

OMEGA TYPE ICT-913 is a D.C. motor trainer built around a small permanent magnet D.C. motor is designed to bring out the salient features of such a system. Facilities are available to directly measure the principal performance features of the speed control system, viz, steady state error and load disturbance rejection, as a function of the forward path gain. In addition, the experimental work involves the determination of the motor transfer function and the characteristics of the tachogenerator.

An important feature of the unit is the built-in absolute speed measurement through photo diode pick-up from a slotted disk followed by a frequency counter. Variable loading of the motor is achieved by a built-in eddy current brake.

OBJECT

- 01 Effect of loading on the speed of the motor in the open loop & close loop
- 02 Steady state error variation with forward gain in the open loop & close loop
- 03 System time constant variation with forward gain in the open loop & close loop
- 04 Effect of forward gain on disturbance rejection in the open loop & close loop
- 05 Determination of the motor transfer function and tachometer characteristics in the open loop & close loop

SPECIFICATIONS

- 01 Closed loop motor speed control with eddy current brake
- 02 Compact system-no mechanical hassles
- 03 Photo diode speed sensor
- 04 Micro-controller based 4 digit RPM meter.
- 05 Speed control of a 12V, 4W permanent magnet D.C. motor
- 06 Speed range : 0 to 2500 rpm (typical)
- 07 Photo diode based speed sensing
- 08 4-digit speed display in rpm
- 09 Electronic tachogenerator for feedback
- 10 Separate unit for motor in a see through cabinet



- 11 Smooth, non-contact eddy current brake for loading
- 12 Built-in 3½ digit DVM for signal measurements
- 13 Built-in IC regulated internal power supply
- 14 The unit is operative on 230V ±10% at 50Hz A.C. Mains
- 15 Adequate no. of patch cords stackable from rear both ends 4mm spring loaded plug length 50cm.
- 16 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
- 17 Dimension : W340 X H125 X D210 (mm)
- 18 Weight : 2Kg. (Approximately)

LIST OF ACCESSORIES:

- 01 Patch cord 4mm length 50cm Red & Black02
- 02 Cable 9-Pin male to 9-pin Female01
- 03 Motor Assembly.....01

OTHER APPARATUS REQUIRED:

- 01 Cathode Ray Oscilloscope 20MHz.
OMEGATYPE CRO-20

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

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