



Portable Ammeters & Voltmeters are designed for the use in laboratories, field & test room where precision measurement is required. These portable instruments can be used in precision research laboratories where carefully controlled atmospheric conditions are secured, in educational institutions where possible misuses exist and in factories where these instruments are important for making calibration check on switchboard and panel instruments.

**SALIENT FEATURES:-**

- Knife edge Pointer & Anti-parallax mirror scale.
- Shock resistant Pivot jewel movement. The pivots are made from carbon steel hard chrome plated and are mounted in spring loaded sapphire jewels. This ensures shock resistance due to vibrations in transit and minimum friction during use.
- Tough Bakelite Case: The complete body of the instrument is made from superior grade of Bakelite and ABS. Unique design makes it strong in construction and at the same time provides very high insulation.
- Dust Proof: The moment is placed in a separate compartment making it completely dust proof, thus ensuring long life & years of trouble free service.
- Minimized Heating of Voltmeters or less internal heating due to low VA-loss: The resistance of Voltmeters are housed separately in a ventilated compartment making heating problems negligible.
- Quick Response due to unique damping.

<b>Model</b>	<b>MOVING IRON AC INSTRUMENT(MIACP)</b>
Description	Moving iron meter of 90° deflection
Movement Type	Moving iron spring-mounted jewel bearing suspension.
Accuracy	±1.0% (Regular), ± 0.5% ( <b>Precision Grade - Optional</b> ) of full scale as per IS 1248, EN60051
Self consumption	Ammeters (Up-to 5AAC), 0.6VA, Voltmeters (Up-to 500VAC) 5VA
Operating Voltage	600V RMS max
Test Voltage	2KV for 1 minute at 50Hz
Scale Length	Knife-edge Pointer with 140mm Length (approx)
Scale	Anti-parallax Mirror Scale
Casing/Housing	Bakelite Housing with ABS bottom base.
Temperature Conditions	-10°C ~ + 55°C, RH <90% (Operating), -10°C ~ + 70°C, RH <90% (Storing)

**MOVING IRON AC INSTRUMENTS** ⚡

\*Rated Accuracy : Class 1.0% of Full Scale value as per IS 1248/84, between 20% - 100% of scale.

Range	A.C. VOLTMETERS	A.C. AMMETERS
Single	0-15, 30V, 60V, 75V, 100V, 125V, 150V, 250V, 300V, 500V, 600V	0-50mA, 100mA, 250mA, 500mA, 1A, 2A, 5A, 10A, 20A, 25A, 30A, 40A, 50A, 60A, 75A, 100A
Double	0-15/30V, 30/60V, 62.5/125V, 75/150V, 125/250V, 150/300V, 250/500V, 300/600V	0-1/2A, 2.5/5A, 5/10A, 15/30A, 25/50A, 50/100A
Triple	0-30/60/120V, 75/150/300V, 62.5/125/250V, 125/250/500V, 150/300/600V	0-1/3/10A, 3/10/30A, 5/10/25A, 10/30/100A, 10/25/50A, 25/50/100A
Multiple	75/150/300/600V	0-1/3/10/30/100A, 5/10/25/50/100A

Carrying Case for the Bakelite Portable Meters are available as an optional accessory. To ensure longer service, the instrument should be preferably be housed in a carrying case, when stored or being transported in the field.

<b>Model</b>	<b>MOVING COIL AC RECTIFIER TYPE INSTRUMENT (MCACP)</b>
Description	Moving coil meter of 90° deflection with AC rectifier.
Movement Type	Moving coil with central magnetic core, spring-mounted bearing jewel suspension
Accuracy	±2.5% (regular) of full scale as per IS 1248, EN60051
Sensitivity	1000Ω/V (Voltmeter), 200Ω/V (Ammeter)
Operating Voltage	600V RMS max
Test Voltage	2KV for 1 minute at 50Hz
Scale Length	Knife-edge Pointer with 140mm Length (approx)
Scale	Anti-parallax Mirror Scale
Casing/Housing	Bakelite Housing with ABS bottom base.
Temperature Conditions	-10°C ~ + 55°C, RH <90% (Operating), -10°C ~ + 70°C, RH <90% (Storing)

## MOVING COIL AC RECTIFIER TYPE INSTRUMENTS

\*Rated Accuracy : Class 2.5% of Full Scale value as per IS 1248/84, between 20% - 100% of scale.

Range	A.C. VOLTMETERS	A.C. AMMETERS
Single	0-7.5V, 10V, 15V, 30V, 60V, 75V, 125V, 150V, 300V, 500V, 600V	0-10mA, 15mA, 20mA, 25mA, 50mA, 75mA, 100mA, 200mA, 250mA, 300mA, 500mA, 750mA 0-1A, 2A, 2.5A, 5A, 10A, 15A, 20A, 25A, 30A, (With built in CT)
Double	0-7.5/15V, 15/30V, 30/60V, 75/150V, 125/250V, 150/300V, 250/500V, 300/600V	
Triple	0-7.5/15/30V, 15/30/60V, 30/75/150V, 75/150/300V, 125/250/500V, 150/300/600V	

<b>Model</b>	<b>MOVING COIL DC INSTRUMENT (MCDCP)</b>
Description	Moving coil meter of 90° deflection.
Movement Type	Moving coil with central magnetic core, spring-mounted bearing jewel suspension
Accuracy	±1.0% (regular), 0.5% ( <b>Precision Grade - Optional</b> ) of full scale as per IS 1248, EN60051
Sensitivity	1000Ω/V (Voltmeter), 200Ω/V (Ammeter)
Test Voltage	2KV for 1 minute at 50Hz
Scale Length	Knife-edge Pointer with 140mm Length (approx)
Scale	Anti-parallax Mirror Scale
Casing/Housing	Bakelite Housing with ABS bottom base.
Temperature Conditions	-10°C ~ + 55°C, RH <90% (Operating), -10°C ~ + 70°C, RH <90% (Storing)

## MOVING COIL DC INSTRUMENTS

\*Rated Accuracy : Class 1.0% of Full Scale value as per IS 1248/84, between 10% - 100% of scale.

Ranges	D.C. VOLTMETERS	D.C. AMMETERS
Single	0-50mV, 75mV, 100mV, 150mV, 250mV, 500mV, 750mV, 1V, 3V, 7.5V, 10V, 15V, 30V, 60V, 75V, 100V, 150V, 250V, 300V, 500V, 600V	0-1mA, 2mA, 5mA, 10mA, 20mA, 50mA, 100mA, 200mA, 500mA, 750mA, 1A, 2A, 2.5A, 5A, 10A, 20A, 25A, 30A, 40A, 50A
Double	0-50/100mV, 75/150mV, 125/250mV, 150/300mV, 250/500mV, 300/600mV, 500/1000mV, 1.5/3V, 5/10V, 7.5/15V, 15/30V, 30/60V, 75/150V, 125/250V, 150/300V, 250/500V, 300/600V	0-1/2mA, 2.5/5mA, 5/10mA, 10/20mA, 15/30mA, 25/50mA, 50/100mA, 75/150mA, 100/200mA, 150/300mA, 250/500mA, 300/600mA, 500/1000mA, 1/2A, 2.5/5A, 5/10A, 10/20A, 15/30A, 25/50A
Triple	0-50/100/200mV, 75/150/300mV, 125/250/500mV, 150/300/600mV, 250/500/1000mV, 1.5/3/7.5V, 3/7.5/15V, 7.5/15/30V, 15/30/75V, 30/75/150V, 75/150/300V, 125/250/500V, 150/300/600V	
Multiple	0-50/100/250/500mV, 75/150/300/600mV, 125/250/500/1000mV, 1.5/3/7.5/15V, 3/7.5/15/30V, 7.5/15/30/60V, 15/30/75/50V, 30/75/150/300V, 75/150/300/600V, 0.3/1/3/10V, 3/10/30/100V, 30/100/300/600V	0.1/0.3/1/3mA, 1/3/10/30mA, 10/30/100/300mA, 0.1/0.3/1/3A, 1/3/10/30A

Meters with Centre '0' also available

Other ranges available on request. (Subject to Technical Feasibility)

**FOR DIMENSIONS KINDLY REFER PAGE NO. 83**