

<b>Laboratory</b>	<b>National Test House (SR), Calibration Laboratory, Tharamani, Chennai, Tamilnadu</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Electro-Technical Calibration</b>	<b>Issue Date</b>	<b>16.06.2014</b>
<b>Certificate Number</b>	<b>C-0791</b>	<b>Valid Until</b>	<b>15.06.2016</b>
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>SOURCE</u></b>			
<b>1. DC VOLTAGE<sup>\$</sup></b>	1 mV to 200 V 200 V to 1000 V	0.14% to 0.003% 0.003% to 0.002%	Using Fluke 5520A Calibrator
<b>2. DC CURRENT<sup>\$</sup></b>	190 $\mu$ A to 32 mA 32 mA to 3 A 3 A to 20A	0.028% to 0.012 % 0.012 % to 0.045% 0.045 % to 0.12 $\Omega$	Using Fluke 5520A Calibrator
<b>3. DC RESISTANCE<sup>\$</sup></b>	0.1m $\Omega$ 1m $\Omega$ 10m $\Omega$ 100m $\Omega$ 1 $\Omega$ to 10 $\Omega$ 10 $\Omega$ to 1 k $\Omega$ 10 k $\Omega$ to 1M $\Omega$ 1M $\Omega$ to 100 M $\Omega$ 100 M $\Omega$ to 1000 M $\Omega$	1.04% 0.21% 0.12% 0.11% 0.14% to 0.021% 0.021% to 0.005% 0.021% to 0.005% 0.005% to 0.072% 0.072% to 1.8%	Using Standard Resistors By Direct Method Using Fluke 5520A By Direct Method
<b>4. AC VOLTAGE<sup>\$</sup></b>	<b>45 Hz to 10 kHz</b> 3mV to 10 V 10 V to 100 V	0.3% to 0.03 % 0.3 % to 0.04 %	Using Fluke 5520 A Calibrator. By Direct Method
<b>5. AC CURRENT<sup>\$</sup></b>	<b>45 Hz to 1 kHz</b> 190 $\mu$ A to 300 $\mu$ A 300 $\mu$ A to 3 mA 3 mA to 32 mA  <b>45 Hz to 100 Hz</b> 32mA to 2.9 A 2.9 A to 10 A 10 A to 20 A	0.26% to 0.059 % 0.26% to 0.059 % 0.26% to 0.059 %  0.059 % to 0.079% 0.0795 to 0.096 % 0.096 % to 0.18 %	Using Fluke 5520 A Calibrator. By Direct Method  Using Fluke 5520 A Calibrator. By Direct Method

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	<b>Quantity Measured/ Instrument</b>	<b>Range / Frequency</b>	<b>*Calibration Measurement Capability (<math>\pm</math>)</b>	<b>Remarks</b>
<b>6.</b>	<b>AC POWER<sup>s</sup></b>	1 $\Phi$ , 50 Hz PF 0.2 to 1, 120 V to 240 V 10 mA to 20 A	0.14 % to 0.96 %	Using Fluke 5520 A Calibrator. By Direct Method
	<b><u>MEASURE</u></b>			
<b>1.</b>	<b>DC VOLTAGE<sup>s</sup></b>	100 $\mu$ V to 100 mV 100mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	0.036 % to 0.0013 % 0.0013 % to 0.0026 % 0.0026 % to 0.0007% 0.0007 % to 0.0024 % 0.0024 % to 0.001 %	Using Fluke 8508A Reference Multimeter By Direct Method
<b>2.</b>	<b>DC CURRENT<sup>s</sup></b>	10 $\mu$ A to 30mA 30 mA to 3 A 3 A to 20 A	0.03 % to 00032 % 0.0032 % to 0.034 % 0.034 % to 0.063 %	Using Fluke 8508A Reference Multimeter By Direct Method
<b>3.</b>	<b>DC RESISTANCE<sup>s</sup></b>	1 $\Omega$ to 100 $\Omega$ 100 $\Omega$ to 100 M $\Omega$ 100 M $\Omega$ to 1 G $\Omega$	0.0064 % to 0.0013 % 0.0013 % to 0.032 % 0.032 % to 1.6 %	Using Fluke 8508A Reference Multimeter By Direct Method
<b>4.</b>	<b>AC VOLTAGE<sup>s</sup></b>	<b>45 Hz to 1 kHz</b> 1 mV to 100mV 100mV to 20 V	2 % to 0.026 % 0.026 % to 0.072 %	Using Fluke 8508A Reference Multimeter By Direct Method

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	<b>Quantity Measured/ Instrument</b>	<b>Range / Frequency</b>	<b>*Calibration Measurement Capability (<math>\pm</math>)</b>	<b>Remarks</b>
<b>5.</b>	<b>AC CURRENT<sup>§</sup></b>	<b>300 Hz to 1 kHz</b> 100 $\mu$ A to 10 A	0.071 % to 0.14 %	Using Fluke 8508A Reference Multimeter By Direct Method
		<b>50 Hz to 1 kHz</b> 20 A	0.14 %	

\* Measurement Capability is expressed as an uncertainty ( $\pm$ ) at a confidence probability of 95%.

<sup>§</sup>Only in Permanent Laboratory