National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : CENTRAL POWER RESEARCH INSTITUTE (C P R I), PROF. SIR C. V. RAMAN ROAD, SADASHIVNAGAR POST OFFICE, BENGALURU, KARNATAKA, INDIA

Accreditation Standard ISO/IEC 17025:2017

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Validity 10/06/2026 to 09/06/2030 **Last Amended on** -

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 @ 50 Hz	Using Three Phase Comparator with Source by Comparison Method	1 mA to 9.9 mA	0.054 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using Three Phase Comparator with Source by Comparison Method	10 mA to 120 A	0.018 % to 0.013 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz	Using Three Phase Comparator with Source by Comparison Method	30 V to 480 V	0.015 % to 0.013 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Harmonics in Current circuits Fundamental Frequency @ 50 Hz	Using Three Phase Comparator with Source by Comparison method	2nd to 21st (5 A)	0.3 %

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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Harmonics in Voltage Circuit Fundamental Frequency @ 50 Hz	Using Three Phase Comparator With Source by Comparison Method	2nd to 21st (240 V)	0.3 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor @ 50 Hz	Using Three Phase Comparator with Source by Comparison Method	0.25 (Lead / Lag) PF to 1	0.00033 PF to 0.00035 PF
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single Phase, AC Active Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator With Source by Comparison Method	0.159 Wh to 28.8 kWh	0.061 % to 0.015 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single Phase, AC Active Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator With Source by Comparison Method	0.159 W to 28.8 kW	0.064 % to 0.019 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single phase, AC Reactive Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator With Source by Comparison Method	0.159 VArh to 28.8 kVarh	0.064 % to 0.015 %

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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single Phase, AC Reactive Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator With Source by Comparison Method	0.159 Var to 28.8 kVar	0.064 % to 0.019 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase 4 Wire Active Energy @ 47.5 Hz to 52.5 Hz (63.5 V to 240 V, 0.05 A to 20 A, UPF, 0.5 Lag)	Using Three Phase Comparator with Source by Comparison Method	4.7625 Wh to 14400 Wh	0.032 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase 4 Wire Active Energy @ 50Hz (63.5 V to 240 V, 0.25 A to 60 A, UPF, 5th harmonics, 40% in Current & 10% in Voltage)	Using Three Phase Comparator With Source by Comparison Method	47.625 Wh to 43200 Wh	0.3 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase 4 Wire Active Energy @ 50Hz (30 V to 300 V, 10 A to 20 A, UPF, 0.5 Lag)	Using Three Phase Comparator With Source by Comparison Method	450 Wh to 18000 Wh	0.032 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase 4 Wire Reactive Energy @ 47.5 Hz to 52.5 Hz (63.5 V to 240 V, 0.05 A to 20 A, ZPF, 0.5 Lag)	Using Three Phase Comparator with Source by Comparison Method	4.7625 VARh to 14400 VARh	0.32 %

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15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Active Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator With Source by Comparison Method	0.476 Wh to 86.4 kWh	0.061 % to 0.015 %
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Active Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator With Source by Comparison Method	0.476 W to 86.4 kW	0.064 % to 0.015 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Apparent Power @ 50 Hz (30 V to 240 V, 10 mA to 1 A , UPF)	Using Three Phase Comparator With Source by Comparison Method	0.9 VA to 720 VA	0.026 % to 0.015 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Reactive Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator with Source by Comparison Method	0.476 Varh to 86.4 kVarh	0.064 % to 0.015 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Reactive Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Comparator With Source by Comparison Method	0.476 Var to 86.4 kVar	0.064 % to 0.015 %

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20	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Three Phase Comparator with Source by Comparison Method	45 Hz to 65 Hz	0.026 %

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Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using Three Phase Portable Test System with Source by Comparison Method	10 mA to 120 A	0.034 % to 0.026 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz	Using Three Phase Portable Test System with Source by Comparison Method	30 V to 480 V	0.028 % to 0.026 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Harmonics in Current Circuit Fundamental Frequency @ 50 Hz	Using Three Phase Portable Test System With Source by Comparison Method	2nd to 21st (1 A & 10 A)	0.3 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Harmonics in Voltage Circuit Fundamental Frequency @ 50 Hz	Using Three Phase Portable Test System With Source by Comparison Method	2nd to 21st (240 V)	0.3 %

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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor @50 Hz	Using Three Phase Portable Test System With Source by Comparison Method	0.25 (Lead / Lag) PF to 1	0.00039 PF to 0.00040 PF
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single Phase, AC Active Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.159 Wh to 28.8 kWh	0.064 % to 0.028 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single Phase, AC Active Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.159 W to 28.8 kW	0.081 % to 0.038 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single phase, AC Reactive Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.159 VArh to 28.8 kVarh	0.064 % to 0.028 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Single Phase, AC Reactive Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.159 Var to 28.8 kVar	0.081 % to 0.038 %

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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Active Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.476 Wh to 86.4 kWh	0.065 % to 0.028 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Active Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.476 W to 86.4 kW	0.067 % to 0.028 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Reactive Energy @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.476 Varh to 86.4 kVarh	0.068 % to 0.028 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Three Phase, 4 Wire AC Reactive Power @ 50 Hz (63.5 V to 240 V, 10 mA to 120 A, 0.25 (Lead / Lag) to 1)	Using Three Phase Portable Test System With Source by Comparison Method	0.476 Var to 86.4 kVar	0.067 % to 0.028 %
14	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Three Phase Portable Test System with Source Comparison Method	45 Hz to 65 Hz	0.029 %

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