The **DC Motor Speed Control Trainer** i.e. DC DRIVE TRAINER outlines the basics of their operation, Construction and speed control of motor.

Features

- The self contained unit.
- Modern industrial components are used for operating.
- Comprehensive training manual supplied.
- Optional components are available to allow fault finding.
- Operation and diagnosis training
- Computer interface facility.
- SCADA software for graphical user interface (GUI), Digital data display, redundant bidirectional parameter selection facility, real time Trend plotting historical trends, report generation (Optional)

Technical Specification:-

Item Name		Technical Specifications
PMDC Motor	:	12V DC, 1500 RPM, 1.5 Amp, Torque: ½ Kgcm, Mounting Horizontal
Optical Sensor / Inductive Proximity Sensor-	:	3 Wire, Sensing Distance: 10cm/ 7mm, 24 VDC
RPM Indicator/ Tachometer	:	Speed: 0-1500 RPM, Supply: 230V AC, Cut out size :92 X 92 Retransmission O/P: 4-20mA according 0-1500rpm, 3 ½ digital display.
DC Drive	:	Power Supply: 230 V AC, Input: 4-20mA, Output Voltage. 0-12 V DC.
Voltmeter	:	Supply:230VAC, 0-20VDC
Ammeter	:	Supply:230VAC, 0-2ADC
Electrical Control Panel	:	MS Powder coated panel with switches, indicator, test Points, controller on front fascia, UK 2.5 Terminal Connectors mounted on DIN rail channel, Use of 1sq mm multi-strand wire with proper insulated Lugs, Feruling & Neat wire dressing & clamping. Wires & power cables are seated through 1''×1''PVC cable tray. Dimension: 1ft (L) ×1ft (W) ×1ft (H)
PID Controller		With Serial PC Interface (ASCII Protocol) USB / RS 485 / RS 232, Input: 4-20mA, Output:4-20mA, 3½ Digit display, Display: Dual for PV & SP , Bar graph Display for Output & Deviation, High-Low Alarm Annunciation, Cut Out Size: 92mm X 92mm X 144mm

Note: Specifications are subject to change.

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Objectives

- Study of operation, construction of DC motor.
- Study of characteristics of DC motor.
- Study of tachometer.
- Study of DC drive.
- Characteristics plot of Voltage VS Speed, Speed VS Current.
- Study of closed loop control system (speed control).
- Study of P, PI, and PID controllers.
- Study of computerized speed control of DC motor (Optional).
- Study of SCADA SOFTWARE for DC Speed control application (Optional).
- Study torque VS speed for characteristics of DC Motor.

System Components

- DC drive.
- PID controller.
- Tachometer.
- DC motor.

Services Required

- Electric Supply of 1φ 230 VAC, 50Hz
- DC generator or DC supply. (Other supply can be catered for required)
- PC Pentium Dual core for SCADA software analysis for computerized control.(Optional)

System Dimensions: 2 Ft. (L) X 1Ft. (W) X 2 Ft. (H)

Weight: Approx.22 Kg

Note-
All descriptive matter and illustrations are intended to give only a general idea of the equipment Detailed specifications may be altered at the company's discretion without any notice.

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