



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :

TNPDCL TESTING LABORATORY, NO.129, WALLAJAH ROAD, TRIPPLICANE,
CHENNAI, TAMIL NADU, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

NABLC0726TN04848

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Validity

04/08/2026 to 03/08/2030

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)($\pm$)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using Three Phase Power/Energy Comparator with Source by Comparison Method	1 mA to 100 A	0.046 % to 0.011 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	100 A to 120 A	0.011 % to 0.020 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 50 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	30 V to 480 V	0.012 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy (1 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead) , 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kWh to 38.4 kWh	0.091 % to 0.020 %



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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy (1 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lead / Lag), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mWh to 24 kWh	0.461 % to 0.015 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy (3 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead) , 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	7.2 kWh to 115.2 kWh	0.091 % to 0.020 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy (3 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 to UPF (Lead / Lag), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	9 mWh to 72 kWh	0.461 % to 0.015 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power (1 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lag /Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mW to 24 kW	0.283 % to 0.015 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power (1 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kW to 38.4 kW	0.091 % to 0.020 %



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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power (3 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	7.2 kW to 115.2 kW	0.091 % to 0.020 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power (3 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lag /Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	9 mW to 72 kW	0.279 % to 0.015 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy (1 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	24 kVAh to 38.4 kVAh	0.015 % to 0.020 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy (1 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lead/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	30 mVAh to 24 kVAh	0.054 % to 0.015 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy (3 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead),45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	72 kVAh to 115.2 kVAh	0.015 % to 0.020 %



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15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy (3 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lead/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	90 mVAh to 72 kVAh	0.054 % to 0.015 %
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power (1 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	24 kVA to 38.4 kVA	0.015 % to 0.016 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power (1 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	30 mVA to 24 kVA	0.052 % to 0.015 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power (3 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	72 kVA to 115.2 kVA	0.015 % to 0.016 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power (3 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	90 mVA to 72 kVA	0.052 % to 0.015 %



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20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Harmonics/Total Harmonic Distortion factor(thd)	Using Three Phase Power/Energy Comparator with Source By Comparison Method	1st order to 31st order	0.48 % to 0.81 %
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor (63.5 V, 5 A @ 50 Hz)	Using Three Phase Power/Energy Comparator with Source By Comparison Method	(-) 1 PF to 1 PF	0.0001 PF
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy (1 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag/Lead) , 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kVArh to 38.4 kVArh	0.091 % to 0.020 %
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy (1 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mVArh to 24 kVArh	0.461 % to 0.015 %
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy (3 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lag/Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	9 mVArh to 72 kVArh	0.461 % to 0.015 %



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25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy (3 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lag /Lead), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	7.2 kVArh to 115.2 kVArh	0.091 % to 0.020 %
26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power (1 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF (Lead /Lag), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kVAr to 38.4 kVAr	0.091 % to 0.020 %
27	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power (1Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lead/Lag), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mVAr to 24 kVAr	0.279 % to 0.015 %
28	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power (3 Phase) {240 V to 320 V, 100 A to 120 A, 0.1 PF to UPF(Lead /Lag), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	7.2 kVAr to 115.2 kVAr	0.091 % to 0.020 %
29	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power (3 Phase) {30 V to 240 V, 1 mA to 100 A, 0.1 PF to UPF (Lead/Lag), 45 Hz to 65 Hz}	Using Three Phase Power/Energy Comparator with Source By Comparison Method	9 mVAr to 72 kVAr	0.279 % to 0.015 %



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30	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Measure)	Current Transformer - Phase Angle Error Primary: 5 A to 500 A Secondary: 5 A & 1 A	Using Automatic Current and Potential transformer Test Set and Standard Current Transformer by Comparison method	120 % to 1 %	1.45 min to 2.75 min
31	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Measure)	Current Transformer - Ratio Error Primary: 5 A to 500 A Secondary: 5 A & 1 A	Using Automatic Current and Potential transformer Test Set and Standard Current Transformer by Comparison method	120 % to 1 %	0.021 % to 0.032 %
32	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Measure)	Potential Transformer - Phase Angle Error Primary:11 kV to 33 kV Secondary:110 V	Using Automatic Instrument Transformer Test Set and Standard Voltage Transformer by Comparison method	120 % to 80 %	2.91 min
33	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Measure)	Potential Transformer - Phase Angle Error Primary:11/v3 to 33/v3 kV Secondary: 63.5 V	Using Automatic Instrument Transformer Test Set and Standard Voltage Transformer by Comparison method	120 % to 80 %	2.91 min



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34	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Measure)	Potential Transformer - Ratio Error Primary:11 kV to 33 kV Secondary:110 V	Using Automatic Instrument Transformer Test Set and Standard Voltage Transformer by Comparison method	120 % to 80 %	0.067 %
35	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Measure)	Potential Transformer - Ratio Error Primary:11/v3 to 33/v3 kV Secondary: 63.5 V	Using Automatic Instrument Transformer Test Set and Standard Voltage Transformer by Comparison method	120 % to 80 %	0.067 %
36	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Three Phase Power/Energy Comparator with Source By Comparison Method	45 Hz to 65 Hz	0.016 % to 0.014 %

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