

TMC3 Servo Card Temperature Limiting Feature

The TMC3 (C1478) servo card features a motor temperature limiting firmware when used with the proper hardware. The hardware portion consists of a thermistor input which is implemented as a two position terminal block on the TMC3 card. The thermistor resistance is translated into a temperature dependent voltage and used by the card micro-controller as an input to the temperature limiting firmware algorithm which is used to limit the temperature of the motor.



At a motor temperature below 75°C, the algorithm has no effect on the dead-time between consecutive actuator moves. The dead-time remains at 1 second. As the temperature rises above 75°C, the temperature limiting algorithm will add an extra dead-time. At higher motor temperatures, the motor spends a lot more time idle, which will bring the temperature back down, resulting in a temperature limiting action.

Thermistor Installation

The white wires from the Thermistor are terminated into the terminal strip marked TEMP on the TMC3 servo card. The two TEMP terminal connections are not polarity sensitive.



The red tip of the Thermistor must touch the outside of the motor housing. We recommend using high temperature tape to hold the tip to the surface.

Once the Thermistor is terminated to the TEMP terminal strip and the red tip is touching the motor case, then the TMC3 servo card will automatically control the duty cycle of the actuator.

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For product specifications go to <http://download.a-tcontrols.com/>

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