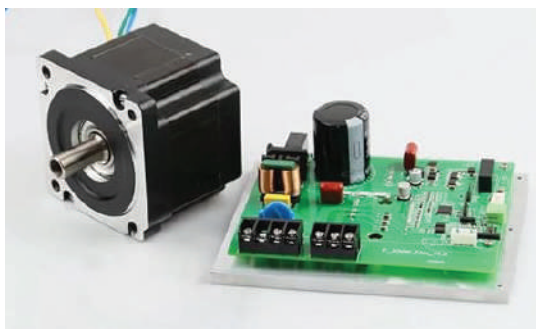


BLDC Motor Drive



SPECIFICATIONS / FEATURES

- Test 12 DUTs simultaneously
- Automated report generation
- High-precision measurements
- Reduced operating and testing time
- Easy maintenance and setup
- Optimized system performance

CHALLENGE

Endurance testing of multiple drives simultaneously requires precise measurement of electrical and thermal parameters, automated data acquisition and accurate reporting. Manual testing risked errors, slow throughput and inconsistent results across multiple DUTs.

SOLUTION

TMCS developed a custom DAQ system capable of testing 12 DUTs (Drive) simultaneously. Each DUT is equipped with programmable power sources, DC load banks, thermocouples and communication interfaces. The system integrates LabVIEW software, industrial PCs, and specialized hardware for data acquisition and control. Parameters such as voltage, current, power, overload/no-load voltages are measured automatically for all DUTs.

TEST TYPE	DESCRIPTION / PARAMETERS MONITORED
Temperature Rise Test	Monitors motor winding temperature at full load.
KWH Test	Measures power, voltage and current of each motor.
Line Regulation Test	Checks drive stability under varying input voltage at constant load.
Load Regulation Test	Evaluates drive performance under varying load at constant voltage.

TECHNOLOGY USED

- LabVIEW Software for automation and data acquisition
- Electric energy meters & RPM meters
- Industrial PC and DAQ hardware
- Thermocouple input modules
- Panel-mounted hardware for centralized control

