

# PRECISION LOW CURRENT/HIGH VOLTAGE ELECTROMETER

## (A.C./D.C./PULSE)

### Introduction:

Precision low current/high voltage electrometers are available in 8 different regular models apart from tailor made solutions virtually covering all industrial and research applications meeting all electrical, thermal, mechanical, and environmental specifications. These indicators are first choice for online monitoring of low current/high voltage resistance measurement(A.C./D.C.).These finds applications in generation, transmission/distribution, defense, electrical/mechanical m/c testing instrument, industrial electronics, railway, and avionics and solid state physical application like dielectrics characterization, switch gears, MEMS and many research and development activities. These precision instruments are compatible to any standard or hall/shunt/thermocouple sensor and display with very high degree of accuracy/repeatability/reliability and are available in different constructional material like ceramic-coated MS, poly carbonate cabinets.

### Benefits:

- High input impedance/Low input biased current /higher accuracy/.
- 5-1/2 & 6-1/2 digit display /consistent performance
- ce over large temperature/humidity range (70°C and 80 % RH)
- Scaled directly in nano/pico/femto ampere with repeatable accuracy.
- Auto/manual zero offset without drift.
- Auto drift tracking
- RS-32 interface/high sample rate – 10,000 sample/second.
- Feed back current measurement technique.



MLCHVEM-0009991



MLCHVEM-0099991



MLCHVEM-9999992

### ELECTROMETER D.C./A.C. Range<999999 nano volt meter / 999999 pico amperemeter

Model	Range volt	Range 10 <sup>-9</sup> /10 <sup>-12</sup> /10 <sup>-15</sup> Ampere	Pulse/D.C./Pulse Frequency Range	Burdon	Accuracy Restricted to Resolution level	Resolution Quantified/ optional	Voltage/current source Volt/current/optional As demanded	INTERFACE
MLCHVEM-9999990101	10.0/5.0 -999999Nv 1.0 mV-10.0Volts	05.0/01.0 -999999nA 1.0 mA-10.0Amp	0-50K.Hz	< 100 micro-volts	99.99999%	5 nV/5nA	015 VOLTS/001.0 A	RS-232USB
MLCHVEM-9999990401	10.0/5.0 -999999Nv 1.0 mV-20.0Volts	05.0/01.0 -999999nA 1.0 mA-20.0Amp	0-50 k.Hz	< 100 micro volts	99.99999%	5 nV/5nA	040 VOLTS/001.0 A	RS-232/USB
MLCHVEM-9999990102	10.0/5.0 -999999Nv 1.0 mV-10.0Volts	10.0/05.0 -999999pA 0.001 m.A-1.00Amp	0-50K.Hz	< 100 micro volts	99.99999%	5 nV/5pA	015 VOLTS/001.0 A	RS-232/USB
MLCHVEM-9999990402	05.0/1.0 -999999Nv 1.0 mV-20.0Volts	10.0/05.0 -999999pA 0.001 m.A-2.00Amp	0-50 k.Hz	< 100 micro volts	99.99999%	5 nV/5pA	040 VOLTS/001.0 A	RS-232/USB
MLCHVEM-9999991002	05.0/1.0 -999999Nv 1.0 mV-99.9Volts	10.0/05.0 -999999pA 0.001 m.A-10.0Amp	0-50k. Hz	< 100 micro volts	99.99999%	5 nV/5pA	100 VOLTS/001.0 A	RS-232/USB
MLCHVEM-9999992002	05.0/1.0 -999999Nv 1.0 mV-199Volts	10.0/05.0 -999999pA 1.0 mA-199Amp	0-50 k.Hz	< 100 micro volts	99.99999%	5 nV/5pA	200 VOLTS/001.0 A	RS-232/USB
MLCHVEM-9999992003	05.0/1.0 -999999Nv 1.0 mV-199Volts	10.0/05.0 -999999fA 0.0001mA-10.0 mA	0-50 k.Hz	< 100 micro volts	99.99999%	5 nV/5fA	200 VOLTS/010.0m A	RS-232/USB

Six digit after product code indicate count, next, Two digit indicate voltage and last digit indicate 01- nano amp/02-pico amp/03-femto amp.

### General electrical/mechanical specifications:

Operating voltage: 220 volt A.C. (50-20,000 Hz)/ 12 volts D.C.  
 Measurement range (full scale): as above in different model.  
 Ampere meter signal: 10<sup>-9</sup>/10<sup>-12</sup>/10<sup>-15</sup>100 ampere AC/DC (optional)  
 Voltage measurement range: 0-40/0-100/0-500 volts-a.c. /D.C. (pulse mode H.V.)-optional  
 Input capacitance: 10 nF  
 Response time: 1000 sample/sec  
 Burden: less than 100 micro volt/full scales current or better  
 Accuracy: 0.5/1.0/2.0 % reading  
 Repeatability: 100 of reading  
 Resolution: 1/5 nV & 1/5 nano amps or optional and may be altered based on time behaviour of signal  
 Range (V/I -A.C./D.C.):10<sup>-09</sup>-10<sup>-04</sup>/10<sup>-4</sup>-10<sup>+1</sup> /10<sup>+1</sup>-10<sup>+3</sup> volt least count- 5.0 nano volt  
 10<sup>-12</sup>-10<sup>-07</sup> amp/10<sup>-7</sup>-10<sup>-2</sup>/10<sup>-02</sup>-10<sup>+2</sup> amp least count- 5.0 pico ampere  
 Linearity adjustment: upto 100 nano volt  
 Input imedence: ultra low(<1000 nano volt burden),  
 Filtering: low pass( adjustable)  
 Offset: variable upto 10,000 nano volts (manual/auto)  
 CMMR: >80 db at 50-60 Hz  
 Isolation: > 100 giga ohm  
 Connector: BNC-9 pinx2 and BNC-25 pinx2  
 Size: 5X8X8 inches/rack mounted or portable  
 Interface: RS-232

Option : ADDITIONAL SOFTWARE to plot V/I OR ANY DESIRED INFERENTIAL PARAMETER.

THESE SPECIFICATIONS OR PART THERE OF MAY BE MODIFIED TO MEET ANY TAILOR MADE SOLUTIONS.

NOTES: The numeral after product code indicates the ( ampere meter) range and last digit corresponds to size (5x5x8, 8x8x12)



MLCHVEM-9999990402

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