

Laboratory Hi Physix Laboratory, K-12, Sector-2, DSIDC Industrial Area, Bawana, Delhi

Accreditation Standard ISO/IEC 17025:2005

Discipline Electro-Technical Calibration Issue Date 23.11.2016

Certificate Number C-0507 Valid Until 22.11.2018

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Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (\pm)	Remarks
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SOURCE

1. AC VOLTAGE [#]	50 Hz to 70 Hz 5 V to 80 V 80 V to 420 V	0.75 % to 0.16 % 0.16 % to 0.20 %	Using Power Calibrator C 200B (4 ½ Digit) by Direct Method
2. AC CURRENT [#]	50 Hz to 70 Hz 100 mA to 1 A 1 A to 10 A	0.78 % to 0.49 % 0.49 % to 0.28 %	Using Power Calibrator C 200B (4 ½ Digit) by Direct Method
3. FREQUENCY [#]	45 Hz to 70 Hz	0.17 %	Using Power Calibrator C 200B (4 ½ Digit) by Direct Method
4. POWER FACTOR [#]	50Hz 0.2PF to UPF	0.011 PF	Using Power Calibrator C 200B (4 ½ Digit) by Direct Method
5. RESISTANCE [#] (2 Wire)	0.1 Ω to 1 M Ω 1 M Ω to 1 G Ω	6.6 % to 1.13 % 1.13 % to 2.72 %	Using Decade Resistance Box (2W) by Direct Method

MEASURE

1. DC VOLTAGE ^{\$}	0.1 V to 100 mV 100 mV to 1 V 1 V to 100 V 100 V to 300 V	4.1 % to 0.4 % 0.4 % to 0.08 % 0.08 % 0.08 % to 0.035 %	Using Tektronix 4020, 5½ Digit DMM by Direct/ Comparison Method
2. DC HIGH VOLTAGE ^{\$}	1 kV to 5 kV	3.6 %	Using H.V. Probe & DMM by Direct Method

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Convenor

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Program Manager

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3. AC VOLTAGE [§]	50Hz 1 V to 750 V	0.5 % to 0.48 %	Using Tektronix 4020, 5½ Digit DMM by Direct Method
4. AC HIGH VOLTAGE [§]	50Hz 1 kV to 5 kV	3.9 %	Using H.V. Probe & DMM by Direct Method
5. DC CURRENT [§]	1 μ A to 100 μ A 100 μ A to 100 mA 100 mA to 1 A 1 A to 10 A	3.0 % to 0.085 % 0.085 % to 0.48 % 0.48 % to 0.49 % 0.49 %	Using Tektronix 4020, 5½ Digit DMM by Direct Method
6. AC CURRENT [§]	50 Hz to 1 kHz 100 mA to 1 A 1 A to 10 A	0.75 %	Using Tektronix 4020, 5½ Digit DMM By Direct Method
7. RESISTANCE [§] (2 Wire)	0.1 Ω to 1 Ω 1 Ω to 10 Ω 10 Ω to 100 k Ω 100 k Ω to 10 M Ω 10 M Ω to 100 M Ω	3.45 % 3.45 % to 0.22 % 0.22 % 0.22 % to 0.88 % 0.88 % to 2.5 %	Using Tektronix 4020, 5½ Digit DMM by Direct Method
8. FREQUENCY [§]	45 Hz to 70 Hz	0.16 % to 0.058 %	Using Tektronix 4020, 5½ Digit DMM by Direct Method
9. POWER FACTOR [§]	50 Hz 0.2 to UPF	0.007 PF	Using Digital Power Meter by Direct Method
10. AC POWER SINGLE PHASE UPF [§]	50Hz 10 V to 400 V 0.1 A to 20 A 1 W to 8 kW	1.08 % to 0.46 %	Using Digital Power Meter

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11. CT RATIO & PHASE ERROR ^{\$}	2.5/5 A to 600/5 A 0.25 Min. to 400 Min	0.3 % 0.3 %	Using Digital Power Meter Using CT Test System & Standard CT by Comparison Method
12. TIME INTERVAL ^{\$}	1 s to 9999 s	1 % to 0.15 %	Using Time Interval Meter by Comparison Method
13. HARMONICS DISTORTION ^{\$} (V&I)	2 nd to 39 th Order	0.35 %	Using Harmonic Analyzer V&I by Direct Method
14. CAPACITANCE ^{\$}	1 nF to 3 mF	5.5 % to 1.9 %	Using 5½ Digit DMM, Rish Multi 20 by Direct Method

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

^{\$}Only in Permanent Laboratory

[#]The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

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