



OMEGA TYPE ES-451: The Zeeman effect is the splitting of spectral lines of atoms when they are placed in a magnetic field. It exhibits space quantization and is one of the few fundamental atomic physics experiments which can be performed in a teaching laboratory.

OBJECT: Study of Zeeman effect: with external magnetic field hyper fine splitting.

Features:

The setup consists of the following:

01. Optical Bench 1 MTR with Transverse saddle/3nos
02. Fabry Perot Etalon High Resolution
03. Narrow Band Interference Filter (Quarter wave filter)
 - 3.1 Central Wave Length: 546nm
 - 3.2 T_{max}: 74%
 - 3.3 HBW: 8nm
04. Polarizer with Lens
05. Telescope with Focusing Lens
06. Mercury Discharge Tube (Low Pressure)
07. Power Supply (4KV AT 30 mA for Mercury Discharge Tube)
08. CCD Camera: (High Resolution CCD Camera)
09. Monitor 14 INCH

10. ELECTROMAGNET OMEGA TYPE EMU-10:

The electromagnet has the most widely used 'U' shaped soft iron yoke. The soft iron is of a special quality, structurally uniform, well machined and finished to meet the rigid standards.

Field intensity : 7.5 KG at 10mm air-gap which flat pole pieces.

Pole pieces : 50mm diameter.

Energising coils : Two, each a resistance of about 3.0 ohm.

Power requirement: 0-30V dc, 4A, its coils are connected in series.

11. CONSTANT CURRENT POWER SUPPLY.

OMEGA TYPE :- CCP-30/4

Current range: 0 - 4 Amp.

Load regulation: Better than 0.5% of the highest (No Load to Full Load) specified output current.

Line regulation: Better than $\pm 2\%$ of the specified output (For $\pm 10\%$ Mains Variation) current. Metering: 3 1/2 digit 7 segment LED DPM.

12. DIGITAL GAUSS METER DGM-020: Operates on the principle of Hall Effect in semiconductor. The small with HALL PROBE Hall Voltage is amplified through a high stability amplifier connected at the output of the amplifier can be calibrated directly in magnetic field unit (gauss).

Range : 0-2 KG & 0-20 KG.

Resolution : 1G at 0-2 KG range

Accuracy : $\pm 0.5\%$.

Special Feature : Indicate the direction of the magnetic field.

13. Weight : 58 Kg. (Approx.)

14. Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

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

OMEGA ELECTRONICS