National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : TANGEDCO TESTING LABORATORY, NO.129, WALLAJAH ROAD, TRIPLICANE, CHENNAI, TAMIL NADU, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3445 **Page No** 1 of 5

Validity 04/08/2024 to 03/08/2026 **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 Power/Energy Comparator with Source by Comparison Method	1 mA to 10 mA	0.034 % to 0.016 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	10 mA to 100 A	0.016 % to 0.012 %
3	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	0.012 % to 0.016 %
4	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	0.011 %

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Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3445	**Page No**	2 of 5
Validity	04/08/2024 to 03/08/2026	**Last Amended on**	-

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5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy (1 Phase and 3 Phase) (30 V to 240 V, 1 mA to 100 A, 0.1 Lead / Lag to UPF, 45 Hz to 65 Hz)	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mWh to 72 kWh	0.480 % to 0.012 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Energy (1Phase and 3 Phase) 240 V to 480 V, 100 A to 120 A, 0.1 Lag/Lead to UPF , 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kWh to 172.8 kWh	0.16 % to 0.015 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power (1 Phase and 3 Phase) 30 V to 240 V, 1 mA to 100 A, 0.1 Lag /Lead to UPF , 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mW to 72 kW	0.480 % to 0.012 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Active Power (1Phase and 3 Phase) 240 V to 480 V, 100 A to 120 A, 0.1 Lag/Lead to UPF , 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kW to 172.8 kW	0.16 % to 0.015 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy (1 Phase and 3 Phase) 30 V to 240 V, 1 mA to 100 A, 0.1 Lead/Lead to UPF, 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mVAh to 72 KVAh	0.480 % to 0.012 %

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Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3445 **Page No** 3 of 5

Validity 04/08/2024 to 03/08/2026 **Last Amended on** -

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10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Energy (1Phase and 3 Phase) 240 V to 480 V, 100 A to 120 A, 0.1 Lag/Lead to UPF,45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kVAh to 172.8 kVAh	0.015 % to 0.16 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power (1 Phase and 3 Phase) 30 V to 240 V, 1 mA to 100 A, 0.1 Lag/Lead to UPF, 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mVA to 72 KVA	0.480 % to 0.012 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Apparent Power (1Phase and 3 Phase) 240 V to 480 V, 100 A to 120 A, 0.1 Lag/Lead to UPF, 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kVA to 172.8 kVA	0.015 % to 0.16 %
13	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	0.5 % to 0.71 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Power Factor (30 V to 480 V, 1 mA to 120 A , 45 Hz to 65 Hz)	Using Three Phase Power/Energy Comparator with Source By Comparison Method	(-) 1 PF to 1 PF	0.0001 PF

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Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3445 **Page No** 4 of 5

Validity 04/08/2024 to 03/08/2026 **Last Amended on** -

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15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy (1 Phase and 3 Phase) 30 V to 240 V, 1 mA to 100 A, 0.1 Lag/Lead to UPF, 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mVArh to 72 kVArh	0.480 % to 0.012 %
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Energy (1 Phase and 3 Phase) 240 V to 480 V, 100 A to 120 A, 0.1 Lag /Lead to UPF , 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kVArh to 172.8 kVArh	0.16 % to 0.015 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power (1 Phase and 3 Phase) 240 V to 480 V, 100 A to 120 A, 0.1 Lead /Lag to UPF , 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	2.4 kVAr to 172.8 kVAr	0.16 % to 0.015 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Reactive Power (1Phase and 3 Phase) 30 V to 240 V, 1 mA to 100 A, 0.1 Lead/Lag to UPF, 45 Hz to 65 Hz	Using Three Phase Power/Energy Comparator with Source By Comparison Method	3 mVAr to 72 KVAr	0.480 % to 0.012 %
19	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Three Phase Power/Energy Comparator with Source By Comparison Method	45 Hz to 65 Hz	0.002 %

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Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3445	**Page No**	5 of 5
Validity	04/08/2024 to 03/08/2026	**Last Amended on**	-

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