



OMEGA TYPE EM-25 has been designed to measure "e/m" by Helical Method.

Practical experience on this apparatus carries great educative value for Science & Engineering Students.

OBJECT

To determine the value of e/m for an electron by helical method

FEATURES

The apparatus consists of three parts :

- 01 A Cathode Ray Tube of 6 cm. dia mounted on two aluminum supports, so that it can be placed in the solenoid.
- 02 A solenoid of proper dimensions in the interior of which Cathode Ray Tube can be placed.
- 03 A power supply unit which consists of
 - 3.1 High Voltage Power Supply to operate the Cathode Ray Tube : The accelerating voltage can be varied from 700 to 1100 volts and a voltmeter has been provided to read the voltage.
 - 3.2 Power Supply to operate the solenoid : D.C. supply of 0 - 20, 30, 40, 50, 60 Volts in steps at 1.5 Amps. current which can be adjusted by means of a coarse control and fine rheostat. An Ammeter has been provided to read the current in the solenoid. A reversing switch is used to correct the extraneous magnetic field such as that of earth.
 - 3.3 A.C. Supply for the deflecting plates of the Cathode Ray Tube : A switch is provided so that voltage can be applied on X or Y plates. An A.C. voltmeter has been provided to read the voltage.
 - 3.4 Provision of D.C. voltage for spot adjustment.

- 04 Weight : 52 Kg. (Approx.)
- 05 Dimension : W445xH190 x D 290
- 06 POWER REQUIREMENT : 230V \pm 10% at 50 Hz A.C. Mains.
- 07 Strongly supported by detailed Operating Instructions.

CATHODE RAY TUBE DATA

- 01 Type : 8SJ31J
- 02 Distance between the edge of the Y Deflecting plate and the screen : $l_y = 12.5\text{Cm}$ (app.)
- 03 Distance between the edge of the X Deflecting plate and the screen : $l_x = 10.15\text{Cm}$ (app.)
- 04 Heater voltage : 6.3V AC/DC
- 05 Heater current : 0.6Amp. \pm 0.06Amp.
- 06 Focusing method : Electrostatic
- 07 Deflection method : Electrostatic
- 08 Phosphor fluorescence : Green
- 09 Persistence : Medium

SOLENOID DATA

- 01 Diameter : D = 12 cms
- 02 Length of the winding : L = 74 cms
- 03 Number of turns : N = 6000
- 04 Current carrying Capacity : 1.5 Amps.
- 05 Resistance : 20 to 22E approx
- 06 Inductance : 415mH approx

ACCESSORIES:

- 01 Patch cords 4mm length 100cm RED — 01
- 02 Patch cords 4mm length 100cm BLACK — 01

CAUTION

- 01 The breaking of the Cathode Ray Tube may cause explosion and result in personal injury from flying glass particles. Utmost care should, therefore, be taken when handling the tube.
- 02 Dangerous potentials as high as 1000V are employed in the power supply unit. They should be treated with proper care.

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

OMEGA ELECTRONICS

Works:
28E & F, Malviya Industrial Area,
Jaipur-302 017 (INDIA)
Phone: 0141-2751559

E-mail : info@omegaelectronics.net
: omegajaipur62@gmail.com

www.omegaelectronics.net

Marketing Division:
B-28, Fateh Singh Scheme, Opp. Rajputana
Palace Sheraton, Jaipur-302006 (INDIA)
Phone : 091-141-2375647, 2379223