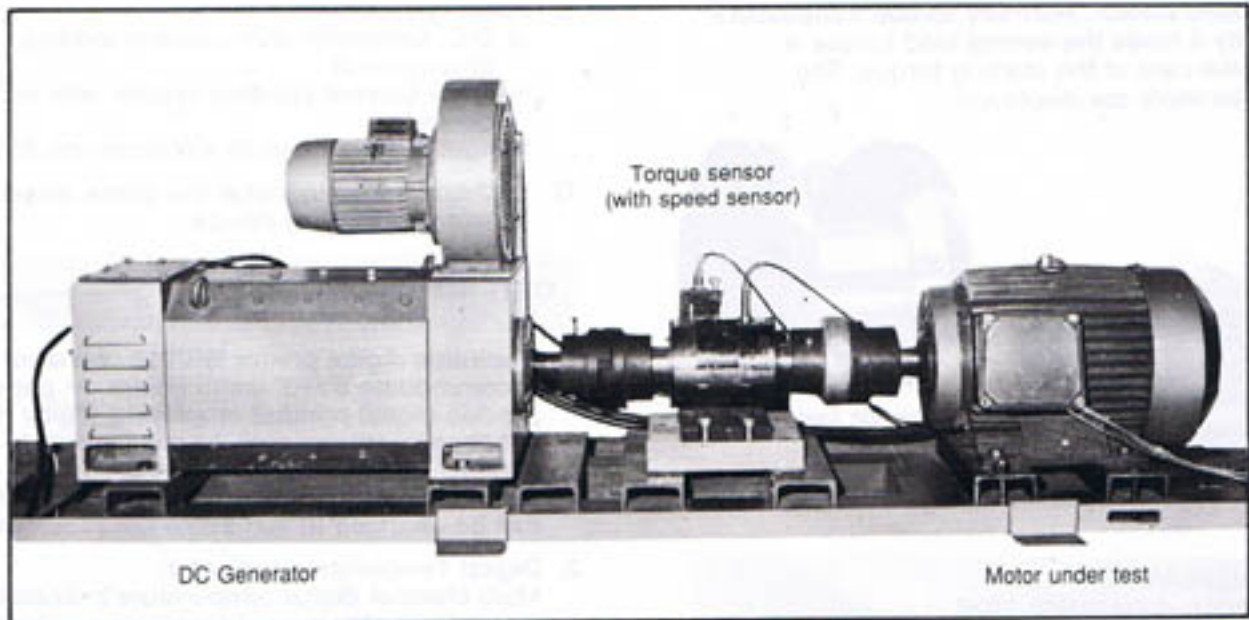


IEICOS



**MICROPROCESSOR
BASED ELECTRONIC
DIGITAL
DYNAMOMETER
SYSTEMS**
for testing motors



Dynamometer Arrangement with torque sensor

IEICOS Electronic Digital Dynamometer Instrument System for testing electric motor using in-line rotating/reaction torque transducer with built in speed sensor is Microprocessor based and provides digital display of various Input, Transmission and Absorption/Loading Power, Efficiency etc. and optional printing of the displayed parameters. It is housed in a printed metallic console.

The values measured and computed are limited to the capacity of the test motors, torque transducers and the loading capacity. Required capacity of in-line rotating/reaction torque sensor and loading system like DC generator with resistive loading, Eddy Current dynamometer, water brake dynamometer or brake drum with mechanical loading can be selected to suit individual requirements.

DIGITAL DISPLAY AT INPUT SIDE FEEDING POINTS TO MOTOR

A.C. Voltage
A.C. Current
Power Factor
A.C. Power
Frequency

The digital display range can be made to suit specific requirement



Electronic Digital
Motor Test Bench

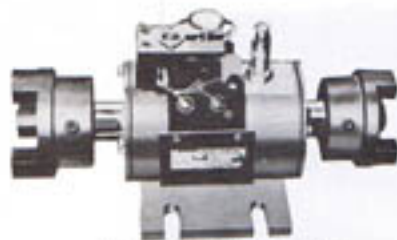
DIGITAL DISPLAY AT TRANSMISSION SIDE:

Torque is defined as the force which tends to produce rotation, specifically the moment of a tangential force.

The power output of (or input to) a rotating device is directly related to force and speed. Two general methods are available for measuring torque, both providing an electrical signal proportional to the torque. These are in-line rotating shaft torque sensors for non-swinging loads and reaction torque sensors for swinging loads.

In-line rotating/reaction torque transducer with a capacity corresponding to that of the test motor is generally used along with speed sensor. Normally torque transducers with a capacity 5 times the normal load torque is selected to take care of the starting torque. The following parameters are displayed:

Torque
Speed
Power



Rotating Torque Sensor



Reaction Torque Sensor

DIGITAL DISPLAY AT ABSORPTION (LOADING) SIDE

D.C. Generator of corresponding power is normally used for loading the prime mover or test motor. In such a case, armature of the DC Generator is loaded by using resistive load, and the following parameters are displayed

D.C. Voltage
D.C. Current
D.C. Power

DIGITAL DISPLAY OF EFFICIENCY:

On-line computation and digital display of efficiency by using data of Input power and Transmission power.

ESSENTIAL ACCESSORIES:

- IEICOS INLINE ROTATING/REACTION TORQUE SENSORS WITH SPEED SENSORS**
Range: 2, 5, 10, 20, 50 and 100 KGM
- Love Joy couplings to inter connect prime mover and loading device at both ends of the torque sensor.
- Loading system:
 - D.C. Generator with resistive loading arrangement.
 - Eddy Current Loading system with necessary controls.
 Range: 5, 10, 15 and 30 kW (common to both)
- U Channel Bed to install the prime mover, torque sensor and loading device.

OPTIONAL FACILITIES:

- Electronic digital printer (80/132 character model to accommodate 8"/10" width computer paper) to provide digital printout employing digital multiflexor interface to interconnect the display data to the digital printer.
(Note: Printing format of the measured parameter can be changed to suit individual requirement)
- Digital Temperature Indicator:
Multi channel digital temperature indicator with manual selector to read temperature at various locations.
Range: 0 - 199.9° C
- Digital clock to read duration of test. Digital electronic clock to display set and reset time before and after completion of test.
Range: 9 hrs, 60 mts, 60 secs.
- Measurement of RAMP time of motors (time taken to reach max. speed).

IEICOS MICROPROCESSOR MOTOR TEST BED MOTOR PERFORMANCE CHARACTERISTICS

INPUT	TRANSMISSION	ABSORPTION
AC VOLTAGE : 0439 Volts.	TORQUE : 06.78 Kgm.	DC VOLTAGE : 0420 Volts.
AC CURRENT : 016.2 Amps.	SPEED : 1425 Rpm.	DC CURRENT : 020.2 Amps.
POWER FACTOR : 00.85	POWER : 09.92 Kw.	POWER : 08.45 Kw.
POWER : 10.45 Kw.		EFFICIENCY : 095.0 %

Typical printout of the Dynamometer System

RANGE OF PRODUCTS: DIGITAL ELECTRONIC INSTRUMENTS for measurement of load, force, weight, torque, expansion, motion, vibration, sound, temperature, fluid flow etc. ELECTRONIC INDUSTRIAL CONTROLS such as Vibration Switch, Proximity Switch, Timers, Pressure Switch, Temperature Controllers, Level Controllers etc.

Mechanical dimensions, location of components, controls and panel meters may be changed without notice to incorporate the latest state of art technology.



INDUSTRIAL ENGINEERING INSTRUMENTS

Manufacturers of Techno-Electronic Aids,
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