

# PRECISION L.C.R. ANALYZER

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

### Introduction:

Precision electrical inductance /capacitance/resistance analyzers 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 nano.Hironmental specifications. These analyzers are first choice for online monitoring of ultra low thermal measurement (upto  $10^{-9}$  Henry/ $10^{-12}$  farad/  $10^{-9}$  ohm) in static/dynamic mode. These finds applications in magnetic material characterization, allied phenomenon, electricity, MEMS, micro-biology, genetics, electro-chemical machining, generation, transmission/distribution, defense, electrical/mechanical m/c testing instrument, industrial electronics, railway, metallurgy and avionics and solid state physical application like dielectrics characterization, switch gears, and many solid-state physical application/research and development activities 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 over large temperature/humidity range (70°C and 80 % RH)
- Scaled directly in nano ampere with repeatable accuracy.
- Auto/manual zero offset without drift.
- Auto drift tracking
- RS-32 interface/high sample rate – 2000 sample/second.
- Feed back current measurement technique.



### Precision Inductance Analyzers static/dynamic.

Model	Henry (AC/DC)	Farad (AC/DC)	A.C./Pulse Hz	Burdon	Accuracy Restricted to Resolution level	Resolution/ Quantified optional	Voltage/current source	INTERFACE
MLCREM-9999990101	$10^{-08}$ - $10^{-0}$ - $10^{+02}$ - $10^{+08}$	$10^{-08}$ - $10^{-0}$ - $10^{+02}$ - $10^{+08}$	0-50K.Hz	< 100 - counts	99.99999%	5 nano.H/5nf	100 VOLTS/001.0 A	RS-232USB
MLCREM-9999990401	$10^{-08}$ - $10^{-0}$ - $10^{+02}$ - $10^{+08}$	$10^{-08}$ - $10^{-0}$ - $10^{+02}$ - $10^{+08}$	0-50 kHz	< 100 counts	99.99999%	5 nano.H/5nf	100 VOLTS/001.0 A	RS-232/USB
MLCREM-9999990102	$10^{-09}$ - $10^{-3}$ - $10^{+02}$ - $10^{+08}$	$10^{-09}$ - $10^{-3}$ - $10^{+02}$ - $10^{+08}$	0-50K.Hz	< 100 counts	99.99999%	5 nano.H/5nf	100 VOLTS/001.0 A	RS-232/USB
MLCREM-9999990402	$10^{-09}$ - $10^{-3}$ - $10^{+02}$ - $10^{+08}$	$10^{-09}$ - $10^{-3}$ - $10^{+02}$ - $10^{+08}$	0-50 kHz	< 100 counts	99.99999%	5 nano.H/5pf	100 VOLTS/001.0 A	RS-232/USB
MLCREM-9999991002	$10^{-12}$ - $10^{-6}$ - $10^{+02}$ - $10^{+08}$	$10^{-12}$ - $10^{-6}$ - $10^{+02}$ - $10^{+08}$	0-50k...Hz	< 100 counts	99.99999%	5 nano.H/5pf	100 VOLTS/001.0 A	RS-232/USB
MLCREM-9999992002	$10^{-12}$ - $10^{-6}$ - $10^{+02}$ - $10^{+08}$	$10^{-12}$ - $10^{-6}$ - $10^{+02}$ - $10^{+08}$	0-50 kHz	< 100 counts	99.99999%	5 nano.H/5pf	100 VOLTS/001.0 A	RS-232/USB
MLCREM-9999992003	$10^{-15}$ - $10^{-9}$ - $10^{+02}$ - $10^{+08}$	$10^{-15}$ - $10^{-9}$ - $10^{+02}$ - $10^{+08}$	0-50 kHz	< 100 counts	99.99999%	5 nano.H/5nf	100 VOLTS/001.0 A	RS-232/USB

### General electrical/mechanical specifications:

Operating voltage: 220 Volts A.C. (50Hz)

#### Mesurement range:

**Inductance range :**  $10^{-08}$ - $10^{-02}$ ...  $10^{-02}$ - $10^{+04}$  H in multiple of x10 ,upto 100,00 henrys least count- 10.0 nano- henry or as in data sheet upto range  
**Capacitance range :**  $10^{-15}$ - $10^{-09}$ ...  $10^{-04}$ - $10^{+02}$  farad in multiple of x10 ,upto 100 farad least count- 10.0 femto farad or as in data sheet upto range  
**Resistance range :**  $10^{-08}$ - $10^{-02}$ ...  $10^{+02}$ - $10^{+08}$  ohm in multiple of x10 ,upto 100 mega-ohm least count- 10.0 nano- ohm or as in data sheet upto range

#### Source range:

**Voltage :**  $10^{-06}$ - $10^{-0}$  in multiple of x10 ,upto 40.0 henrys least count- 1.0 henrys or as in data sheet

Input capacitance: 10 nF

Response time: 1000 sample/sec

Burden: less than 100 henry/full scale current

Accuracy: 0.5/1.0/2.0 % reading

Repeatability: 100 of reading

Resolution: 1/10 of least significant bit

Linearity adjustment: upto 100 nano henry

Input imedence: ultra low(<1000 nano henry burdon),

Filtering: low pass

Offset: variable upto 10,000 nano henrys (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)**

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