

Laboratory	Sarrc Test House, Plot No-100, Sector 29, Faridabad, Haryana		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Electro-Technical Calibration	Issue Date	28.01.2015
Certificate Number	C-0706	Valid Until	27.01.2017
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>SOURCE</u>			
1. DC VOLTAGE^{\$}	1 mV to 200 mV > 200 mV to 2 V > 2 V to 200 V > 200V to 1000 V	0.31 % to 0.12 % 0.12 % to 0.13 % 0.13 % to 0.13 % 0.13 % to 0.13 %	Using Zeal MFC 5½ Digit by Direct Method
2. DC CURRENT[#]	1mA to 200 mA > 200 mA to 1 A > 1 A to 10 A > 10 A to 20 A > 20 A to 1000A > 1000 A to 1900 A	0.15 % to 0.13 % 0.13 % to 0.14 % 0.14 % to 0.21 % 0.21 % to 0.27 % 0.27 % to 0.32 % 0.32 % to 0.33 %	Using Zeal MFC 5½ Digit With Current Coil by Direct Method
3. AC VOLTS[#]	50 Hz 1 mV to 200 mV > 200 mV to 2 V > 2 V to 750 V	0.42 % to 0.21 % 0.21 % to 0.24 % 0.24 % to 0.21 %	Using Zeal MFC 5½ Digit by Direct Method
4. AC CURRENT[#]	50 Hz 1 mA to 200 mA > 200 mA to 1 A > 1 A to 10 A > 10 A to 20 A > 20 A to 1000 A > 1000 A to 1900 A	0.31 % to 0.21 % 0.21 % to 0.17 % 0.17 % to 0.32 % 0.31 % to 0.27 % 0.27 % to 0.32 % 0.32 % to 0.41 %	Using Zeal MFC 5½ Digit With Current Coil by Direct Method
5. FREQUENCY[#]	50 Hz to 1kHz	0.27 % to 0.20 %	Using Zeal MFC 5½ Digit by Direct Method
6. DC RESISTANCE 2W/4 W^{\$}	1 Ω to 100 Ω 100 Ω to 10k Ω 10k Ω to 1M Ω 1M Ω to 100M Ω	0.47 % to 0.11 % 0.11 % to 0.11 % 0.11 % to 0.12 % 0.12 % to 1.10 %	Using Std. Resistance box- zeal

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Convenor

Avijit Das
Program Manager

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7. TEMPERATURE STIMULATION-TEMPERATURE INDICATOR/ CONTROLLER[#]			
RTD	(-)199 °C to 600 °C	1.5 °C	Using Universal Calibrator (Radix) + ITS-90 by Direct Method
THERMOCOUPLE			
TYPE 'J'	0 °C to 760°C	2.48 °C	
TYPE 'K'	(-)199 °C to 1370°C	2.48 °C	
TYPE 'R'	0 °C to 1700°C	2.48 °C	
TYPE 'S'	0 °C to 1750°C	2.48 °C	
TYPE 'T'	(-)199 °C to 400°C	2.48 °C	
TYPE 'B'	400 °C to 1800°C	2.48 °C	
8. DC VOLTAGE[#]	1 mV to 200 mV > 200 mV to 2 V > 2 V to 200 V > 200 V to 1000 V	0.31 % to 0.12 % 0.12 % to 0.13 % 0.13 % to 0.13 % 0.13 % to 0.13 %	Using Zeal MFC 5½ Digit by Direct Method
<u>MEASURE</u>			
1. DC CURRENT^{\$}	1mA to 200 mA >200 mA to 1 A >1 A to 10 A	0.080 % to 0.064 % 0.064 % to 0.085 % 0.085 % to 0.21 %	Using Fluke 8846A 6½ DMM by Comparison/Direct Method
2. AC VOLTAGE^{\$}	50 Hz 5 mV to 200 mV >200 mV to 2 V >2 V to 200 V >200 V to 1000 V	0.13 % to 0.11 % 0.11 % 0.11 % to 0.096 % 0.096 %	Using Fluke 8846A 6½ DMM by Comparison/Direct Method
3. AC CURRENT^{\$}	50 Hz 1mA to 200 mA >200 mA to 1A >1A to 10A	0.17 % to 0.23 % 0.23 % to 0.17 % 0.17 % to 0.25 %	Using Fluke 8846A 6½ DMM by Comparison/Direct Method

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
4.	RESISTANCE 2W/4 W^{\$}	1 Ω to 100 Ω >100 Ω to 10kΩ >10 kΩ to 1 MΩ >1 MΩ to 100 MΩ >100 MΩ to 900 MΩ	0.15 % to 0.017 % 0.017 % to 0.013 % 0.013 % to 0.030 % 0.030 % to 0.94 % 0.94 % to 2.32 %	Using Fluke 8846A 6½ DMM by Direct Method
5.	FREQUENCY^{\$}	10 Hz to 100 kHz	0.096 % to 0.072 %	Using Fluke 8846A 6½ DMM by Direct Method
6.	CAPACITANCE^{\$}	1nF to 100 nF >100 nF to 1μF >1μF to 3.3 μF	1.79 % to 0.46 % 0.46 % to 0.48 % 0.48 % to 0.98 %	Using Fluke 8846A 6½ DMM by Direct Method
7.	STOP WATCH/TIMER^{\$}	10 s to 900 s 0 to 30 Minute 0 to 90 Minute 0 to 999 Minute	0.59 % 0.61 % 0.58 % 0.58 %	Using Digital Timer by Comparison Method

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

^{\$}Only in Permanent Laboratory

^{*}Only for Site Calibration

[#] 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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