

Test Stand Refurb

The Test Stand Refurb. project encompasses placing four modules; each consisting of four test heads under computer control. Each module includes sixteen thermocouple inputs, four analog inputs & four heaters for the test heads.

Items under control of the system are speed, ramp time, & heating, which are normally run in a recipe of some form. Each test head in the module can have it's own recipe and runs independently of the other three test heads.

A Trilogic T100MD 1616+ was chosen to handle speed monitoring, temperature control and misc. functions for the discrete I/O. The T100MD directly communicates with High Limit controllers using Modbus RTU and Thermocouple modules using a simple ascii protocol.

In this application the T100MD is used as an intelligent remote I/O device. The main control in this application is a Biscuit Styled single board computer that sends control commands to the T100MD, maintains recipe control and communicates with the remote MMI package, which monitors the overall test.

Utilizing serial communications with the T100MD, SBC, High Limits, Thermocouple modules and Inverters has dramatically simplified wiring and increased flexibility. By changing a couple of paramaters in the T100MD & the SBC new machines with one, two or three test heads can be built with out making changes to either program. Simple leave out components not required on the new machines.