National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

HI-TECH CALIBRATION & TESTING LLP

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

GALA NO. 60, ROYAL INDUSTRIAL HUB, VILL. VALWADA, UMBERGAON, VALSAD, GUJARAT, INDIA

in the field of

CALIBRATION

Certificate Number: CC-2478

Issue Date: 04/01/2025 **Valid Until:** 03/01/2029

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of thislaboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: HI-TECH CALIBRATION & TESTING LLP

Signed for and on behalf of NABL

Anita Rani
Director

N. Venkateswaran
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : HI-TECH CALIBRATION & TESTING LLP, GALA NO. 60, ROYAL INDUSTRIAL HUB, VILL. VALWADA, UMBERGAON, VALSAD, GUJARAT, INDIA

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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using 8½ Digit Digital Reference Multimeter with 6½ Digit Multiproduct calibrator by Direct/Comparison method	10 µA to 30 µA	0.08 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	100 mA to 1 A	0.01 % to 0.1 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	30 µA to 100 mA	0.04 % to 0.007 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 5 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method:	1 A to 30 A	0.05 % to 0.32 %
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using Multiproduct Calibrator with Current Coil and Clamp Meter by Comparison method	20 A to 1000 A	3 %

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6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50Hz	Using High Voltage Probe with Digital Multimeter and High Voltage Divider with H.V Source by Direct/Comparison method	1 kV to 20 kV	1.8 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50Hz	Using High Voltage Divider with kV meter by Direct method	1 kV to 20 kV	6.04 % to 1.8 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50Hz	Using High Voltage Probe with Digital Multimeter and High Voltage Divider with H.V Source by Direct/Comparison method	20 kV to 100 kV	1.8 % to 2.43 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 100 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	3 V to 329.999 V	0.04 %
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 500 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	0.3 V to 3 V	0.08 % to 0.1 %

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11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 500 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	1 mV to 32.999 mV	0.8 % to 0.15 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 500 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	33 mV to 329.99 mV	0.15 % to 0.08 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz to 10 kHz	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	330 V to 1020 V	0.1 % to 0.07 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy 30 to 520 ACV 0.001A to 12A, 50 Hz, 1P2W, 3P3W, 3P4W, PF=0.001 Lead/Lag to 1.00000 UPF	Using Power/Energy Reference meter with source(single or three phase) by Direct and Comparison method	1 Wh to 1 kWh	0.025 % to 0.1 %
15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy 30 to 520 ACV 0.050A to 100A, 50 Hz, 1P2W, 3P4W, PF = 0.3 Lag to UPF to 0.2 Lead.	Using Power/Energy Reference meter with source (single/ Three Phase) with CT by Direct and Comparison Method	50 Wh to 85 kWh	0.9 %

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16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power 30 to 520 ACV 0.001A to 12A, 50 Hz, 1P2W, 3P4W, PF=0.2 Lead/Lag to 1.00000 UPF	Using Power/Energy Reference meter with source (single or three phase) @12 A by Direct and Comparison method	300 mW to 3.45 kW	0.02 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy 30 to 520 ACV, 0.001 A to 12A, 50 Hz, 1P2W, 3P4W, 0.2 Lead/Lag to UPF	Using Power/Energy Reference meter with source (single or three phase) by Direct and Comparison method	1 VAh to 1 kVAh	0.025 % to 0.1 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power 30 to 520 ACV 0.001 A to 12 A, 50 Hz, 1P2W, 3P4W, 0.2 Lag/Lead to UPF	Using Power/Energy Reference meter with source (single or three phase) by Direct and Comparison method	300 mVA to 3.45 kVA	0.1 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @ 1kHz	Using 8½ Digit Digital Reference Multimeter or LCR meter with 6½ digit Multiproduct Calibrator by Direct and Comparison method	1 nF to 1 mF	0.5 % to 1.4 %
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance	Using LCR meter with Decade box by Direct/Comparison method	1 H to 10 H	1.4 % to 3.4 %
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance	Using LCR meter with Deacde box by Direct/Comparison method	1 mH to 100 mH	14.8 % to 2.34 %

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22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance	Using LCR meter with Decade box by Direct/Comparison method	100 mH to 1 H	2.34 % to 1.4 %
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Phase Angle @ 50+/-5 Hz, 0.001 (Lag/Lead) to 1 UPF, 1mA to 500A	Using Reference Power/Energy Comparator with CT Clamp and source By Direct and Comparison Method	0 ° to 340 °	0.005 °
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor 0.001 (Lag/Lead) to 1 UPF	Using Reference Power/Energy Comparator with CT Clamp and Source By Direct and Comparison Method:	0.2 Lag to UPF to 0.2 Lead @ 50+/-5Hz	0.005 PF
25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy 30 to 300 ACV 0.001 A to 12 A,50 Hz, 1P2W, 3P4W, PF=0.2 Lead/Lag to 1.00000 UPF	Using Power/Energy Reference meter with Source(single or three phase) by Direct and Comparison method	0.02 kVArh to 0.73 kVArh	0.1 %
26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power 30 to 300 ACV 0.001A to 12A, 50 Hz, 1P2W, 3P4W, PF=0.2 Lead/Lag to 1.00 UPF	Using Power/Energy Reference meter with Source (single or three phase) by Direct and Comparison method	1 VAr to 300 VAr	0.1 %
27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 10 Hz to 440 Hz	Using 6½ Digit Multiproduct Calibrator by Direct method	1 A to 20 A	0.1 % to 0.4 %

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28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 10 Hz to 440 Hz	Using 6½ Digit Multiproduct Calibrator with Current Coils by Direct method	20 A to 1000 A	0.5 % to 0.8 %
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 10 Hz to 440 Hz	Using 6½ Digit Multiproduct Calibrator by Direct method	30 µA to 1 A	1.2 % to 0.1 %
30	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45 Hz to 100 kHz	Using 6½ Digit Multiproduct Calibrator by Direct method	1 mV to 1 V	0.75 % to 0.05 %
31	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45 Hz to 100 kHz	Using 6½ Multiproduct Calibrator by Direct method	1 V to 1000 V	0.05 % to 0.07 %
32	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Active Energy Up to 230V, 2.5A- 5A, 50 Hz, PF= 0.5 to UPF (3 Phase 4 wire)	Using 3 Phase Energy Source & load manager by Direct method	862.5 Wh to 3.45 kWh	1.5 % to 2.5 %
33	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Active Power 0 to 300 V, 10mA to 500A, 50 Hz 1P2W, 3P3W, 3P4W, PF=0.01 Lead/Lag to 1.0 UPF	Using 1/3 Phase Power Base Source & load manager by Direct method	1 W to 1.8 kW	0.9 %
34	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1kHz	Using 6½ Digit Multiproduct Calibrator or Decade Box by Direct method	1 nF to 1 mF	0.7 %

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35	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Inductance Decade Box by Direct method	0.1 mH to 1000 mH	3.2 % to 0.3 %
36	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Inductance Decade Box by Direct method	1 H to 11.11 H	1.4 %
37	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Phase Angle @ 50+/-5 Hz, 0.001 (Lag/Lead) to 1 UPF 1 mA to 500A	Using 1/3 Phase Power Base Source & load manager by Direct method	0° to 340°	0.005°
38	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power Factor 0.001 (Lag/Lead) to 1 UPF	Using 1/3 Phase Power Base Source & load manager by Direct method	0.2 Lag to UPF to 0.2 Lead @50+/-5 Hz	0.005 PF
39	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	1 µA to 100 mA	0.2 % to 0.072 %
40	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Multiproduct Calibrator with Current Coil and Clamp meter By Comparison Method	1 A to 1000 A	11.3 % to 3 %

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41	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	1 A to 30 A	0.032 %
42	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	100 mA to 1 A	0.072 % to 0.05 %
43	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High voltage probe with DMM By Direct Method	1 kV to 20 kV	6.04 % to 1.8 %
44	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High voltage probe with DMM and High Voltage Divider With H.V Source By Direct and Comparison Method	20 kV to 100 kV	1.8 % to 2.06 %
45	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	0.1 mV to 1mV	0. 328 % to 0.033 %

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46	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	1 mV to 100 mV	0.033 % to 0.001 %
47	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	10 V to 1000 V	0.002 %
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8½ Digit Digital Reference Multimeter and 6½ digit Multiproduct Calibrator by Direct/Comparison method	100 mV to 10 V	0.001 % to 0.002 %
49	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 8½ Digit Digital Reference Multimeter and LCR meter with source By Direct and Comparison Method	1 mohm to 100 mohm	0.06 % to 0.6 %
50	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 8½ Digit Digital Reference Multimeter and LCR meter with source By Direct and Comparison Method	100 mohm to 1 ohm	0.6 % to 0.0025 %
51	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance upto 1 kV	Using 8½ Digit Digital Reference Multimeter with source By Direct and Comparison Method	1 ohm to 100 kohm	0.0025 % to 0.58 %

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52	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance upto 1 kV	Using 8½ Digit Digital Reference Multimeter with source By Direct and Comparison Method	100 kohm to 10 Mohm	0.58 % to 0.003 %
53	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance(2 Wire) upto 1 kV	Using 8½ Digit Digital Reference Multimeter with Source By Direct and Comparison Method	1 Gohm to 10 Gohm	0.3 % to 3 %
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance(2 Wire) upto 1 kV	Using 8½ Digit Digital Reference Multimeter with source By Direct and Comparison Method	10 MOhm to 1000 MOhm	0.003 % to 0.3 %
55	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using 6½ Digit Multiproduct Calibrator By Direct method	1 µA to 100 µA	0.08 %
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC current	Using 6½ Digit Multi Product Calibrator By Direct method	10 A to 20 A	0.31 % to 0.7 %
57	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC current	Using 6½ Digit Multiproduct Calibrator By Direct Method	100 µA to 100 mA	0.08 %
58	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC current	Using 6½ Digit Multiproduct Calibrator By Direct Method	100 mA to 10 A	0.08% to 0.31 %

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59	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC current	Using 6½ Digit Multiproduct Calibrator with Current Coil By Direct Method	20 A to 1000 A	0.7 %
60	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using 6½ Digit Multiproduct Calibrator or Standard Resistance Decade Box By Direct Method	0.05 mohm to 1 mohm	1.65 %
61	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using Resistance Decade Box By Direct method	1 mohm to 1 ohm	1.0 % to 0.4%
62	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance @ 1 kV	Using Standard Resistance Decade Box By Direct method	1 Gohm to 100 Gohm	1 %
63	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance @ 5 kV	Using Resistance High Voltage Decade Box	100 Gohm to 1000 Gohm	1.5 %
64	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance upto 1 kV	Using 6½ Digit Digital Multifunction by Direct method	1 ohm to 100 Mohm	0.15 % to 0.2 %
65	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance upto 1 kV	Using 6½ Digit Digital Multiproduct Calibrator by Direct Method	100 Mohm to 1000 Mohm	0.2 % to 0.3 %

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66	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance upto 1 kV	Using Resistance Decade Box By Direct method	11 Mohm to 1000 Mohm	0.25 % to 0.75 %
67	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance(2 Wire) upto 1 kV	Using Resistance Decade Box By Direct method	1 ohm to 11.11 Mohm	0.4 % to 0.1 %
68	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using 6½ Digit Multiproduct Calibrator By Direct Method	0.1 mV to 1 mV	0.6 %
69	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using 6½ Digit Multiproduct Calibrator By Direct method	1 mV to 100 mV	0.6 % to 0.01 %
70	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using 6½ Digit Multiproduct Calibrator By Direct method	100 mV to 1000 V	0.01 % to 0.01%
71	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Conductivity meter (50 ohm to 1000 Gohm)	Using Decade Resistance Box By Direct Simulation Method	1 µS/cm to 2000 µS/cm	2.4 %
72	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Insulation Resistance @ 5 kV	Using Standard Resistance Decade Box by Direct Method	1 ohm to 1 Tera ohm	0.03 % to 2.5 %

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73	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Insulation Resistance @ up to 1000 V	Using Standard Resistance Decade Box by Direct Method	100 kohm to 1000 Mega ohm	0.62 %
74	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Insulation Resistance @1 kV	Using Standard Resistance Decade Box by Direct Method	1 ohm to 100 Giga ohm	0.03 % to 1 %
75	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oxidation Reduction, Potential meter	Using 6½ Digit Multiproduct Calibrator or Universal Calibrator By Direct Simulation Method	(-)414 mV to 414 mV	0.1 %
76	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	pH meter (- 500 mV to 500 mV)	Using 6½ Digit Multiproduct Calibrator or Universal Calibrator By Direct Simulation Method	0 pH to 14 pH	0.1 %
77	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	TDS meter (1 ohm to 1000 Gohm)	Using Decade Resistance Box By Direct Simulation Method	1 ppm to 999 ppm	1.06 % to 0.1 %
78	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	(-)250°C to 1820°C	0.43 °C
79	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	(-)250 °C to 1000 °C	0.27 °C

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80	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	(-) 200 °C to 800 °C	0.30 °C
81	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	760 °C to 1200 °C	0.22 °C
82	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	K-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	(-)270 °C to 1372 °C	0.25 °C
83	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	N-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	(-)200 °C to 1370 °C	0.28 °C
84	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	PRT/ PT-100	Using 8½ Digit Digital Reference Multimeter By Direct Method	(-)200 °C to 800 °C	0.02 °C
85	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	R-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	0 °C to 1767 °C	0.33 °C
86	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	S-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	0 °C to 1767 °C	0.48 °C

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87	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	T-Type Thermocouple	Using 8½ Digit Digital Reference Multimeter By Direct Method	(-)250 °C to 400 °C	0.20 °C
88	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	B-Type Thermocouple	Using 6½ Digit Multiproduct Calibrator By Direct Method	(-)250°C to 1820°C	0.15°C
89	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	E-Type Thermocouple	Using 6½ Digit Multiproduct Calibrator By Direct Method	(-)250 °C to 1000 °C	0.15 °C
90	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J-Type Thermocouple	Using 6½ Digit Multiproduct Calibrator by Direct method	0 °C to 1200 °C	0.15 °C
91	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K-Type Thermocouple	Using 6½ Digit Multiproduct Calibrator By Direct Method	(-)200 °C to 1372 °C	0.15 °C
92	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	N-Type Thermocouple	Using 6½ Digit Multiproduct Calibrator By Direct Method	(-)200 °C to 1300 °C	0.15 °C
93	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	PRT/ PT-100	Using 6½ Digit Multiproduct Calibrator By Direct Method	(-)200 °C to 850 °C	0.1 °C

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94	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R & S Type Thermocouple	Using 6½ Digit Multiproduct Calibrator By Direct Method	0 °C to 1767 °C	0.7 °C
95	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	T-Type Thermocouple	Using 6½ Digit Multiproduct Calibrator By Direct Method	(-)250 °C to 400 °C	0.15 °C
96	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 8½ Digit Digital Reference Multimeter with 6½ Multiproduct calibrator By Direct and Comparison Method	10 Hz to 60 Hz	0.01 %
97	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 8½ Digit Digital Reference Multimeter with 6½ Multiproduct calibrator By Direct and Comparison Method	100 kHz to 25 MHz	0.01 %
98	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 8½ Digit Digital Reference Multimeter with 6½ Multiproduct calibrator By Direct and Comparison Method	50 Hz to 100 kHz	0.0005 %
99	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter By Comparison Method.	1 hr. to 3 hrs.	0.6 sec

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100	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval meter By Comparison Method	1 min to 5 min	0.6 sec
101	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval Meter By Comparison method	1 s to 60 s	0.06 s
102	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval Meter By Comparison Method	3 hrs. to 24 hrs.	2.1 sec
103	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval meter By Comparison Method	5 min to 60 min	0.6 sec
104	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using 6½ Digit Multiproduct Calibrator By Direct Method	10 Hz to 100 kHz	0.15 %
105	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using 6½ Digit Multiproduct Calibrator By Direct Method	100 kHz to 10 MHz	0.03 % to 0.001 %
106	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Frequency Generator By Direct Method	100 kHz to 10 MHz	0.6 %

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Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using 6½ Digit Digital Multimeter with Multiproduct source by Direct/Comparison method	0.03 mA to 100 mA	0.4 % to 0.01 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 10 kHz	Using 6½ Digit Digital Multimeter with Multiproduct source by Direct/Comparison method	100 mA to 1 A	0.01 % to 0.03 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 10 Hz to 5 kHz	Using 6½ Digit Digital Multimeter with Multiproduct source by Direct/Comparison method:	1 A to 10 A	0.04 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50Hz	Using High Voltage Divider with kV meter by Direct method	1 kV to 20 kV	6.04 % to 1.8 %
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage @ 50Hz	Using High Voltage Probe with Digital Multimeter and High Voltage Divider with H.V Source by Direct/Comparison method	20 kV to 100 kV	1.8 % to 2.43 %

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6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 300 kHz	Using 6½ Digit Digital Multimeter with Multiproduct source by Direct/Comparison method	1 mV to 1000 mV	0.8 % to 0.08 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 10 Hz to 300 kHz	Using 6½ Digit Digital Multimeter with Multiproduct Source by Direct/Comparison method	1 V to 1000 V	0.08 % to 0.02 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy 30 to 520 ACV 0.001A to 12A, 50 Hz, 1P2W, 3P3W, 3P4W, PF=0.001 Lead/Lag to 1.00000 UPF	Using Power/Energy Reference meter with source(single or three phase) by Direct and Comparison method	1 Wh to 1 kWh	0.025 % to 0.1 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy 30 to 520 ACV 0.050A to 100A, 50 Hz, 1P2W, 3P4W, PF = 0.3 Lag to UPF to 0.2 Lead.	Using Power/Energy Reference meter with source (single/ Three Phase) with CT by Direct and Comparison Method	50 Wh to 85 kWh	0.9 %
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy Up to 230V, 2.5A- 5A, 50 Hz, PF= 0.5 to UPF (3 Phase 4 wire)	Using meter with CT along with Power Source by Direct/Comparison method	862.5 Wh to 3.45 kWh	0.5 % to 1.4 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power 30 to 520 ACV 0.001A to 12A, 50 Hz, 1P2W, 3P4W, PF=0.2 Lead/Lag to 1.00000 UPF	Using Power/Energy Reference meter with source (single or three phase) @12 A by Direct and Comparison method	300 mW to 3.45 kW	0.02 %

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12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy 30 to 520 ACV, 0.001 A to 12A, 50 Hz, 1P2W, 3P4W, 0.2 Lead/Lag to UPF	Using Power/Energy Reference meter with source (single or three phase) by Direct and Comparison method	1 VAh to 1 kVAh	0.025 % to 0.1 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power 30 to 520 ACV 0.001 A to 12 A, 50 Hz, 1P2W, 3P4W, 0.2 Lag/Lead to UPF	Using Power/Energy Reference meter with source (single or three phase) by Direct and Comparison method	300 mVA to 3.45 kVA	0.1 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Phase Angle @ 50+/-5 Hz, 0.001 (Lag/Lead) to 1 UPF, 1mA to 500A	Using Reference Power/Energy Comparator with CT Clamp and source By Direct and Comparison Method	0 ° to 340 °	0.005 °
15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor 0.001 (Lag/Lead) to 1 UPF	Using Reference Power/Energy Comparator with CT Clamp and Source By Direct and Comparison Method:	0.2 Lag to UPF to 0.2 Lead @ 50+/-5Hz	0.005 PF
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy 30 to 300 ACV 0.001 A to 12 A,50 Hz, 1P2W, 3P4W, PF=0.2 Lead/Lag to 1.00000 UPF	Using Power/Energy Reference meter with Source(single or three phase) by Direct and Comparison method	0.02 kVArh to 0.73 kVArh	0.1 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power 30 to 300 ACV 0.001A to 12A, 50 Hz, 1P2W, 3P4W, PF=0.2 Lead/Lag to 1.00 UPF	Using Power/Energy Reference meter with Source (single or three phase) by Direct and Comparison method	1 VAr to 300 VAr	0.1 %

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18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 45 Hz to 100 Hz	Using 5½ Digit Multifunction Calibrator by Direct method	20 µA to 10 A	0.30 % to 1.61 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45 to 100 Hz	Using 5½ Digit Multifunction Calibrator by Direct method	10 mV to 1000 V	0.50 % to 0.22 %
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Active Power 0 to 300 V, 10mA to 500A, 50 Hz 1P2W, 3P3W, 3P4W, PF=0.01 Lead/Lag to 1.0 UPF	Using 1/3 Phase Power Base Source & load manager by Direct method	1 W to 1.8 kW	0.9 %
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @ 1kHz	Using Decade Box by Direct method	1 nF to 1 mF	0.3 % to 0.08 %
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Phase Angle @ 50+/-5 Hz, 0.001 (Lag/Lead) to 1 UPF 1 mA to 500A	Using 1/3 Phase Power Base Source & load manager by Direct method	0° to 340°	0.005°
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power Factor 0.001 (Lag/Lead) to 1 UPF	Using 1/3 Phase Power Base Source & load manager by Direct method	0.2 Lag to UPF to 0.2 Lead @50+/-5 Hz	0.005 PF
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter With Multiproduct Source by Direct / Comparison method	1 µA to 100 mA	5.4 % to 0.072 %

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25	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter with Multiproduct source By Direct and Comparison Method	1 A to 10 A	0.032 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Digital Multimeter With Multiproduct Source by Direct / Comparison method	100 mA to 1 A	0.007 % to 0.05 %
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Divider with kV meter By Direct method	1 kV to 20 kV	6.04 % to 1.8 %
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High voltage probe with DMM By Direct Method	1 kV to 20 kV	6.04 % to 1.8 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using Hight Voltage Divider with kV meter By Direct method	20 kV to 100 kV	1.8 % to 2.1 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter With Multiproduct Source by Direct / Comparison method	0.1 mV to 1000 mV	0.6 % to 0.04 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Digital Multimeter With Multiproduct Source by Direct / Comparison method	1 V to 1000 V	0.02 %

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32	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC current	Using 5½ digit Multifunction By Direct method	1 mA to 10 A	0.2 % to 0.6 %
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using 6½ Digit Multiproduct Calibrator or Standard Resistance Decade Box By Direct Method	0.05 mohm to 1 mohm	1.65 %
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance @ 1 kV	Using Standard Resistance Decade Box By Direct method	1 Gohm to 100 Gohm	1 %
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance upto 1 kV	Using Resistance Decade Box By direct method	1 ohm to 11.11 Mohm	0.25 %
36	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance upto 1 kV	Using Resistance Decade Box By Direct method	11 Mohm to 1000 Mohm	0.25 % to 0.75 %
37	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using 5½ digit Multifunction By Direct method	1 mV to 1000 V	1.65 % to 0.13 %
38	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Standard Resistance Decade box By Direct Method	50 µohm to 1000 µohm	0.85 %

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39	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Conductivity meter (50 ohm to 1000 Gohm)	Using Decade Resistance Box By Direct Simulation Method	1 µS/cm to 2000 µS/cm	2.4 %
40	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oxidation Reduction, Potential meter	Using 6½ Digit Multiproduct Calibrator or Universal Calibrator By Direct Simulation Method	(-)414 mV to 414 mV	0.1 %
41	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	pH meter (- 500 mV to 500 mV)	Using 6½ Digit Multiproduct Calibrator or Universal Calibrator By Direct Simulation Method	0 pH to 14 pH	0.1 %
42	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	TDS meter (1 ohm to 1000 Gohm)	Using Decade Resistance Box By Direct Simulation Method	1 ppm to 999 ppm	1.06 % to 0.1 %
43	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J-Type Thermocouple	Using Universal Calibrator By Direct Method	0 °C to 760 °C	0.3 °C
44	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K-Type Thermocouple	Using Universal Calibrator By Direct Method	(-)200 °C to 1372 °C	0.15 °C
45	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R & S Type Thermocouple	Using Universal Calibrator By Direct Method	0 °C to 1767 °C	0.7 °C

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46	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter By Comparison Method.	1 hr. to 3 hrs.	0.6 sec
47	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval meter By Comparison Method	1 min to 5 min	0.6 sec
48	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval Meter By Comparison method	1 s to 60 s	0.06 s
49	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval Meter By Comparison Method	3 hrs. to 24 hrs.	2.1 sec
50	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Digital Time Interval meter By Comparison Method	5 min to 60 min	0.6 sec
51	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Frequency Generator By Direct Method	100 kHz to 10 MHz	0.6 %
52	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using 5½ digit Multifunction By Direct method	40 Hz to 1000 Hz	0.01 %