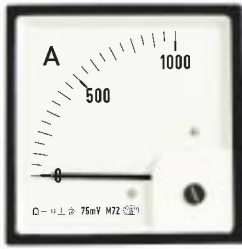




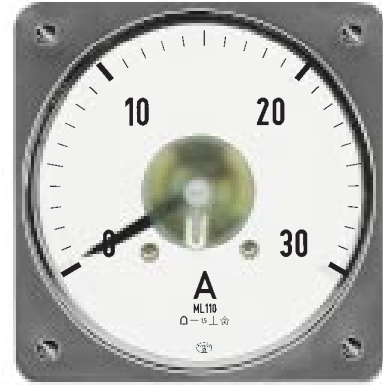
# DC Moving Coil DIN Panel Ammeters and Voltmeters



MQ72  
MQ96



ML72  
ML96  
ML144



ML110

Model	MQ72, MQ96	ML72, ML96, ML144, ML110
Description	Full Scale deflection 90°	Full Scale deflection 240°
Movement Type	Moving-coil with central magnetic Core; spring-mounted bearing jewel suspension	Moving-coil with central magnetic Core; spring-mounted bearing jewel suspension
Accuracy	± 1.5% of Full Scale	± 1.5% of Full Scale for ML96, ML144, ML110 ± 2.5% of Full Scale for ML72
Sensitivity	1000Ω/V (Voltmeter); 200Ω/V (Ammeter)	1000Ω/V (Voltmeter); 200Ω/V (Ammeter)
Operating Voltage	600 V RMS max.	600 V RMS max.
Test Voltage	2.5 KV for 1 minute at 50 Hz	2.5 KV for 1 minute at 50 Hz
Construction & Design	According to I.S.1248; IEC 51	According to I.S. 1248; IEC 51
Scale	According to DIN 43802	According to DIN 43802
Case	ABS	ABS
Dimensions and Panel cutout	Refer Dimensions	Refer Dimensions
Temperature Conditions	- 10°C to + 55°C, RH < 90% (Operating) and - 20°C to + 70°C, RH < 90% (Storage) EN60051	- 10°C to + 55°C, RH < 90% (Operating) and - 20°C to + 70°C, RH < 90% (Storage) EN60051
Front Protection	IP52 protection as per IS2147. IP54 (optional)	IP52 protection as per IS2147. IP54 (optional)
Terminal Protection	Back cover for IP20 terminal protection as per IS2147 (optional)	Back cover for IP20 terminal protection as per IS2147 (optional)

Ammeters				Voltsmeters	
μA	mA	A	On shunt	mV	V
	1 mA	1 A	-A/60 mV		1 V
	1.5 mA	1.5 A	-A/75 mV		1.5 V
	2 mA	2 A	-A/100 mV		2 V
	2.5 mA	2.5 A			2.5 V
	4 mA	4 A			4 V
	5 mA	5 A	5A/75 mV		5 V
	6 mA	6 A	6A/75 mV		6 V
	10 mA	10 A	10A/75 mV		10 V
	15 mA	15 A	15A/75 mV		15 V
	20 mA	20 A	20A/75 mV		20 V
	25 mA	25 A	25A/75 mV		25 V
	30 mA	30 A	30A/75 mV		30 V
	40 mA	40 A*	40A/75 mV		40 V
	50 mA	50 A	50A/75 mV	50 mV	50 V
	60 mA		60A/75 mV	60 mV	60 V
	75 mA		75A/75 mV	75 mV	75 V
100 μA	100 mA		100A/75 mV	100 mV	100 V
150 μA	150 mA		150A/75 mV	150 mV	150 V
250 μA	250 mA		250A/75 mV	250 mV	250 V
400 μA	400 mA		400A/75 mV	400 mV	400 V
500 μA	500 mA		500A/75 mV	500 mV	500 V
600 μA	600 mA		600A/75 mV and higher	600 mV	600 V

**Ordering Information** : Model, Input range, Scale

- Notes**
- Common to MQ and ML Series □ All other refer to M Series only
  - \* For ML72 DC direct current upto 1A. Above 1A, use with external shunt.
  - a) Double stamping/non-standard/centre zero marking available.
  - b) Zero suppressed DC ammeter for 4-20mA & voltmeter for 5-10V available.
  - c) Voltmeters with sensitivity 10 K Ohms/V available in 90°
  - d) Rubber gaskets for vibration proof available.
  - e) Terminal protection cover (optional) for Voltmeter and Ammeter (upto 5A)
  - f) External Shunts from 5A to 7500A of voltage drop 50/60/75mV available
  - g) Other ranges like expanded scale voltmeters etc. subject to technical feasibility

