

Ultra-high Resolution Encoder Test Jig

Ultra-high resolution encoder test jig is basically designed to test the accuracy and various parameters of different types of encoders. This system provides the testing feature of encoders in different modes.

TECHNICAL FEATURES :

- Compact in size
- Easy to connect and operate
- Graphical User Interface (GUI) for monitoring and controlling encoder test process
- USB to support windows PC connection(GUI)
- Graph based encoder performance analysis
- Various error detection and indication
- Capturing and storage of test data in excel sheet for further analysis
- SPARTAN 7 FPGA based design facilitates reconfigurability for various encoders
- Add on microcontroller to manage cloud data logistics
- On board Wi-Fi interface
- Multiple powering options – Power supply through IO Header, USB, PoE
- On-board current and voltage measurement of encoder signals
- RTC interface for time stamping



Fig : Encoder Testing Jig

BLOCK DIAGRAM :

This block diagram shows an ultra-high resolution encoder test jig that receives encoder signals and power through a terminal block. The processed data is then transmitted to a GUI display via USB or Ethernet.

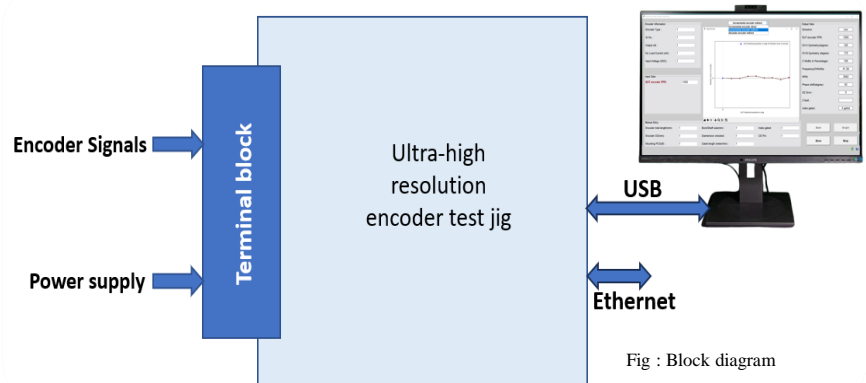


Fig : Block diagram

GUI DETAILS:

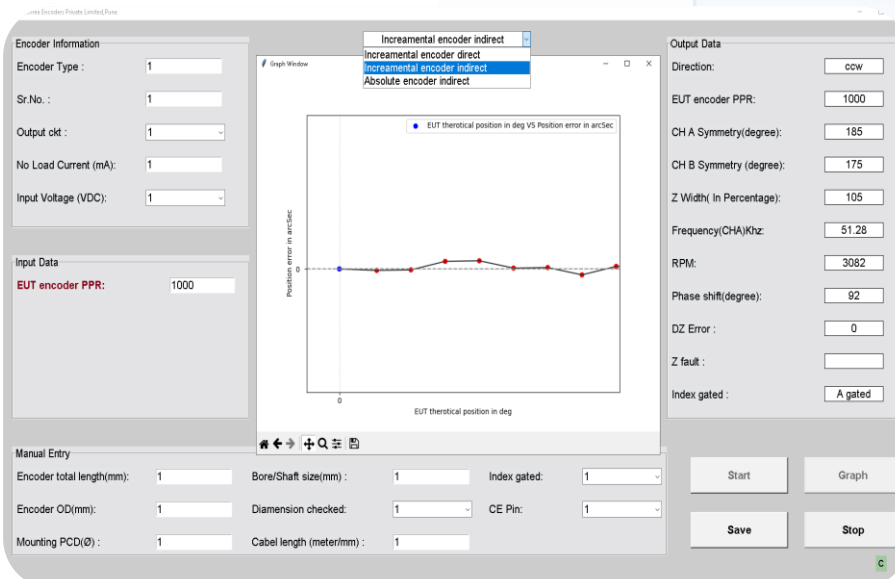


Fig : GUI View

The GUI window provides the facility to test the encoders in three modes as per user selection and displays Direction of Rotation, PPR, Symmetry, Frequency, RPM, Phase Shift between CH A and B signals, Index Gated, Z width, Ton and Toff time of CH A and CH B signals etc. GUI also provides the facility to enter every test encoder information and log this information in excel sheet along with test parameters.