

Laboratory

Birla Institute of Scientific Research, 27, Malviya Industrial Area,
Jaipur, Rajasthan

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number

CC-2841 (In lieu of C-0118)

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Validity

20.10.2018 to 19.10.2020

Last Amended on -

	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>ELECTRO TECHNICAL CALIBRATION</u>				
I.	SOURCE			
1.	DC Voltage ^{\$}	330 mV to 1000 V	0.012%	Using Fluke Multi Product Calibrator 5500A by Direct Method
2.	DC Current ^{\$}	3.3. mA to 100 mA 100 mA to 1.0 A 1A to 10 A	0.07 % to 0.025% 0.025% to 0.076% 0.076% to 0.11%	Using Fluke Multi Product Calibrator 5500A by Direct Method
3.	AC Voltage ^{\$}	50Hz to1 kHz 3.3. mA to 100 mA 100 mA to 10 A	0.22 % to 0.14 % 0.14% to 0.13%	Using Fluke Multi Product Calibrator 5500A by Direct Method
4.	AC Current ^{\$}	50Hz to1 kHz 3.3. mA to 100 mA 100 mA to 10 A	0.22 % to 0.14% 0.14% to 0.13%	Using Fluke Multi Product Calibrator 5500A by Direct Method
5.	Frequency ^{\$}	10 Hz to 1 MHz	0.05 % to 0.007%	Using Fluke Multi Product Calibrator 5500A by Direct Method
6.	Resistance ^{\$} (4 Wire)	0.001 Ω 0.01 Ω 0.1 Ω 1.0 Ω 10 Ω	0.05 % 0.05 % 0.05 % 0.05 % 0.05 %	Using Standard Resistance (Discrete Values) by VSI Method
7.	DC Variable Resistance ^{\$} (2 Wire)	10 Ω to 100 Ω 100 Ω to 10 k Ω 10 k Ω to 100 k Ω 100 k Ω to 1M Ω 1 M Ω to 10 M Ω 10 M Ω to 100 M Ω	0.2 % to 0.027 0.027 % to 0.017 0.017 % to 0.02 % 0.02 % to 0.025 % 0.025 % to 0.13 % 0.13 % to 0.16 %	Using Fluke Multi Product Calibrator 5500A by Direct Method

Dheeraj Chawla
Convenor

Srikanth R
Program Manager

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8.	High Resistance ^s	2.0 Ω 20.0 Ω 200.0 Ω 1000 M Ω 2000 M Ω	2.28 2.28 2.28 2.28 2.28	Using Variable Resistance by Direct Method
9.	AC Power ^s	50 Hz UPF 40 to 600 V 0.01 A/10 A	0.17 %	Using Fluke Multi Product Calibrator 5500A by Direct Method
10.	AC Power ^s 50 Hz PF=0.5	240 V/0.1 A to 10A	0.55 %	Using Fluke Multi Product Calibrator 5500A by Direct Method
11.	DC Power ^s	10 to 600 V/ 100 mA to 10 A	0.16 %	Using Fluke Multi Product Calibrator 5500A by Direct Method
II.	MEASURE			
1.	DC Voltage ^s	1 mV to 100 mV 100 mV to 1 V 1 V to 1000 V	0.5 % to 0.01 % 0.01 % to 0.005 % 0.005 % to 0.006 %	Using 6½ Digit DMM Agilent 34401 A by Direct Method
2.	DC Current ^s	10 mA to 100 mA 100 mA to 1 A 1 A to 3 A	0.08 % to 0.062 % 0.062 % to 0.13 % 0.13 % to 0.17 %	Using 6½ Digit DMM Agilent 34401 A by Direct Method
3.	AC Voltage ^s	50 Hz 10 mV to 100 mA 100 mA to 1 V 1 V to 750 V	1.0 % to 0.55 % 0.55 % to 0.11 % 0.11 % to 0.005 %	Using 6½ Digit DMM Agilent 34401 A by Direct Method
4.	AC Current ^s	50 Hz 100 mV to 1A 1 A to 3 A	0.56 % to 0.17 0.17% to 0.25 %	Using 6½ Digit DMM Agilent 34401 A by Direct Method

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5.	Frequency [§]	10 Hz to 100 Hz 100 Hz to 100 kHz	0.1 % to 0.057 % 0.057 % to 0.012%	Using 6½ Digit DMM Agilent 34401 A by Direct Method
6.	DC Resistance [§] (2 Wire)	10 Ω to 100 Ω 100 Ω to 1 k Ω 1 k Ω to 10 M Ω 10 M Ω to 100 M Ω	0.05 % to 0.016% 0.016 % to 0.017 % 0.017 % to 0.05 % 0.05 % to 0.93 %	Using 6½ Digit DMM Agilent 34401 A by Direct Method
7.	CT [§] Ratio Error Phase Error	5-10-25-50 100A/5 A	0.07 % 3.7 min	Using CT Bridge and Standard CT by Comparison Method

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95.45%

[§]Only in Permanent Laboratory

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