National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : C AND I CALIBRATIONS PVT. LTD., J-448, SITAPURA INDUSTRIAL AREA, JAIPUR, RAJASTHAN, INDIA

Accreditation Standard ISO/IEC 17025:2017

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Validity 30/11/2022 to 29/11/2024 **Last Amended on** 28/02/2023

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
LOCATION 1-J-448, SITAPURA INDUSTRIAL AREA, JAIPUR, RAJASTHAN, INDIA Permanent Facility				
1	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour & Var-Hour Meters (Class 0.2s, 0.5s & 1s) (Energy Meters)	Test of influence quantities - Voltage variation -Frequency Variation -Reversed phase sequence -Voltage unbalance - Wave form:10 percent of third harmonic in the current	14697 Cl: 12.10
2	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Test of No Load Condition	IS 15884, Cl : 5.6.3
3	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Test of Repeatability of Error	IS 15884, Cl : 5.6.7
4	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Initial Startup of Energy Meter	IS 15884, Cl : 4.6.4.1
5	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Power Consumption	Is 15884, Cl : 5.4.1
6	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and Meters (class 1 & 2) (Energy Meters)	Insulation Resistance Test	IS 13779 : Clause 12.7.6.4
7	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class : 1 & 2) (Energy meters)	Initial start-up of the energy meter	Withdrawn Standard IEC 62053-21 : Clause 8.3.1
8	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Meter Constant	Withdrawn Standard IEC 62053-22 : Clause 8.4
9	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	AC Voltage Test	Withdrawn Standard IEC 62053-22 : Clause 7.4
10	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Initial start-up of the energy meter	Withdrawn Standard IEC 62053-22 : Clause 8.3.1

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11	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of Error due to variation of the current	Withdrawn Standard IEC 62053-22, Clause 8.1
12	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	No-load Condition	Withdrawn Standard IEC 62053-22 : Clause 8.3.2
13	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Power Consumption	Withdrawn Standard IEC 62053-22 : Clause 7.1
14	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Starting Conditions	Withdrawn Standard IEC 62053-22 : Clause 8.3.3
15	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	AC Voltage Test	Withdrawn Standard IEC 62053-21 : Clause 7.4
16	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Limits of Error due to variation of the current	Withdrawn Standard IEC 62053-21: Clause 8.1
17	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Meter Constant	Withdrawn Standard IEC 62053-21 : Clause 8.1
18	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	No-load Condition	Withdrawn Standard IEC 62053-21 : clause 8.3.2
19	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Power Consumption	Withdrawn Standard IEC 62053-21 : Clause 7.1
20	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Starting Conditions	Withdrawn Standard IEC 62053-21 : Clause 8.3.3
21	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s) (Energy meters)	Verification of Average Frequency Slot	CBIP 325, Clause No. 6.9.c

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
22	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s) (Energy meters)	Verification of Reactive Energy Registration in Total, Low and High Varh Registers	CBIP 325, Clause no. 6.9.c
23	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Test of Power Consumption	IS 14697 : Clause 9.1
24	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	AC Voltage Test	IS 14697 : Clause 12.7.6.3
25	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Initial start-up of the energy meter	IS 14697 : Clause 11.4.1
26	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	Insulation Resistance Test	IS 14697 : Clause 12.7.6.4
27	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (Class 0.2s, 0.5s & 1s) (Energy Meters)	Test of Meter Constant	IS 14697 : Clause 12.14
28	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Test of No-load Condition	IS 14697 : Clause 12.12
29	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Test of Repeatability of error	IS 14697 : Clause 12.16
30	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	Test of Starting Conditions	IS 14697 : Clause 12.13
31	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	Test on Limits of Errors	IS 14697 : Clause 11.1
32	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Initial start-up of the energy meter	IEC 62053-22, Clause 7.5

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
33	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of error due to influence quantities- Voltage Variation, Frequency Variation, Reversed phase sequence, Voltage unbalance Wave form:10 percent of third harmonic in the current	Withdrawn Standard IEC 62053-22 : Clause 8.2
34	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of error due to influence quantities -Voltage variation,Frequency Variation, Reversed phase sequence, Voltage unbalance, Wave form:10 percent of third harmonic in the current	IEC 62053-22: Clause 7.10
35	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of Error due to variation of the current	IEC 62053-22, Clause 7.9
36	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Meter Constant	IEC 62053-22 : Clause 7.4
37	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	No-load Condition	IEC 62053-22 : Clause 7.6
38	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Power Consumption	IEC 62053-22 : Clause 4.4
39	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Repeatability	IEC 62053-22, Clause 7.8
40	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Starting Current	IEC 62053-22 : Clause 7.7
41	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meter Class 1 & Class 2 1 Phase and 3 Phase Active	Ac Voltage Test	IS 15884, Cl 5.4.6.3

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
42	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Limits of Error	IS 15884, Cl 4.6.1
43	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Starting Condition	IS 15884, Cl: 5.6.4
44	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	AC Voltage Test	IS 13779 : Cl No.12.7.6.3
45	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Initial start-up of the energy meter	IS 13779 : Clause 11.4.1
46	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Meter Constant	IS 13779 : Clause 11.6
47	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of No-load Condition	IS 13779 : Clause 12.13
48	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Repeatability of error	IS 13779 : Clause 12.17
49	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy meters)	Test of Starting Conditions	IS 13779 : Clause 12.14
50	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test on Limits of Errors	IS 13779 : Clause 11.1
51	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Power Consumption	IS 13779 : Cl.No.9.1
52	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Initial Start-Up of the Meter	IEC 62053-21 : Clause 7.5

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
53	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Insulation Resistance Test	IS 15884, Cl 5.4.6.4
54	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour meters (Class 1 & 2) (Energy meters)	Limits of error due to influence quantities- Voltage Variation, Frequency Variation, Reversed phase sequence, Voltage unbalance Wave form:10 percent of third harmonic in the current	Withdrawn Standard IEC 62053-21 : Clause 8.2
55	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy Meters)	Limits of error due to influence quantities- Voltage variation, Frequency Variation, Reversed phase sequence, Voltage unbalance Wave form:10 percent of third harmonic in the current	IEC 62053-21 : Clause 7.10
56	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Limits of Error due to variation of the current	IEC 62053-21, Clause 7.9
57	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Meter Constant	IEC 62053-21, Clause 7.4
58	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Meter Constant	IS 15884, Cl : 5.6.5
59	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	No-load Condition	IEC 62053-21 : Clause 7.6
60	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Repeatability	IEC 62053-21 : Clause 7.8
61	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour meters (Class 1 & 2) (Energy meters)	Starting Current	IEC 62053-21 : Clause 7.7

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62	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy Meters)	Test of influence quantities - Voltage variation -Frequency Variation -Reverse phase sequence -Voltage unbalance - Auxiliary Voltage -Wave form:10 percent of third harmonic in the current	15884 Cl : 4.6.2
63	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy Meters)	Test of influence quantities - Voltage variation -Frequency Variation -Reversed phase sequence -Voltage unbalance - Wave form:10 percent of third harmonic in the current	IS 13779 Cl : 12.11
64	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1&2) (Energy Meters)	Power Consumption	IEC 62053-21 : Clause 4.4

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LOCATION 1-J-448, SITAPURA INDUSTRIAL AREA, JAIPUR, RAJASTHAN, INDIA Site Facility				
1	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour & Var-Hour Meters (Class 0.2s, 0.5s & 1s) (Energy Meters)	Test of influence quantities - Voltage variation -Frequency Variation -Reversed phase sequence -Voltage unbalance - Wave form:10 percent of third harmonic in the current	14697 Cl: 12.10
2	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Test of No Load Condition	IS 15884, Cl : 5.6.3
3	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Test of Repeatability of Error	IS 15884, Cl : 5.6.7
4	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Initial Startup of Energy Meter	IS 15884, Cl : 4.6.4.1
5	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour (class 1 & 2) (Energy Meters)	Power Consumption	Is 15884, Cl : 5.4.1
6	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and Meters (class 1 & 2) (Energy Meters)	Insulation Resistance Test	IS 13779 : Clause 12.7.6.4
7	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class : 1 & 2) (Energy meters)	Initial start-up of the energy meter	Withdrawn Standard IEC 62053-21 : Clause 8.3.1
8	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Meter Constant	Withdrawn Standard IEC 62053-22 : Clause 8.4
9	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	AC Voltage Test	Withdrawn Standard IEC 62053-22 : Clause 7.4
10	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Initial start-up of the energy meter	Withdrawn Standard IEC 62053-22 : Clause 8.3.1

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11	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of Error due to variation of the current	Withdrawn Standard IEC 62053-22, Clause 8.1
12	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	No-load Condition	Withdrawn Standard IEC 62053-22 : Clause 8.3.2
13	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Power Consumption	Withdrawn Standard IEC 62053-22 : Clause 7.1
14	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Starting Conditions	Withdrawn Standard IEC 62053-22 : Clause 8.3.3
15	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	AC Voltage Test	Withdrawn Standard IEC 62053-21 : Clause 7.4
16	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Limits of Error due to variation of the current	Withdrawn Standard IEC 62053-21: Clause 8.1
17	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Meter Constant	Withdrawn Standard IEC 62053-21 : Clause 8.1
18	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	No-load Condition	Withdrawn Standard IEC 62053-21 : clause 8.3.2
19	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Power Consumption	Withdrawn Standard IEC 62053-21 : Clause 7.1
20	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 1 & 2) (Energy meters)	Starting Conditions	Withdrawn Standard IEC 62053-21 : Clause 8.3.3
21	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s) (Energy meters)	Verification of Average Frequency Slot	CBIP 325, Clause No. 6.9.c

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22	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s) (Energy meters)	Verification of Reactive Energy Registration in Total, Low and High Varh Registers	CBIP 325, Clause no. 6.9.c
23	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Test of Power Consumption	IS 14697 : Clause 9.1
24	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	AC Voltage Test	IS 14697 : Clause 12.7.6.3
25	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Initial start-up of the energy meter	IS 14697 : Clause 11.4.1
26	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	Insulation Resistance Test	IS 14697 : Clause 12.7.6.4
27	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (Class 0.2s, 0.5s & 1s) (Energy Meters)	Test of Meter Constant	IS 14697 : Clause 12.14
28	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Test of No-load Condition	IS 14697 : Clause 12.12
29	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy Meters)	Test of Repeatability of error	IS 14697 : Clause 12.16
30	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	Test of Starting Conditions	IS 14697 : Clause 12.13
31	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC watthour and var-hour meters (class 0.2s, 0.5s & 1s) (Energy meters)	Test on Limits of Errors	IS 14697 : Clause 11.1
32	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Initial start-up of the energy meter	IEC 62053-22, Clause 7.5

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
33	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of error due to influence quantities- Voltage Variation, Frequency Variation, Reversed phase sequence, Voltage unbalance Wave form:10 percent of third harmonic in the current	Withdrawn Standard IEC 62053-22 : Clause 8.2
34	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of error due to influence quantities -Voltage variation,Frequency Variation, Reversed phase sequence, Voltage unbalance, Wave form:10 percent of third harmonic in the current	IEC 62053-22: Clause 7.10
35	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Limits of Error due to variation of the current	IEC 62053-22, Clause 7.9
36	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Meter Constant	IEC 62053-22 : Clause 7.4
37	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	No-load Condition	IEC 62053-22 : Clause 7.6
38	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Power Consumption	IEC 62053-22 : Clause 4.4
39	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Repeatability	IEC 62053-22, Clause 7.8
40	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour and Var-hour meters (Class 0.2s, 0.5s) (Energy meters)	Starting Current	IEC 62053-22 : Clause 7.7
41	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meter Class 1 & Class 2 1 Phase and 3 Phase Active	Ac Voltage Test	IS 15884, Cl 5.4.6.3

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42	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Limits of Error	IS 15884, Cl 4.6.1
43	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Starting Condition	IS 15884, Cl: 5.6.4
44	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	AC Voltage Test	IS 13779 : Cl No.12.7.6.3
45	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Initial start-up of the energy meter	IS 13779 : Clause 11.4.1
46	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Meter Constant	IS 13779 : Clause 11.6
47	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of No-load Condition	IS 13779 : Clause 12.13
48	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Repeatability of error	IS 13779 : Clause 12.17
49	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy meters)	Test of Starting Conditions	IS 13779 : Clause 12.14
50	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test on Limits of Errors	IS 13779 : Clause 11.1
51	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Test of Power Consumption	IS 13779 : Cl.No.9.1
52	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Initial Start-Up of the Meter	IEC 62053-21 : Clause 7.5

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53	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Insulation Resistance Test	IS 15884, Cl 5.4.6.4
54	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour meters (Class 1 & 2) (Energy meters)	Limits of error due to influence quantities- Voltage Variation, Frequency Variation, Reversed phase sequence, Voltage unbalance Wave form:10 percent of third harmonic in the current	Withdrawn Standard IEC 62053-21 : Clause 8.2
55	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy Meters)	Limits of error due to influence quantities- Voltage variation, Frequency Variation, Reversed phase sequence, Voltage unbalance Wave form:10 percent of third harmonic in the current	IEC 62053-21 : Clause 7.10
56	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Limits of Error due to variation of the current	IEC 62053-21, Clause 7.9
57	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Meter Constant	IEC 62053-21, Clause 7.4
58	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (class 1 & 2) (Energy Meters)	Meter Constant	IS 15884, Cl : 5.6.5
59	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	No-load Condition	IEC 62053-21 : Clause 7.6
60	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy meters)	Repeatability	IEC 62053-21 : Clause 7.8
61	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour meters (Class 1 & 2) (Energy meters)	Starting Current	IEC 62053-21 : Clause 7.7

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62	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy Meters)	Test of influence quantities - Voltage variation -Frequency Variation -Reverse phase sequence -Voltage unbalance - Auxiliary Voltage -Wave form:10 percent of third harmonic in the current	15884 Cl : 4.6.2
63	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1 & 2) (Energy Meters)	Test of influence quantities - Voltage variation -Frequency Variation -Reversed phase sequence -Voltage unbalance - Wave form:10 percent of third harmonic in the current	IS 13779 Cl : 12.11
64	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Watthour Meters (Class 1&2) (Energy Meters)	Power Consumption	IEC 62053-21 : Clause 4.4

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LOCATION 2 - J-306,SITAPURA INDUSTRIAL AREA, JAIPUR, RAJASTHAN, INDIA Permanent Facility				
1	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers	Paint Adhesion	ASTM D 3359
2	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Full wave lightning impulse test for the line terminals (LI)	IEC:60076-3 : Cl no 13
3	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Chopped wave lightning impulse test for the line terminals (LIC)	CBIP 217 ; Cl no. 6.2
4	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Chopped wave lightning impulse test for the line terminals (LIC)	IEC 60076-11 : Table 4
5	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Chopped wave lightning impulse test for the line terminals (LIC)	IEC:60076-3 : Cl no 14
6	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Chopped wave lightning impulse test for the line terminals (LIC)	IS:1180-1:Cl no 21.3.a
7	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Full wave lightning impulse test for the line terminals (LI)	IEC:60076-11 : Cl no 21
8	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Full wave lightning impulse test for the line terminals (LI)	IS:1180-1:Cl no 21.3.a
9	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Lightning impulse test for the neutral terminals (LIN)	IEC 60076-03 : Cl. No. 13.3.2
10	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Lightning impulse test for the neutral terminals (LIN)	IS:1180-1 : Cl no 21.3.a
11	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Chopped wave lightning impulse test for the line terminals (LIC)	IS:2026-3 : Cl no 14IS:11171:1985,Cl no.16,13.1(g)
12	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Full wave lightning impulse test for the line terminals (LI	IS:11171 : Cl no 16,13.1(g)
13	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Up to 33 kV class	Lightning impulse test for the neutral terminals (LIN)	IS 2026-03 : Cl. No.13.3.2IS 11171:Cl. no. 16,13.1(g)
14	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers , Upto 33 kV class	Full wave lightning impulse test for the line terminals (LI)	IS:2026-3 : Cl no13,14
15	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Air Pressure	IS 1180 (part 1) :Clause 15.2, 21.5, 21.5.1, 21.5.1.2 , 21.5.2.1, 21.5.2.2, 21.5.3.1, 21.5.3.2

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16	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Paint Adhesion	IS 1180 (Part 1) : Clause 21.4d
17	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Vacuum	IS 1180 (Part 1) : Clause 15.2, 21.5, 21.5.1, 21.5.1.2 , 21.5.2.1, 21.5.2.2 ,21.5.3.1, 21.5.3.2
18	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Air Pressure	CBIP publication no 317 : Clause 17.3,3
19	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Induced AC Voltage Test	IEC 60076- Part 1: Clause 10.1.1(e), 10.1.2(b)
20	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	No load losses and current	IEC 60076- Part 1: Clause 10.1.1(d), 10.5
21	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Short circuit impedance and load losses	IEC 60076-Part 1 : Clause 10.1.1(c), 10.4
22	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Vacuum	CBIP publication no 317 : Clause 17.3.3
23	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IEC 60076 (Part I), IS 2026 (Part 1), IS 1180 (Part I)
24	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Temperature Rise Test	IEC 60076- Part 2 : Clause 10.1.2 (a)
25	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Harmonics of the No Load Current	IS 2026 Part 1: Clause : 10.6
26	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Insulation resistance to earth of the windings	IS 2026 (Part-I) : Clause 10.1.3, 16.6
27	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	CBIP publication no 317
28	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	IS 13964
29	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	IS 2026 (Part 1) :Clause 10.1.3IS11171,CL13.3(b)(19)
30	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	IS 2026 (Part10) IS11171, CL 13.3(b)(19)
31	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Voltage ratio and check of phase displacement (vector group)	IS 2026 (Part-I) : Clause 10.3IS 11171:1985:Cl 13.1(b),13.2(b)
32	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Voltage Ratio and check of phase displacement (vector group)	IS 2026(Part-I) : Clause 10.3

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33	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Winding Resistance	IS 2026(Part-I) : (Clause 10.2)
34	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Insulation resistance to earth of the windings	IS 1180 (Part 1) : Clause 21.2 e
35	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Voltage ratio and check of phase displacement (vector group)	IS 1180 (Part 1) : Clause 21.2 b, 6.5, 6.6. 7.5, 7.6, 8.5, 8.6
36	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Voltage ratio and check of phase displacement (vector group)	IS 1180 (Part 1) :Clause 21.2 b, 6.5, 6.6. 7.5, 7.6, 8.5, 8.6
37	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA,, 33 kV class	Sound Level	IS 1180 : Clause 21.4 a
38	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Magnetic Balance Test at Low Voltage	CBIP publication no 317
39	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Magnetizing Current at Low Voltage	CBIP publication no 317
40	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Magnetizing Current at Low Voltage	IS 2026 (Part-I)
41	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Winding Resistance	IEC: 60076
42	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Permissible Flux Density and Over fluxing	IS 1180 (Part 1) : Clause 6.9, 7.9, 8.9 IEC 60076, IS:2026 (part-7)
43	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Winding Resistance	IS 11171:Cl 13.2(a),13.1(a)
44	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Induced AC Voltage Test	IS 2026 (Part III) : Clause 12.1
45	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Measurement of short circuit impedance and load losses	IS 1180 (Part 1):2014 clause 21.2c
46	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	No load losses and current	IS 2026(Part I) : Clause 10.5IS 11171:1985:Cl. 13.1(d),13.2(d)
47	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Separate Source AC withstand voltage test	IS 2026(Part III):Clause 11
48	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Short circuit impedance and load losses	IS 2026-Part I : Clause 10.4
49	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Temperature Rise Test	IS 2026(Part I) :Clause 5.6

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50	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Temperature Rise Test	IS 2026(Part II) : Clause 5 , 10.4IS 11171:1985: Cl 13.1(h),(17)
51	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2.5 MVA 33 kV class	Oil Leakage	IS 1180 (Part 1) : Clause 21.2j, 21.5, 21.5.1.3, 21.5.2.3, 21.5.3.3IEC 60076: Part1
52	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Induced AC Voltage Test	IS 1180 (Part I) : Clause 21.2 f
53	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	No load losses and current	IS 1180 (Part I) :Clause 21.2 d
54	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Separate source AC withstand voltage test	IS 1180 (Part I) :Clause 21.2g
55	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Temperature Rise Test	IS 1180 (Part I): Clause 21.2, 21.3 b 6.10, 7.10, 8.10
56	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Induced AC Voltage test	IEC 60076 Part-3
57	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Induced AC Voltage Test	IS 11171 : Clause 15
58	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Measurement of short circuit impedance and load losses	IEC 60076- Part 1: Clause 10.1.1(c), 10.4
59	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Separate source AC withstand voltage test	IEC 60076 Part-1
60	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Separate Source AC withstand voltage test	IS 11171 : (Clause 14)
61	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Short circuit impedance and load losses	IS 11171
62	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Unbalanced Current	CBIP publication no. GP 317
63	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IEC 60076 Part-1 : Clause 10.1.3(d), 10.7
64	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IS 11171
65	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IS 2026 (Part I) : Clause 10.7
66	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution/Power Transformers Upto 2500 kVA, 33 kV Class	Voltage ratio and check of phase displacement (vector group)	IS 1180 (Part 1) :Clause 21.2 b, 6.5, 6.6. 7.5, 7.6, 8.5, 8.6

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
67	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	Moisture Content of oil in the transformer	IS 335 (Cl 3.5) & IS 1866
68	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	BDV in the transformer	IS 1180 (Part-1) (Cl 21.4(e))
69	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	BDV in the transformer	IS 335 (Cl 3.5)
70	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	Moisture Content of oil in the transformer	IS 1180 (Part 1) (Cl 21.4 e)
71	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	Moisture Content of oil in the transformer	IS 13567

SCOPE OF ACCREDITATION

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
LOCATION 2 - J-306,SITAPURA INDUSTRIAL AREA, JAIPUR, RAJASTHAN, INDIA Site Facility				
1	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers	Paint Adhesion	ASTM D 3359
2	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Air Pressure	IS 1180 (part 1) :Clause 15.2, 21.5, 21.5.1, 21.5.1.2 , 21.5.2.1, 21.5.2.2, 21.5.3.1, 21.5.3.2
3	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Paint Adhesion	IS 1180 (Part 1) : Clause 21.4d
4	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Vacuum	IS 1180 (Part 1) : Clause 15.2, 21.5, 21.5.1, 21.5.1.2 , 21.5.2.1, 21.5.2.2 ,21.5.3.1, 21.5.3.2
5	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Air Pressure	CBIP publication no 317 : Clause 17.3,3
6	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Induced AC Voltage Test	IEC 60076- Part 1: Clause 10.1.1(e), 10.1.2(b)
7	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	No load losses and current	IEC 60076- Part 1: Clause 10.1.1(d), 10.5
8	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Short circuit impedance and load losses	IEC 60076-Part 1 : Clause 10.1.1(c), 10.4
9	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Vacuum	CBIP publication no 317 : Clause 17.3.3
10	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IEC 60076 (Part I), IS 2026 (Part 1), IS 1180 (Part I)
11	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Temperature Rise Test	IEC 60076- Part 2 : Clause 10.1.2 (a)
12	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Harmonics of the No Load Current	IS 2026 Part 1: Clause : 10.6
13	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Insulation resistance to earth of the windings	IS 2026 (Part-I) : Clause 10.1.3, 16.6
14	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	CBIP publication no 317
15	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	IS 13964
16	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	IS 2026 (Part 1) :Clause 10.1.3IS11171,CL13.3(b)(19)

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
17	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Sound Level	IS 2026 (Part10) IS11171, CL 13.3(b)(19)
18	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Voltage ratio and check of phase displacement (vector group)	IS 2026 (Part-I) : Clause 10.3IS 11171:1985:Cl 13.1(b),13.2(b)
19	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Voltage Ratio and check of phase displacement (vector group)	IS 2026(Part-I) : Clause 10.3
20	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Winding Resistance	IS 2026(Part-I) : (Clause 10.2)
21	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Insulation resistance to earth of the windings	IS 1180 (Part 1) : Clause 21.2 e
22	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Voltage ratio and check of phase displacement (vector group)	IS 1180 (Part 1) : Clause 21.2 b, 6.5, 6.6. 7.5, 7.6, 8.5, 8.6
23	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Voltage ratio and check of phase displacement (vector group)	IS 1180 (Part 1) :Clause 21.2 b, 6.5, 6.6. 7.5, 7.6, 8.5, 8.6
24	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA,, 33 kV class	Sound Level	IS 1180 : Clause 21.4 a
25	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Magnetic Balance Test at Low Voltage	CBIP publication no 317
26	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Magnetizing Current at Low Voltage	CBIP publication no 317
27	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Magnetizing Current at Low Voltage	IS 2026 (Part-I)
28	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Winding Resistance	IEC: 60076
29	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Permissible Flux Density and Over fluxing	IS 1180 (Part 1) : Clause 6.9, 7.9, 8.9 IEC 60076, IS:2026 (part-7)
30	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Winding Resistance	IS 11171:Cl 13.2(a),13.1(a)
31	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Induced AC Voltage Test	IS 2026 (Part III) : Clause 12.1
32	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Measurement of short circuit impedance and load losses	IS 1180 (Part 1):2014 clause 21.2c
33	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	No load losses and current	IS 2026(Part I) : Clause 10.5IS 11171:1985:Cl. 13.1(d),13.2(d)

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
34	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Separate Source AC withstand voltage test	IS 2026(Part III):Clause 11
35	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Short circuit impedance and load losses	IS 2026-Part I : Clause 10.4
36	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Temperature Rise Test	IS 2026(Part I) :Clause 5.6
37	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 10 MVA , 33 kV class	Temperature Rise Test	IS 2026(Part II) : Clause 5 , 10.4IS 11171:1985: Cl 13.1(h),(17)
38	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2.5 MVA 33 kV class	Oil Leakage	IS 1180 (Part 1) : Clause 21.2j, 21.5, 21.5.1.3, 21.5.2.3, 21.5.3.3IEC 60076: Part1
39	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Induced AC Voltage Test	IS 1180 (Part I) : Clause 21.2 f
40	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	No load losses and current	IS 1180 (Part I) :Clause 21.2 d
41	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Separate source AC withstand voltage test	IS 1180 (Part I) :Clause 21.2g
42	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 2500 kVA , 33 kV class	Temperature Rise Test	IS 1180 (Part I): Clause 21.2, 21.3 b 6.10, 7.10, 8.10
43	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Induced AC Voltage test	IEC 60076 Part-3
44	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Induced AC Voltage Test	IS 11171 : Clause 15
45	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Measurement of short circuit impedance and load losses	IEC 60076- Part 1: Clause 10.1.1(c), 10.4
46	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Separate source AC withstand voltage test	IEC 60076 Part-1
47	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Separate Source AC withstand voltage test	IS 11171 : (Clause 14)
48	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Short circuit impedance and load losses	IS 11171
49	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Unbalanced Current	CBIP publication no. GP 317
50	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IEC 60076 Part-1 : Clause 10.1.3(d), 10.7
51	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IS 11171

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
52	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution /Power Transformers 5 kVA to 5 MVA , 33 kV class	Zero sequence impedance for 3 phase transformer	IS 2026 (Part I) : Clause 10.7
53	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution/Power Transformers Upto 2500 kVA, 33 kV Class	Insulation resistance to earth of the windings	IS 1180 (Part 1) : Clause 21.2 e
54	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution/Power Transformers Upto 2500 kVA, 33 kV Class	Voltage ratio and check of phase displacement (vector group)	IS 1180 (Part 1) : Clause 21.2 b, 6.5, 6.6. 7.5, 7.6, 8.5, 8.6
55	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution/Power Transformers Upto 2500 kVA, 33 kV Class	Voltage ratio and check of phase displacement (vector group)	IS 1180 (Part 1) :Clause 21.2 b, 6.5, 6.6. 7.5, 7.6, 8.5, 8.6
56	ELECTRICAL- INDUCTORS & TRANSFORMERS	Distribution/Power Transformers Upto 2500 kVA, 33 kV Class	Winding Resistance	IS 1180 (Part 1) Clause 21.2 a
57	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	Moisture Content of oil in the transformer	IS 335 (Cl 3.5) & IS 1866
58	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	BDV in the transformer	IS 1180 (Part-1) (Cl 21.4(e))
59	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	BDV in the transformer	IS 335 (Cl 3.5)
60	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	Moisture Content of oil in the transformer	IS 1180 (Part 1) (Cl 21.4 e)
61	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Distribution /Power Transformers	Moisture Content of oil in the transformer	IS 13567