

**TURBO COMPUTER
PROFESSIONALS PVT. LTD.**

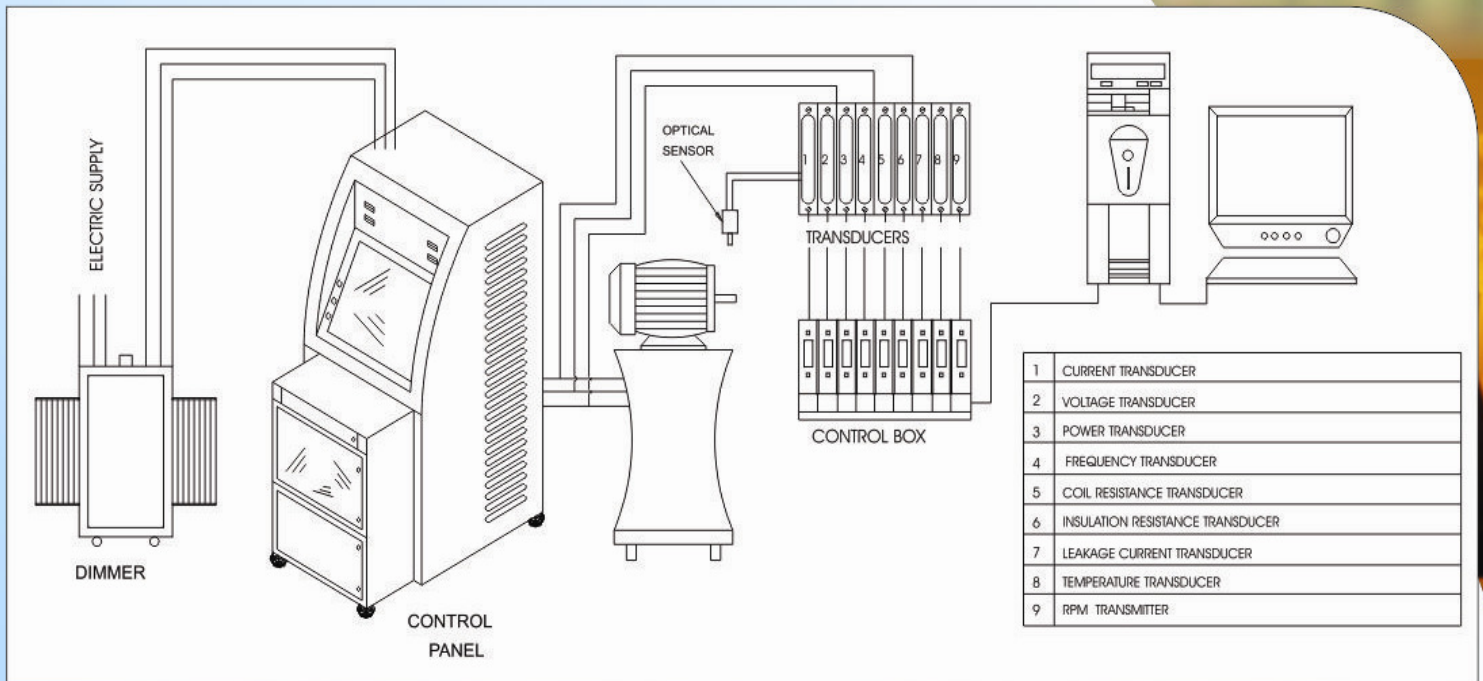


*Perfect Motor
Testing Solution*



On getting the command from motor testing software the reverse process takes place in control box. It actuates dimmer and switching circuit. The control box is designed such that same box is used for any rating of motor. So it takes care of future expansion. Control box is card based, so it is easy to install, trouble shoot and repair. Control box is capable of interfacing current, voltage, power, power factor, frequency, temperature, coil resistance, insulation resistance, leakage current, rpm etc.

AUTOMATIC MOTOR TEST SYSTEM



Software consists of three modules Calibration, Master Creation & Test modules. The calibration module converts the data received from control box in to actual field readings. Calibration module also have provision to test relay and contactor working. The master creation module provides the environment to manage the master data of each motor. Motor model data like model name, motor rating, rated current, rated voltage, no load current, efficiency, rated speed, number of phases, locked rotor current, number of leads, frequency, winding connection, coil resistance etc are managed by master module.

AUTOMATIC MOTOR TESTING SYSTEM

Automatic motor testing system is complete testing solution for induction motor manufacturer. Developed under the guidance of highly qualified professor, scientist, consultant, senior manager and CEOs system shows great future promises. Our R&D and design team work closely to create international quality in term of wiring and appearance. Our testing systems are used countrywide, by many leading manufacturer. We have automatic, accurate, stable & dynamic response system which outclass the existing manual testing system. The system not only reduces the testing time but also avoid human errors. System can be customized for single/three phase motors and testing is done without human intervention.

The automatic motor testing system consists of the following modules

·CONTROL PANEL

·TRANSDUCERS

·CONTROL BOX

·SOFTWARE

Control panel consists of power contactors, Current transformers, Miniature circuit breakers, bus bar, indicators, shunt trip coil. The shape of panel depends on the rating of the motors to be tested. The panels are designed with proper safety measures. The array of contactors are interlocked to prevent any accident. The panel also consists of switching circuit. This circuit consists of set of electrical devices, which offer automatic completion of various tests without human intervention. The panel comes along with motorized dimmer and step transformer. The dimmer and the step transformer is automatically controlled by the software. The system is capable of absorbing the surge current created during the reversal of motor. The panel takes care of three/six lead motors.

Transducer are most appropriate device to measure the electrical and other types of parameters for automation. We use multi transducer to measure electrical parameters. These are programmable transducer. Out of approximately thirty two types of parameters, it can be programmed for any four electrical parameters at a time. This transducer offer accuracy up to 0.15%. Leakage current is measured using specialized transducer. In order to measure coil resistance we use transducer of 0.2% accuracy. The coil resistance transducer is also programmable. It can be programmed to nullify the lead resistance. In order to avoid human intervene, we use optical rpm transmitter. These transmitters are very accurate and capable of measuring rpm from long distance. Temperature transducer continuously monitor temperature and system record the temperature.



Control box is connected between computer and transducers. Output of transducer is analog current. This analog current is converted into corresponding voltages. These voltages are in analog form. Voltages coming from different transducer are multiplex on a single line. Finally these signals are converted into digital form, as processor works only on digital signals. Micro-processor is controlled with assembly level programming language. The digital signal and assembly language interact to produce the output for serial interface. This serial interface is connected to serial port of computer. Control box not only read the signal but it control the devices as well.

Testing module is responsible for performing automatic testing of motor. The testing module perform following tests automatically.

- Insulation Resistance Test**
- Coil Resistance Test**
- Low Voltage Test**
- No Load Test**
- Reversal Test**
- Locked Rotor Test**
- High Voltage Test**

Above tests can be conducted individually by operator or test can be sequence automatically without human intervention. Software switches on the motor by selecting the current transformer ratio automatically. The contactors are interlocked by software to ensure two level of security. During test, the name of test & all the required readings are displayed on the screen. Different colors indicate pass/fail/running of test. After completing all tests, required test certificates and reports are printed by software. The software is based on client-server technology. It ensure availability of reports on the computer network.

MOTOR MODEL DATA	
Model Name	KS-160L 20D4
Motor Rating	11(15) kW
Efficiency	91 %
No. of Leads	6
Rated Current	28 amp
Rated Speed	1470 rpm
Frequency	50 hz
Rated Voltage	415 v
No. of Phases	3
Winding Connect	DELTA
No Load Current	12 amp
L.Rotor Current	30 amp
Coil Resistance	0.62 ohm

Test Serial: 48
Motor Serial: ABCD

STATUS: []

Insulation Resistance	[]	Coil Resistance	[]
33% Voltage Test	[]	57% Voltage Test	[]
Reversal Test	[]	High Voltage Test	[]

NO LOAD Test

Current (A)	[]	[]	[]
Voltage	[]	Power (W)	[]
Power Factor	[]	Frequency	[]
Speed (RPM)	[]		

LOCKED ROTOR Test

Current (A)	[]	[]	[]
Voltage	[]	Power (W)	[]
Power Factor	[]	Frequency	[]

Remark: []

Buttons: Show Report, SAVE, SAVE & CLOSE, CLOSE

The software is user friendly and virtually require no training assistance. The software generates the required reports. Formats can be customized to help our customer do better job more effectively and more easily..



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