



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :

POWERGRID ADVANCED RESEARCH AND TECHNOLOGY CENTRE (PARTEC)
CALIBRATION LAB, POWERGRID MANESAR COMPLEX, GWALIOR VILLAGE,
PACHGAON PO, TAORU ROAD, MANESAR, GURGAON, HARYANA, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-3439

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Validity

28/07/2022 to 27/07/2024

Last Amended on

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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 @ (40Hz to 5kHz)	Using 8.5 Digital Multimeter By Direct Method	1 mA to 100 mA	0.06 % to 0.074 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ (40Hz to 5kHz)	Using 8.5 Digital Multimeter By Direct Method	100 mA to 2 A	0.074 % to 0.15 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ (40Hz to 5kHz)	Using 8.5 Digital Multimeter By Direct Method	2 A to 20 A	0.15 % to 0.7 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ (10Hz to 45Hz)	Using 8.5 Digital Multimeter By Direct Method	1 mV to 200 mV	2.12 % to 0.2 %



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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ (10Hz to 45Hz)	Using 8.5 Digital Multimeter By Direct Method	200 mV to 20 V	0.2 % to 0.26 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ (10kHz to 20kHz)	Using 8.5 Digital Multimeter By Direct Method	1 mV to 200 mV	1 % to 0.4 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ (10kHz to 20kHz)	Using 8.5 Digital Multimeter By Direct Method	200 mV to 200 V	0.4 % to 0.034 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ (45Hz to 10kHz)	Using 8.5 Digital Multimeter By Direct Method	1 mV to 200 mV	0.7 % to 0.02 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ (45Hz to 10kHz)	Using 8.5 Digital Multimeter By Direct Method	1 V to 1000 V	0.029 % to 0.18 %



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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ (45Hz to 10kHz)	Using 8.5 Digital Multimeter By Direct Method	200 mV to 1 V	0.02 % to 0.029 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ (45Hz to 1kHz)	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 A to 10 A	0.064 % to 0.11 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ (45Hz to 1kHz)	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 mA to 100 mA	0.11 % to 0.048 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ (45Hz to 1kHz)	Using 6.5 Digit Multifunction Calibrator By Direct Method	100 mA to 1 A	0.048%
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ (45 Hz to 10kHz)	Using 6.5 Digit Multifunction Calibrator By Direct Method	2 mV to 1 V	0.3 % to 0.03 %



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15	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ (45Hz to 10kHz)	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 V to 100 V	0.03 % to 0.02 %
16	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage @ (45Hz to 10kHz)	Using 6.5 Digit Multifunction Calibrator By Direct Method	100 V to 1000 V	0.02 % to 0.03 %
17	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 8.5 Digital Multimeter By Direct Method	1 µA to 100 µA	0.7 % to 0.7 %
18	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 8.5 Digital Multimeter By Direct Method	1 A to 20 A	0.02 % to 0.046 %
19	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 8.5 Digital Multimeter By Direct Method	100 µA to 1 A	0.7 % to 0.02 %
20	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Resistance	Using 8.5 Digital Multimeter By Direct Method	1 kohm to 100 kohm	0.015%



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21	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using 8.5 Digital Multimeter By Direct Method	1 ohm to 1 kohm	0.015 % to 0.015 %
22	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using 8.5 Digital Multimeter By Direct Method	100 kohm to 100 Mohm	0.015 % to 0.03 %
23	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using 8.5 Digital Multimeter By Direct Method	100 Mohm to 1 Gohm	0.03 % to 1.3 %
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8.5 Digital Multimeter By Direct Method	1 mV to 100 mV	0.02 % to 0.002 %
25	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8.5 Digital Multimeter By Direct Method	10 V to 1000 V	0.002 % to 0.001 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8.5 Digital Multimeter By Direct Method	100 mV to 10 V	0.002%



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27	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Capacitance	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 nF to 100 nF	0.212 % to 1.14 %
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Capacitance	Using 6.5 Digit Multifunction Calibrator By Direct Method	100 nF to 1 μ F	0.212 % to 0.275 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 μ A to 300 μ A	1.6 % to 0.2 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 A to 10 A	0.02 % to 0.05 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using 6.5 Digit Multifunction Calibrator By Direct Method	30 mA to 1 A	0.09 % to 0.02 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using 6.5 Digit Multifunction Calibrator By Direct Method	300 μ A to 30 mA	0.2 % to 0.09 %



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33	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 kohm to 300 kohm	0.004 % to 0.007 %
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 Mohm to 300 Mohm	0.0032 % to 0.25 %
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 Ohm to 1 kohm	0.8 % to 0.004 %
36	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using 6.5 Digit Multifunction Calibrator By Direct Method	300 kohm to 1 Mohm	0.0049 % to 0.0032 %
37	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Resistance	Using 6.5 Digit Multifunction Calibrator By Direct Method	300 Mohm to 1000 Mohm	0.25 % to 1.177 %
38	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using 6.5 Digit Multifunction Calibrator By Direct Method	1 mV to 100 mV	0.08 % to 0.003 %



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39	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using 6.5 Digit Multifunction Calibrator By Direct Method	10 V to 1000 V	0.002 % to 0.0016 %
40	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using 6.5 Digit Multifunction Calibrator By Direct Method	100 mV to 10 V	0.003 % to 0.002 %
41	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Temperature Simulation RTD Pt 385	Using 6.5 Digit Multifunction Calibrator By Direct Method	-200 °C to 600 °C	0.091°C
42	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using 6.5 Digit Multifunction Calibrator By Direct Method	10 Hz to 100 KHz	0.0008 % to 0.0002 %

* CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.