

Laboratory ASKIB Engineers Private Limited, 86 D, Dr. Suresh Sarkar Road,
 Kolkata, West Bengal
Accreditation Standard ISO/IEC 17025: 2005
Discipline Electro-Technical Calibration **Issue Date** 20.11.2014
Certificate Number C-1157 **Valid Until** 19.11.2016
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>SOURCE</u>			
1. DC VOLTAGE ^{\$}	1 mV	1.443 %	Using ZEAL Multi Function Calibrator By Direct Method
	100 mV	0.24 %	
	10 V	0.24 %	
	1000 V	0.24 %	
2. DC CURRENT ^{\$}	1 mA	0.64 %	Using ZEAL Multi Function Calibrator By Direct Method
	100 mA	0.25 %	
	10 A	0.34 %	
3. AC VOLTAGE ^{\$}	50 Hz		Using ZEAL Multi Function Calibrator By Direct Method
	10 mV	2.31 %	
	100 mV	0.47 %	
	10 V	0.435 %	
	1000 V	0.43 %	
4. AC CURRENT ^{\$}	50 Hz		Using ZEAL Multi Function Calibrator By Direct Method
	100 mA	0.40 %	
	10 A	1.2 %	
5. RESISTANCE ^{\$}	1 Ω	4.06 %	Using Decade Resistance Box By Direct Method
	10 Ω	1.183 %	
	1 G Ω	3.46%	
6. FREQUENCY ^{\$}	45 Hz	0.60 %	Using ZEAL Multi Function Calibrator By Direct Method
	990 Hz	0.213 %	

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 Program Manager

Sangeeta Kunwar
 Convenor

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
7. CAPACITANCE^s	1 kHz		
	1 nF	5.39 %	Using Decade Capacitance Box By Direct Method
	10 μ F	3.70%	
8. INDUCTANCE^s	1 kHz		
	1 mH	4.00 %	Using Decade Capacitance Box By Direct Method
	10 H	4.00 %	
9. Temperature Simulation[#] (Controller/ Indicator/ Recorder)			
RTD	-200°C	0.16 %	Using Process Calibrator 754 By Direct Method
	800°C	0.36%	
T – Type T/C	-200°C	0.87 %	
	400°C	0.41 %	
S – Type T/C	0°C	1.58°C	
	1700°C	1.58°C	
J – Type T/C	-200°C	0.49 %	
	1200°C	0.6 %	
N – Type T/C	-200°C	0.85 %	
	1300°C	0.5 %	
K – Type T/C	-200°C	0.62 %	
	1300°C	0.5 %	
R – Type T/C	0°C	1.5°C	
	1700°C	1.5°C	
E – Type T/C	-200°C	0.7 %	
	1000°C	0.43 %	
B – Type T/C	600°C	1.3 %	
	1800°C	1.0 %	

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>MEASURE</u>			
1. DC VOLTAGE^{\$}	100 μ V	4.05 %	Using Digital Multimeter 6.5 By Direct Method
	100 mV	0.20 %	
	10 V	0.08 %	
	1000 V	0.08 %	
2. DC CURRENT^{\$}	100 μ A	0.12 %	Using Digital Multimeter 6.5 By Direct Method
	100 mA	0.50 %	
	10 A	0.33 %	
3. AC VOLTAGE^{\$}	50 Hz		Using Digital Multimeter 6.5 By Direct Method
	100 mV	0.23 %	
	10 V	0.4 %	
	1000 V	0.2 %	
4. AC CURRENT^{\$}	50 Hz		Using Digital Multimeter 6.5 By Direct Method
	20 mA	0.7 %	
	100 mA	0.62 %	
5. RESISTANCE^{\$}	1.25 Ω	0.76 %	Using Digital Multimeter 6.5 By Direct Method
	10 Ω	0.40 %	
	1 M Ω	0.17 %	
	100 M Ω	1.11 %	
6. FREQUENCY^{\$}	10 Hz	0.11 %	Using Digital Multimeter 6.5 By Direct Method
	1 MHz	0.082 %	

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7. CAPACITANCE	10 nF 10 μ F	3.0 % 3.01 %	Using Digital Multimeter 6.5 By Direct Method
8. STOP WATCH ^s (Digital/Analog)	5 min to 24 hr	3.55 %	Using Digital Stop Watch By Comparison Method
9. AC HIGH VOLTAGE [#]	1 kV to 25 kV	6.11 %	Using H.V probe with DMM
10 Temperature Simulation [#] (Temperature Source/ Temperature Calibrator)			
RTD	-200°C 800°C	0.19 0.32	Process Calibrator 754 By Direct Method
T – Type T/C	-200°C 400°C	1.00 0.41	
S – Type T/C	0°C 1700°C	1.67°C 1.67°C	
J – Type T/C	-200°C 1200°C	0.78 0.73	
N – Type T/C	-200°C 1300°C	1.25 0.78	
K – Type T/C	-200°C 1300°C	0.91 0.88	
R – Type T/C	100°C 1700°C	1.56°C 1.56°C	

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
E – Type T/C	-200°C	1.62	
	1000°C	0.59	
B– Type T/C	600 °C	1.8	
	1800 °C	1.4	

* Measurement Capability is expressed as an uncertainty (\pm) 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.