD display.

The temperature is changed by first two buttons (up and down, hold to increase the speed of change). Once the temperature is set press the third button. The fourt button changes between the present state and the log mode. The controller operates in the range -65°C to 65°C. If the sensor is not connected either upper of lower limit is displayed.

Once the temperature is set the two leds will indicate the controller function (heating/cooling). The display will show also the power [% of maximum power] delivered to the Peltier. The controller is designed for use with either liquid or air cooled Peltier. In the case of the latter the fan power / ventilation speed is also driven by the controller and displayed.

Description of output connector





The 15-pin D—SUB connector can be used to fully exploit the potential of the controller. The second Pt-100 (aux) is used to monitor the temperature of the cold side. The T is required to be in the range between 0-25°C. If the monitoring is not required the 100 Ω resistor can be used instead.

Controll software

http://www.particulars.si/downloads/PA-TController-Driver.zip