

**Laboratory** Calibration Laboratory, Central Power Research Institute, Sadashivnagar  
Sub Post Office, Bangalore, Karnataka

**Accreditation Standard** ISO/IEC 17025:2005

**Discipline** Electro-Technical Calibration **Issue Date** 25.10.2014

**Certificate Number** C-0076 **Valid Until** 24.10.2016

**Last Amended on** **Page** 1 of 4

Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b>SOURCE</b>			
1. AC Voltage Single Phase and Three Phase <sup>s</sup>	@50Hz 30 V to 480 V	0.021 % to 0.0094 %	Using POWER Source with Power/Energy Comparator By Direct / Comparison method
2. AC Current Single Phase and Three Phase <sup>s</sup>	@50Hz 10 mA to 120 A	0.07 % to 0.011%	Using POWER Source with Power/Energy Comparator By Direct / Comparison method
3. Power Factor <sup>s</sup>	@50Hz 320 V/120A UPF to 0.25 PF lead/Lag	0.001 PF	Using POWER Source with Power/Energy Comparator By Direct / Comparison method
4. Frequency <sup>s</sup>	45 Hz to 60 Hz	0.03 %	Using POWER Source with Power/Energy Comparator By Direct / Comparison method
5. Active/Reactive Power/Energy Single Phase and Three Phase <sup>s</sup>	@50Hz 30 V to 320 V 10 mA to 120 A UPF to 0.5 PF 0.5 PF to 0.25 PF lead/lag	0.012 % to 0.031 % 0.031 % to 0.12 %	Using POWER Source with Power/Energy Comparator By Direct / Comparison method

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>SOURCE</u></b>			
1. AC Voltage Single Phase and Three Phase*	@50Hz 30 V to 320 V	0.057 % to 0.062 %	Using POWER Source with Power/Energy Meter By Direct / Comparison method
2. AC Current Single Phase and Three Phase*	@50Hz 5 mA to 100 A	0.07 % to 0.08 %	Using POWER Source with Power/Energy Meter By Direct / Comparison method
3. Power Factor*	@50Hz 320 V/100 A UPF to 0.25 PF lead/Lag	0.055 PF	Using POWER Source By Direct / Comparison method
4. Frequency*	45 Hz to 60 Hz	0.041 %	Using POWER Source with Power/Energy Meter By Direct / Comparison method
5. Active/Reactive Power/Energy Single Phase and Three Phase*	@50Hz 40 V to 320V 100 mA to 100 A UPF to 0.5 PF 0.5 PF to 0.25 PF lead/lag	0.04 % to 0.059 % 0.059 % to 0.098 %	Using POWER Source with Power/Energy Meter By Direct / Comparison method

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Last Amended on Page 3 of 4

Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b>MEASURE</b>			
1. AC Voltage Single Phase and Three Phase <sup>s</sup>	@50Hz 30 V to 480 V	0.02 % to 0.007 %	Using Power/Energy Comparator By Direct / Comparison method
2. AC Current Single Phase and Three Phase <sup>s</sup>	@50Hz 10 mA to 160 A	0.07 % to 0.014 %	Using Power/Energy Comparator By Direct / Comparison method
3. Power Factor <sup>s</sup>	@50Hz 320 V/160 A UPF to 0.25 PF lead/Lag	0.001 PF	Using Power/Energy Comparator By Direct / Comparison method
4. Frequency <sup>s</sup>	45 Hz to 60 Hz	0.03 %	Using Power/Energy Comparator By Direct / Comparison method
5. Active/Reactive Power/Energy Single Phase and Three Phase <sup>s</sup>	@50Hz 30 V to 320 V 10 mA to 160 A UPF to 0.5PF 0.5 PF to 0.25 PF lead/lag	0.011 % to 0.031 % 0.031 % to 0.12 %	Using Power/Energy Comparator By Direct / Comparison method

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**Last Amended on** **Page** 4 of 4

Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b>MEASURE</b>			
1. AC Voltage Single Phase and Three Phase*	@50Hz 30 V to 320 V	0.057 % to 0.062 %	Using Power/Energy Meter By Direct/Comparison Method
2. AC Current Single Phase and Three Phase*	@50Hz 5 mA to 100 A	0.07 % to 0.08 %	Using Power/Energy Meter By Direct/Comparison Method
3. Power Factor*	@50Hz 320 V/100A UPF to 0.25 PF lead/Lag	0.055 PF	Using Power/Energy Meter By Direct/Comparison Method
4. Frequency*	45 Hz to 60 Hz	0.03 %	Using Power/Energy Meter By Direct/Comparison Method
5. Active/Reactive Power/Energy Single Phase and Three Phase*	@50Hz 40 V to 320 V 10 mA to 100 A UPF to 0.5 PF 0.5 PF to 0.25 PF lead/lag	0.028 % to 0.05 % 0.05 % to 0.092 %	Using Power/Energy Meter By Direct/Comparison Method

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

\$Only in Permanent Laboratory

\*Only for Site Calibration

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