



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : ULTRA HIGH VOLTAGE RESEARCH LABORATORY, CENTRAL POWER RESEARCH INSTITUTE, MEDIPALLY P.O, WARANGAL ROAD, UPPAL, MEDCHAL MALKAJGIRI, HYDERABAD, TELANGANA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-6198 **Page No** 1 of 39

Validity 26/07/2024 to 25/07/2026 **Last Amended on** 07/09/2024

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
Permanent Testing				
1	CHEMICAL- LUBRICANTS	Transformer Oil	Acidity (neutralization value)	IEC 62021-1
2	CHEMICAL- LUBRICANTS	Transformer Oil	Breakdown voltage	IEC 60156
3	CHEMICAL- LUBRICANTS	Transformer Oil	Dielectric dissipation factor (DDF)	IEC 60247
4	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Acetylene	IEC 60567: 2023; IEC 60599
5	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Carbon Dioxide	IEC 60567: 2023; IEC 60599
6	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Carbon Monoxide	IEC 60567: 2023; IEC 60599
7	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Ethane	IEC 60567: 2023; IEC 60599
8	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Ethylene	IEC 60567: 2023; IEC 60599
9	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Hydrogen	IEC 60567: 2023; IEC 60599
10	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Methane	IEC 60567: 2023; IEC 60599
11	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Nitrogen	IEC 60567: 2023; IEC 60599
12	CHEMICAL- LUBRICANTS	Transformer Oil	Dissolved Gas Analysis-Oxygen	IEC 60567: 2023; IEC 60599
13	CHEMICAL- LUBRICANTS	Transformer Oil	Flash Point	ISO 2719
14	CHEMICAL- LUBRICANTS	Transformer Oil	Interfacial Tension (IFT)	ASTM D971
15	CHEMICAL- LUBRICANTS	Transformer Oil	Resistivity	IEC 60247
16	CHEMICAL- LUBRICANTS	Transformer Oil	Sediment and Sludge	IS 1866 Annex C
17	CHEMICAL- LUBRICANTS	Transformer Oil	Water content	IEC 60814
18	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Test of meter constant	IS13779:1999 A.1 to 5 Cl.12.15 (Withdrawn), IS15884:2010 Cl.5.6.5, IEC62055 -31 Cl.8.0, :2005
19	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	a.c Static Direct Connected Watthour Smart Meter Class 1 and Class 2	Smart Meter Functional Requirements	Cl.11 of IS 16444 (Part 1)- 2015 Amd 1 -2017 Amd 2
20	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Influence of heating	IS15884:2010 Cl.5.4.5, IEC62055 -31:2005 Cl.7.5, IS16444 (Part 1): 2015 A.1& 2 Cl.6.10.5, IEC62052-31: Cl.10.4,



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21	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Influence of self heating	IS15884:2010 Cl.5.4.4, IEC62055 -31:2005 Cl.7.6, IS16444(Part1): A.1&2 Cl.6.10.4,
22	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Influence of supply Voltage	Cl.5.4.2, IS15884:2010 Cl.4.4.2 & 5.4.2, IEC62055 -31:2005Cl.7.2, IS16444 (Part 1): A.1&2 Cl.6.10.2
23	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	AC voltage test	IS15884:2010 Cl.5.4.6.3, IEC62055 -31: Cl.7.7,
24	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Insulation test	IS15884:2010 Cl.5.4.6.1, IEC62055 -31
25	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Power Consumption	IS15884:2010 Cl 5.4.1, IEC62055 -31: Cl.7.3,
26	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	DC & even harmonics in current circuit	IS15884:2010 Cl.4.6.2, IEC62055 -31: Cl.4.6.3,
27	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Frequency variation	IS15884:2010 Cl.4.6.2, IEC62055 -31: Cl.8.0,
28	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	General and constructional requirements: General, Meter case, Window, Terminals, Terminal Block and Protective earth Terminal, Terminal Cover, Clearances and Creepage distances, Insulating encased meter, Display of measured values, Output Device, Keypad Interference	IS15884:2010 Cl.4.1, 4.2.12.3, IEC62055 -31
29	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Interpretation of test Results	IS15884:2010 Cl.5.6.6, IEC62055 -31: Cl.8.0,
30	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Marking of meters Name Plate Connection diagrams and terminal Marking	IS15884:2010 Cl.4.2, IEC62055 -31



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31	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Reversed phase sequence	IS15884:2010 Cl.4.6.2, IEC62055 -31: Cl.8.0,
32	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Spring Hammer Test/ mechanical test of meter case	IS15884:2010 Cl.5.2.1, IEC62055-31:2005, IEC62052-31: Cl.8.2,
33	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Test of Initial start -up of meter and Test of no load condition	IS15884:2010 Cl.5.6.3, IEC62055 -31: Cl.8.0,
34	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Test of repeatability of Error	IS15884:2010 Cl.5.6.7, IEC62055 -31: Cl.7.7
35	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Test of starting condition,	IS15884:2010 Cl.5.6.4, IEC62055 -31: Cl.8.0
36	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Test on limits of error	IS15884:2010 Cl.4.6.1, IEC62055 -31: Cl.8.0,
37	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Voltage unbalance	IS15884:2010 Cl.4.6.2, IEC62055 -31: Cl.8.0,
38	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Voltage variation	IS15884:2010 Cl.4.6.2, IEC62055 -31: Cl.8.0,
39	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC direct connected Static prepayment Meters for Active Energy Class 1 and 2;	Waveform 10% of 3rd harmonic in the current	IS15884: Cl.4.6.2,
40	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Insulation test	IS14697: 1999 A.1to4 Cl.12.7.6.4 (Withdrawn), CBIP-325:2015 Cl.5.4.6.4, IS16444(Part 2):2017 A.1Cl.6.10.6, IS13779:2020 Cl.12.7.6.4, IS14697 Cl.12.7.6.4,



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41	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	AC voltage test	IS14697: 1999 A.1 to 4 Cl.12.7.6.3 (Withdrawn), CBIP-325:2015 Cl.5.4.6.3, IS16444(Part 2):2017 A.1Cl.6.10.6, IS14697:2021 Cl.12.7.6.2, IEC62052-31:2015Cl.6.10.3.3, IEC62052-11:2020, IEC62053-21:2020 IEC 62053-22:2020, IEC62053-24:
42	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Test of Initial start -up of meter and Test of no load condition	IS14697: 1999 A.1 to 4 Cl.12.12 (Withdrawn), CBIP-325:2015 Cl.5.6.4, IS16444(Part 2):2017A.1Cl.6.12, IS14697:2021Cl.12.12, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24,Cl.7.6:
43	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Marking of meters Name Plate Connection diagrams and terminal Marking	IS14697:1999 A.1 to4 Cl.7.0(Withdrawn),CBIP: 325:2015 Cl.4.2.2.11, IS16444(Part2):2017 A.1 Cl.6.8, IEC62052-11:2020,IEC62053-2 1:2020,IEC62053-22:2020,IEC6 2053-24:2020, IS14697 Cl.7.0,
44	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	General and constructional requirements: General, Meter case, Window, Terminals, Terminal Block and Protective earth Terminal, Terminal Cover, Clearances and Creepage distances, Insulating encased meter, Display of measured values, Output Device,	IS14697:1999 A.1 to 4 Cl.6.0 (Withdrawn), CBIP - 325:2015 Cl.4.2.2, IS16444 (Part 2):2017 A.1 & 2 Cl.6.0, IEC62052-11:2020Cl.5.0, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24:2020, IS14697,Cl.6.0
45	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Spring Hammer Test/ mechanical test of meter case	IS14697:1999 A.1 to 4 Cl.12.3.3(Withdrawn), CBIP-325:2015 Cl.5.2.1, IEC62052-31:2015 Cl.8.2, IEC62052-11:2020,IEC62053-2 1:2020,IEC62053-22:2020,IEC6 2053-24:2020, IS14697,Cl.12.3.3



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46	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Waveform 10% of 3rd harmonic in the current	IS14697: 1999 A.1 to 4 Cl.12.10 (Withdrawn), CBIP-325:2015 Cl.4.6.3, IS16444(Part 2):2017A.1Cl.6.12, , IS14697, Cl.12.10,
47	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart	Interpretation of test Results	IS14697: 1999 A.1 to 4 Cl.11.1 (Withdrawn), CBIP-325:2015 Cl.5.4.6.8, IS16444(Part 2):2017 A.1Cl.6.12, IS14697:2021Cl.11.1, IEC62052-11:2020, IEC62053-21:2020, IEC62053-23:2020, IEC62053-24, Cl.7.9
48	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart	Test on limits of error	IS14697: 1999 A.1 to 4 Cl.11.1 (Withdrawn), CBIP-325:2015 Cl.5.4.6.8, IS16444(Part 2):2017 A.1Cl.6.12, IS14697:2021Cl.11.1, IEC62052-11:2020, IEC62053-21:2020, IEC62053-23:2020, IEC62053-24, Cl.7.9
49	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Influence of heating	IS14697:1999 A.1 to 4 Cl.12.7.5(Withdrawn), CBIP - 325:2015 Cl.5.4.5, IS16444 (Part 2):2017 A.1 Cl.6.10.5, IEC62052-31:2015 Cl.10.4, IEC62052-11:2020,IEC62053-2 1:2020,IEC62053-22:2020,IEC6 2053-23:2020,IEC62053-24:20 20, IS14697 ,Cl. 12.7.5:
50	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Influence of self heating	IS14697:1999 A.1 to 4Cl.12.7.4(Withdrawn), CBIP-325:2015Cl.5.4.4, IS16444 (Part2):2017A.1 Cl.6.10.4, IEC62052-11:2020 Cl.9.4.11,IEC62053-21, IEC62053-22, IEC62053-24:2020 Cl.7.10, IS14697 Cl.12.7.4



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51	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Auxiliary voltage ? 15%	IS14697:1999 A.1 to 4 Cl.12.10(Withdrawn), CBIP - 325:2015 Cl.4.2.2.10, IS16444 (Part 2): 2017 A.1 Cl.6.12, IS14697:2021, Cl.12.10, IEC62052-11:2020 Cl.9.4.8, IEC62053-21:2020 Cl.7.10, IEC62053-22:2020 Cl.7.10, IEC62053-24 Cl.7.10
52	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Frequency variation	IS14697: 1999 A.1 to 4 Cl.12.10 (Withdrawn), CBIP-325:2015 Cl.5.4.6.3, IS16444 (Part 2):2017 A.1 Cl.6.12, IS14697:2021 Cl.12, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24, Cl.7.10:2020
53	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Influence of supply Voltage	IS14697:1999 A.1 to 4 Cl.12.7.2(Withdrawn), CBIP-325:2015 , IS16444 (Part 2) :2017 A.1 Cl.6.10.2, IEC62052-11:2020 Cl.9.3.2, IEC62053-21:2020 Cl.7.10, IEC62053-22:2020, Cl.7.10, IEC62053-24:2020 Cl.7.10, IS14697, Cl.12.7.2,
54	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Phase of auxiliary Supply changed by 120	IS14697:1999 A.1 to 4 Cl.12.10(Withdrawn), IS16444 (Part 2) A.1:2017 Cl.6.12, IS14697 Cl.12.10,
55	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Power Consumption	IS14697:1999 A.1 to 4 Cl.12.7.1(Withdrawn), CBIP-325:2015 Cl.5.4.1, IS16444 (Part 2) :2017 A.1 Cl.6.10.1, IEC62052-11:2020 Cl.4.4, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24:2020 Cl.4.4, IS14697 Cl.12.7.1,
56	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Reversed phase sequence	IS14697: 1999 A.1 to 4 Cl.12.10 (Withdrawn), CBIP-325:2015 Cl.4.6.3, IS16444 (Part 2):2017 A.1 Cl.6.12, , IS14697:2021 Cl.12.10, IEC62052-11:2020, Cl.9.4.7, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24, Cl.7.10, :



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58	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Test of meter constant	IS14697: 1999 A.1 to 4 Cl.12.14 (Withdrawn), CBIP-325:2015 Cl.5.4.6.6, IS16444(Part 2):2017 A.1 Cl.6.12, IS14697:2021 Cl.12.14, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24, Cl.7.4
59	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Test of repeatability of Error	IS14697: 1999 A.1 to 4 Cl.12.16 (Withdrawn), CBIP-325:2015 Cl.5.6.9, IS16444(Part 2):2017 A.1 Cl.6.12, IS14697:2021 Cl.12.16, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24, Cl.7.8:
60	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Test of starting condition	IS14697: 1999 A.1 to 4 Cl.12.13 (Withdrawn), CBIP-325:2015 Cl.5.4.6.5, IS16444(Part 2):2017 A.1 Cl.6.12, IS14697:2021 Cl.12.13, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24, Cl.7.7:
61	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S,0.5S and 1.0S	Voltage unbalance	IS14697: 1999 A.1 to 4 Cl.12.10 (Withdrawn), CBIP-325:2015 Cl.4.6.3, IS16444(Part 2):2017 A.1 Cl.6.12, IS14697:2021 Cl.12.10, IEC62052-11:2020 Cl.9.4.5, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24, Cl.7.10:



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Laboratory Name : ULTRA HIGH VOLTAGE RESEARCH LABORATORY, CENTRAL POWER RESEARCH INSTITUTE, MEDIPALLY P.O, WARANGAL ROAD, UPPAL, MEDCHAL MALKAJGIRI, HYDERABAD, TELANGANA, INDIA

Accreditation Standard ISO/IEC 17025:2017

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Validity 26/07/2024 to 25/07/2026 **Last Amended on** 07/09/2024

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
62	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC.Static Transformer operated Watthour and VAR - hour Smart Meter Class 0.2S, 0.5S and 1.0S	Voltage variation	IS14697: 1999 A.1 to 4 Cl.12 (Withdrawn), CBIP-325:2015, IS16444 (Part 2):2017 A.1 Cl.6.12, , IS14697:2021 Cl.12, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-24, Cl.7.10:
63	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Spring Hammer Test/ mechanical test of meter case	IS13779:1999 A.1 to 5 Cl.12.3.3(Withdrawn), CBIP-325:2015 Cl.5.2.1, IS16444 (Part 1): 2015 A.1&2 Cl.6.5, IS13779:2020 Cl.12.3.3, IEC62052-31:2015 Cl.8.2, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24
64	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	General and constructional requirements: General, Meter case, Window, Terminals, Terminal Block and Protective earth Terminal, Terminal Cover, Clearances and Creepage distances, Insulating encased meter, Display of measured values, Output Device,	IS13779:1999 A.1 to 5 Cl.6.0 (Withdrawn), CBIP - 325:2015 Cl.4.2.2, IS16444 (Part 1): 2015 A.1&2 Cl.6.0, IS13779:2020 Cl.6.0, IEC62052-11:2020 Cl.5.0, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24:
65	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Insulation test	IS13779:1999 A.1 to 5 Cl.12.7.6.4 (Withdrawn), CBIP-325:2015 Cl.5.4.6.4, Cl.7.7, IS16444 (Part 1):2015 A.1&2 Cl.6.10.6, IS13779: Cl.12.7.6.4
66	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Marking of meters Name Plate Connection diagrams and terminal Marking	IS13779:1999 A.1 to 5 Cl.7.0(Withdrawn), CBIP: 325:2015 Cl.4.2.2.11, IS16444 (Part 1):2015 A.1&2 Cl.6.8, IS13779:2020 Cl.6.0, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24:



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67	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Power Consumption	IS13779:1999A.1to5CI.12.7.1(Withdrawn), CBIP-325:2015 CI.5.4.1, IS16444(Part1): 2015 A.1 & 2 CI.6.10.1, IS13779:2020 CI.12.7.1, IEC62052-11:2020CI.4.4, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24: CI.4.4,
68	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart MeterClass 1 and 2;	AC voltage test	IS13779:1999 A.1 to 5CI.12.7.6.3 (Withdrawn), CBIP-325:2015 CI.5.4.6.3 IS16444(Part 1):2015 A.1&2 CI.6.10.6, IS13779:2020 CI.12.7.6.2, , IEC62052-31:2015CI.6.10.3.3, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020,IEC62053-23:2020, IEC62053-24
69	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Test of meter constant	IS13779:1999 A.1 to 5CI.12.15 (Withdrawn), CBIP-325:2015 CI.5.4.6.6, IS16444(Part 1):2015 A.1&2 IS13779:2020 CI.12.15, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020,IEC62053-23:2020, IEC62053-24,CI.7.4:
70	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC direct connected Static prepayment Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2; AC.Static Transformer operated Watthour and VAR- hour Smart Meter Class 0.25,0.5S and 1.0S	Harmonic component in current and voltage	IEC62055 -31:2005,CI.4.6.2 IEC62052-11,2020,CI.9.4.2.3 IEC62053-21,2020,CI.7.10 IEC62053-22,2020,CI.7.10 IEC62053-23,2020,CI.7.10 IEC62053-24,CI.7.10
71	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC Static Transformer operated Watthour and VAR- Hour Meters,Class 0.2 and 0.5; AC direct connected Static prepayment Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2; AC.Static Transformer operated Watthour and VAR- hour Smart Meter Class 0.25,0.5S and 1.0S	Odd harmonics in ac current circuit	IEC62055 -31:2005,CI.4.6.2 IEC62052-11,2020,CI.9.4.2.4 IEC62053-21,2020,CI.7.10 IEC62053-22,2020,CI.7.10 IEC62053-23,2020,CI.7.10 IEC62053-24,CI.7.10



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72	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC direct connected Static prepayment Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2; AC.Static Transformer operated Watthour and VAR- hour Smart Meter Class 0.2S,0.5S and 1.0S	Sub harmonics in ac current circuit / Interharmonics in ac current circuit- Burst fired waveform test	IEC62055 -31:2005, Cl.4.6.2 IEC62052-11:2020, Cl.9.4.2.3 IEC62053-21:2020, Cl.7.10 IEC62053-22:2020, Cl.7.10 IEC62053-23:2020, Cl.7.10 IEC62053-24, Cl.7.10,
73	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC Static Transformer operated Watthour and VAR- Hour Meters, Class 0.2 and 0.5; AC direct connected Static prepayment Meters for Active Energy Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2; AC.Static Transformer operated Watthour and VAR- hour Smart Meter Class 0.2S,0.5S and 1.0S	Sub harmonics in ac current circuit / Interharmonics in ac current circuit- Burst fired waveform test	IEC62055 -31:2005, Cl.4.6.2 IEC62052-11:2020, Cl.9.4.2.3 IEC62053-21:2020, Cl.7.10 IEC62053-22:2020, Cl.7.10 IEC62053-23:2020, Cl.7.10 IEC62053-24, Cl.7.10,
74	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	DC & even harmonics in current circuit	IS13779:1999 A.1 to 5 Cl.12.11 (Withdrawn), CBIP-325:2015 Cl.4.6.3, IS16444(Part 1):2015 A.1&2 Cl.6.12, IS13779:2020 Cl.12.11, IEC62052-11:2020, Cl.9.4.2.5, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24, Cl.7.10
75	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Frequency variation	IS13779:1999 A.1 to 5 Cl.12.11 (Withdrawn), CBIP-325:2015 Cl.5.4.6.3, IS16444(Part 1):2015 A.1&2 Cl.6.12, IS13779:2020 Cl.12.11, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24, Cl.7.10:
76	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Interpretation of test Results	IS13779:1999 A.1 to 5 Cl.12.16 (Withdrawn), CBIP-325:2015 Cl.5.6.7, IS16444(Part 1):2015 A.1&2 IS13779:2020 Cl.12.16, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24
77	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Reversed phase sequence	IS13779:1999 A.1 to 5 Cl.12.11 (Withdrawn), CBIP-325:2015 Cl.4.6.3, IS16444(Part 1):2015 A.1&2 Cl.6.12, IS13779:2020 Cl.12.11, IEC62052-11:2020, Cl.9.4.7, IEC62053-21:2020, IEC62053-22:2020, IEC62053-23:2020, IEC62053-24, Cl.7.10.:



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78	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Test of immunity to earth/phase fault	IS13779:1999 A.1 to 5 Cl.12.8(Withdrawn), CBIP - 325:2015, IS16444 (Part 1):2015 A.2 Cl.6.10.7, IS13779 :2020 Cl.12.8, IEC62052-11:2020 Cl.9.4.13, IEC62053-21:2020 Cl.7.10,IEC62053-22:2020Cl.7.10, IEC62053-23:2020 Cl.7.10, IEC62053-24: Cl.7.10
79	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Test of Initial start -up of meter and Test of no load condition	IS13779:1999 A.1 to 5Cl.12.13 (Withdrawn), CBIP-325:2015 Cl.5.6.4, Cl.8.0, IS16444(Part 1):2015 A.1& 2 Cl.6.12, IS13779:2020 Cl.12.13, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020,IEC62053-23:2020, IEC62053-24,Cl.7.6:
80	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Test of repeatability of Error	IS13779:1999 A.1 to 5Cl.12.17 (Withdrawn), CBIP-325:2015 Cl.5.6.9, IS16444(Part 1):2015 A.1&2 IS13779:2020 Cl.12.17, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020,IEC62053-23:2020, IEC62053-24,Cl.7.8:
81	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Test of starting condition	IS13779:1999 A.1 to 5Cl.12.14 (Withdrawn), CBIP-325:2015 Cl.5.4.6.5, IS16444(Part 1):2015 A.1&2 Cl.6.12, IS13779:2020 Cl.12.14, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020,IEC62053-23:2020, IEC62053-24,CL.7.7:
82	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Test on limits of error	IS13779:1999 A.1 to 5Cl.11.1 (Withdrawn), CBIP-325:2015 Cl.5.4.6.8, IS16444(Part 1):2015 A.1&2 Cl.6.12, IS 13779:2020 Cl.11.1, Cl.8.0 IEC62052-11:2020, IEC62053-21:2020, IEC62053-23:2020, IEC62053-24:



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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
83	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Voltage unbalance	IS13779:1999 A.1 to 5CI.12.11 (Withdrawn), CBIP-325:2015 , IS16444(Part 1):2015 A.1&2 Cl.6.12, IS13779:2020 Cl.12.11, IEC62052-11:2020 Cl.9.4.5, IEC62053-21:2020, IEC62053-22:2020,IEC62053-23:2020, IEC62053-24,CI.7.10:
84	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Voltage variation	IS13779:1999 A.1 to 5CI.12.11 (Withdrawn), CBIP-325:2015 Cl.4.6.3, IS16444(Part 1):2015 A.1&2 Cl.6.12, IS13779:2020 Cl.12.11, IEC62052-11:2020, IEC62053-21:2020, IEC62053-22:2020,IEC62053-23:2020, IEC62053-24,CI.7.10:
85	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2; AC.Static Direct Connected Watthour Smart Meter Class 1 and 2;	Waveform 10% of 3rd harmonic in the current	IS13779:1999 A.1 to 5CI.12.11 (Withdrawn), CBIP-325:2015 Cl.4.6.3, IS16444(Part 1):2015 A.1&2 Cl.6.12, IS13779: Cl.12.11,
86	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2;	Influence of heating	IS13779:1999 A.1 to 5 Cl.12.7.5(Withdrawn), CBIP - 325:2015 Cl.5.4.5, , IS13779:2020 Cl.12.7.5, IEC62052-31:2015 Cl.10.4, IEC62052-11:2020,IEC62053-21:2020,IEC62053-22:2020,IEC62053-23:2020,IEC62053-24:
87	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2;	Influence of self heating	IS13779:1999A.1to 5CI.12.7.4(Withdrawn), CBIP-325:2015Cl.5.4.4, IS13779:2020,Cl.12.7.4, IEC62052-11:2020 Cl.9.4.11,IEC62053-21, IEC62053-22, IEC62053-23, IEC62053-24: Cl.7.10,
88	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watthour Meter Class 1 and 2;	Influence of supply Voltage	IS13779:1999 A1 to5CI.12.7.2(Withdrawn), CBIP-325:2015 Cl.5.4.2, , IS13779:2020 Cl.12.7.2, IEC62052-11:2020 Cl.9.3.2,IEC62053-21:2020Cl.7.10,IEC62053-22:2020,Cl.7.10, IEC62053-23:2020 Cl.7.10, IEC62053-24: Cl.7.10



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89	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter - Static Energy meter Category A, B, C1, C2 & C3	2.11 Event code and Event logging: 2.11.1 Indian Event Reference Table - Voltage Related2.11.2 Indian Event Reference Table -Current Related2.11.3 Indian Event Reference Table - Power Related2.11.4 Indian Event Reference Table - Transaction Related2.11.5 Indian Event Reference Table - Other2.11.6 Indian Event Reference Table - Non Roll Over2.11.7 Indian Event Reference Table - Control2.12 Selective access by Entry for Event Log Profile	CI No 4 to 14 Annex A to L of IS 15959 (Part 1)
90	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter -Smart Meter Category D1 & D2	10.0 Daily load profile parameters11.0Selective access by Range for Daily load profile12.0 ToU setting13.0 Billing profile parameters14.0 Billing Period15.0 Billing Period Counter16.0 Selective access by Entry for Billing profile	CI No 4 to 24 of IS 15959 (Part 2)
91	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter -Smart Meter Category D1 & D2	17.0 Event code and Event logging :(a) Indian Event Reference Table -Voltage Related (b) Indian Event Reference Table - Current Related(c) Indian Event Reference Table - Power Related (d) Indian Event Reference Table- Transaction Related (e) Indian Event Reference Table - Other (f) Indian Event Reference Table- Non Roll Over (g) Indian Event Reference Table - Control18.0 Selective Access by Entry for Event Log Profile	CI No 4 to 24 of IS 15959 (Part 2) -
92	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter -Smart Meter Category D1 & D2	Conformance test	IS / IEC 62056 (DLMS / COSEM)-
93	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter -Smart Meter Category D3 & D4	Conformance test	IS / IEC 62056 (DLMS / COSEM)-



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94	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter -Static Energy Meter Category A, B, C1, C2 & C3	2.9.2 Block load profile parameters2.9.3 Selective access by Range for Block load profile2.9.4 Daily load profile parameters2.9.5Selective access by Range for Daily load profile2.9.6 Billing profile parameters2.9.7 Selective access by Entry for Billing profile2.10 General Purpose parameters :2.10.1 Name Plate Details2.10.2 Programmable Parameters	CI No 4 to 14 Annex A to L of IS 15959 (Part 1)
95	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter -Static Energy Meter Category A, B, C1, C2 & C3	Compliance test:1.0 Conformance to DLMS / COSEM (IEC 62056)2.0 Parameter verification:2.1 SNRM/UA2.2 Object list download2.3 Association properties2.4 Simultaneous operation2.5 Security:2.5.1 Lowest LevelSecurity Secret 2.5.2 Low Level Security (LLS) Secret2.5.3 High Level Security (HLS) Secret2.6 ToU setting2.7 Billing Period2.8 Billing Period Counter2.9 Parameter list:2.9.1 (a) Instantaneous Parameters2.9.1 (b) Snap Shot of Instantaneous Parameters2.9.1 (c) Scaler Profile	CI No 4 to 14 Annex A to L of IS 15959 (Part 1)
96	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter -Static Energy Meter Category A, B, C1, C2 & C3	Conformance test	IS 15959 (Part 1): 2011 / IS / IEC 62056 (DLMS / COSEM)-2005:
97	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter-Smart Meter Category D1 & D2	19.0 General Purpose parameters :(a) Name Plate Details(b) Programmable Parameters20.0 Test for Smart Meter Functional Requirements21.0 Tests for Smart Meter communicability(a) Association(b) Data read(c) Profile read(d)Selective Programmability(e) Reporting of events(f) Connect/ Disconnect(g) Firmware upgrade	CI No 4 to 24 of IS 15959 (Part 2) -



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98	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter-Smart Meter Category D1 & D2	Compliance test:1.0 Conformance to DLMS/COSEM (IEC 62056)2.0 Parameter verification:3.0 SNRM/UA4.0 Object list download5.0 Association properties6.0 Security:(a) Lowest LevelSecurity Secret (b) Low Level Security (LLS) Secret(c) High Level Security (HLS) SecretParameter list:7.0 (a) Instantaneous Parameters7.0 (b) Snap Shot of Instantaneous Parameters7.0 (c) Scaler Profile8.0 Block load profile parameters9.0 Selective access by Range for Block load profile10.0 Daily load profile	CI No 4 to 24 of IS 15959 (Part 2)
99	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter-Smart Meter Category D3 & D4	10.0 Daily load profile parameters11.0Selective access by Range for Daily load profile12.0 ToU setting13.0 Billing profile parameters14.0 Billing Period15.0 Billing Period Counter16.0 Selective access by Entry for Billing profile	CI No 4 to 28 of IS 15959 (Part 3) -
100	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter-Smart Meter Category D3 & D4	17.0 Event code and Event logging :(a) Indian Event Reference Table -Voltage Related (b) Indian Event Reference Table - Current Related(c) Indian Event Reference Table - Power Related (d) Indian Event Reference Table - Transaction Related (e) Indian Event Reference Table - Other (f) Indian Event Reference Table - Non Roll Over18.0 Selective Access by Entry for Event Log Profile	CI No 4 to 28 of IS 15959 (Part 3)



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Laboratory Name : ULTRA HIGH VOLTAGE RESEARCH LABORATORY, CENTRAL POWER RESEARCH INSTITUTE, MEDIPALLY P.O, WARANGAL ROAD, UPPAL, MEDCHAL MALKAJGIRI, HYDERABAD, TELANGANA, INDIA

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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
101	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter-Smart Meter Category D3 & D4	19.0 General Purpose parameters :(a) Name Plate Details(b) Programmable Parameters20.0 Tests for Smart Meter Functional Requirements21.0 Tests for Smart Meter communicabilitya) Association(b) Data read(c) Profile read(d)Selective Programmability(e) Reporting of events (g) Firmware upgrade	CI No 4 to 28 of IS 15959 (Part 3) -
102	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Data Exchange for Electricity Meter-Smart Meter Category D3 & D4	Compliance test:1.0 Conformance to DLMS/COSEM (IEC 62056)2.0 Parameter verification:3.0 SNRM/UA4.0 Object list download5.0 Association properties6.0 Security:(a) Lowest LevelSecurity Secret (b) Low Level Security (LLS) Secret(c) High Level Security (HLS) SecretParameter list:7.0 (a) Instantaneous Parameters7.0 (b) Snap Shot of Instantaneous Parameters7.0 (c) Scaler Profile8.0 Block load profile parameters9.0 Selective access by Range for Block load profile10.0 Daily load profil	CI No 4 to 28 of IS 15959 (Part 3)
103	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitive Voltage Transformer	Corona Inception and Extinction Voltage Test / Corona test / Corona Extinction voltage test	SOP 1 : 04.09.2015 / SOP 2: 04.09.2015
104	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitive Voltage Transformer	Ferro-resonance test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
105	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor voltage dividers	Measurement of stray capacitance	IEC 61869-1:2023 / IEC 61869-1: 2007 (withdrawn) / IS/IEC 16227 (Part 1):2016 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5)2015, RA:2020 / IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA-2018 (withdrawn) / IS/IEC 60358-1:2012, IS/IEC 60358-2:2013



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106	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformer	Chopped impulse voltage test	IEC 61869-1:2023 / IEC 61869-1: 2007 (withdrawn) / IS/IEC 16227 (Part 1):2016 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5): 2015, RA -2020
107	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformer	Enclosure tightness test at ambient temperature	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5): 2015, RA
108	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformer	Lightning impulse voltage test on primary terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015 : RA -2020
109	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformer	Power-frequency voltage withstand tests on secondary terminals	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
110	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformer	Temperature-rise test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
111	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformer	Transmitted overvoltage test	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA-2020
112	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Capacitance measurement at power frequency	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 60358-1:2012 / IEC 60358-2:2013 /IS/IEC 60358-1:2012 / IS/IEC 60358-2:2013 IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
113	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Electromagnetic compatibility test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA



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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
114	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Equivalent series resistance	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358-1:2012, IS/IEC 60358-2:2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5):2015, RA -2020
115	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Measurement of high frequency capacitance	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358-1:2012 / IS/IEC 60358-2:2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5):2015, RA -2020
116	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Measurement of stray conductance	IEC 61869-5:2011 / IS/IEC 16227 (Part 5):2015, RA:2020 / IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358-1:2012 / IS/IEC 60358-2:2013
117	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Partial discharge measurement	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IEC 60358-1:2012 / IS 16227 (Part 5):2015, RA
118	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Power-frequency Voltage withstand test on primary terminals	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
119	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Power-frequency voltage withstand tests between sections	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
120	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Short circuit withstand capability test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
121	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Switching impulse voltage test (Dry and Wet)	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IEC 60358-1:2012 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA-2020



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122	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	tan delta measurement at power frequency	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IEC 60358-1:2012 / IS/IEC 60358-1:2012 / IS 16227 (Part 5):2015, RA:2020 / IS 9348:1998, RA
123	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Test for accuracy (Accuracy Check) (Ratio Error (+/- %) & Phase Displacement (+/- minutes))	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
124	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Transient response test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
125	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Type test for carrier frequency accessories (Type test for drain Coil- Voltage withstand test)	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 60358-2:2013 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
126	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Verification of markings	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
127	ELECTRICAL- INDUCTORS & TRANSFORMERS	Capacitor Voltage Transformers	Wet test for outdoor type transformers	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-5:2011 / IS 16227 (Part 5):2015, RA
128	ELECTRICAL- INDUCTORS & TRANSFORMERS	Combined Transformers	Impulse tests	IEEE C57.13-2016 / IEEE Std 4™
129	ELECTRICAL- INDUCTORS & TRANSFORMERS	Combined Transformers	Impulse voltage test on primary terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IEC 61869-4:2013 / IS 16227 (Part 1): 2016 / IS 16227 (Part 4):2015 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA: 2021 / IS 2705 (Part 1):1992, RA:2017 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA



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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
130	ELECTRICAL- INDUCTORS & TRANSFORMERS	Combined transformers	Power-frequency voltage withstand test on primary terminals (Dry and Wet)	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 2705 (Part 1):1992, RA:2017 / IS 16227 (Part 2):2016, RA-2021
131	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Corona Inception and Extinction voltage test / Corona test/ Corona extinction voltage test	SOP1: 04.09.2015 / SOP2: 04.09.2015
132	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Electromagnetic compatibility test	IEC 61869-1:2023/ Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2: 2012 / IS 16227 (Part-2):2016, RA
133	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	High voltage Power frequency withstand test on outdoor current transformer	IS 2705 (Part 1):1992, RA
134	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Inter-turn overvoltage test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1):1992, RA
135	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Lightning impulse voltage withstand test on primary terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (Withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016 RA:2021 / IS 2705 (Part 1):1992, RA
136	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Measurement of Capacitance	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part-2): 2016, RA
137	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Measurement of Dielectric dissipation factor	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2: 2012 / IS 16227 (Part-2):2016, RA:2021 / IS 2705 (Part-1):1992, RA
138	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Multiple Chopped impulse test on Primary Terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA



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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
139	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Partial Discharge Measurement	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1): 1992, RA
140	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Power frequency voltage withstand test on primary terminals / winding (Dry & Wet)	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1):1992, RA
141	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Power frequency voltage withstand test on secondary terminals / winding	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1): 1992, RA
142	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Power frequency voltage withstand tests between sections	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2): 2016, RA :2021 / IS 2705 (Part 1):1992, RA
143	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Switching impulse voltage test (Dry & Wet)	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1):1992, RA
144	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Temperature-rise test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2: 2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1): 1992, RA
145	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Test for Accuracy (Ratio Error (+ - %) & Phase Displacement (+-minutes))	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1):1992, RA
146	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Transmitted over voltage test	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016 , RA



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147	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Verification of markings	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA
148	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformer	Verification of terminal marking and polarity	IS 2705 (Part 1):1992, RA
149	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformer	Wet test for outdoor type transformers	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 1 & 2)
150	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformers	Chopped and multiple chopped impulse voltage withstand test on primary terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA
151	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformers	Chopped lightning impulse test	IS 2705 (Part 1):1992, RA
152	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformers	Determination of the instrument security factor (FS) of measuring current transformers	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1):1992, RA
153	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformers	Determination of the secondary winding resistance	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1):1992, RA
154	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current Transformers	Enclosure tightness test at ambient temperature	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA
155	ELECTRICAL- INDUCTORS & TRANSFORMERS	Current transformers	Test for rated knee point e.m.f. (Ek) and exciting current at Ek	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-2:2012 / IS 16227 (Part 2):2016, RA:2021 / IS 2705 (Part 1):1992, RA
156	ELECTRICAL- INDUCTORS & TRANSFORMERS	Dry-type power and auto transformer	Full wave lightning impulse test	IEC 60076-11-2018
157	ELECTRICAL- INDUCTORS & TRANSFORMERS	Dry-type power and auto transformer	Separate source voltage withstand test	IS 11171:1985, RA



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158	ELECTRICAL- INDUCTORS & TRANSFORMERS	Dry-type power and auto transformers	Chopped lightning impulse	IS 11171:1985, RA-2016 (withdrawn) / IS 2026 (Part-11):
159	ELECTRICAL- INDUCTORS & TRANSFORMERS	Dry-type power and auto transformers	Chopped lightning impulse voltage test	IEC 60076-11
160	ELECTRICAL- INDUCTORS & TRANSFORMERS	Dry-type power and auto transformers	Lightning impulse test	IS 11171:1985, RA-2016 (withdrawn) / IS 2026 (Part-11)
161	ELECTRICAL- INDUCTORS & TRANSFORMERS	Dry-type power and auto transformers	Separate-source AC withstand voltage test	IEC 60076-11
162	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Chopped impulse voltage withstand test on primary terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA-2020
163	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Corona Inception and Extinction voltage test / Visible corona test/ Corona extinction voltage test	SOP 1 : 04.09.2015 / SOP 2: 04.09.2015
164	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Electromagnetic Compatibility tests	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
165	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Enclosure tightness test at ambient temperature	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
166	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Impulse voltage test on primary terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA-2020
167	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Measurement of capacitance at power frequency	IEC 60358-1:2012 / IEC 61869-3:2011 / IS 16227 (Part 3): 2015 , RA
168	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage transformers	Measurement of Dielectric dissipation factor at power frequency	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 60358-1:2012 / IEC 61869-3:2011 / IS 16227 (Part 3): 2015 , RA
169	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Multiple chopped impulse test on primary terminals	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA-2020

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170	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Power-frequency voltage withstand tests between sections	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
171	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Power-frequency voltage withstand tests on secondary terminals	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
172	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Short-circuit withstand capability test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
173	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Switching impulse voltage withstand test on primary terminals (Dry and wet)	IEC 61869-1:2023 / IEC 61869-1:2007 (withdrawn) / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
174	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Temperature-rise test	IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
175	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Test for accuracy (Ratio Error (+/- %) & Phase Displacement (+/- minutes))	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
176	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Transmitted overvoltage test	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
177	ELECTRICAL- INDUCTORS & TRANSFORMERS	Inductive Voltage Transformers	Verification of markings	IEC 61869-1:2023 / Withdrawn Standard IEC 61869-1:2007 / IS 16227 (Part 1): 2016 / IEC 61869-3:2011 / IS 16227 (Part 3):2015, RA
178	ELECTRICAL- INDUCTORS & TRANSFORMERS	Liquid-Immersed Distribution, Power, and Regulating transformers	Chopped Impulse voltage test	IEEE Std C57.12.90
179	ELECTRICAL- INDUCTORS & TRANSFORMERS	Liquid-Immersed Distribution, Power, and Regulating transformers	Lightning impulse test	IEEE Std C57.12.90
180	ELECTRICAL- INDUCTORS & TRANSFORMERS	Oil immersed distribution transformer	Chopped impulse test	IS 1180 (Part 1):2014, RA



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181	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power , auto and distribution transformers	Transfer surge test	IEC 60076-3:2013, A1-2018
182	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power, distribution and auto transformers	Chopped lightning impulse test	IS 2026 (Part 3) : 2018 / IEC 60076-3-2013, AMD1:2018
183	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power, distribution and auto transformers	Lightning impulse test	IEC 60076-3: 2013, A1-2018
184	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power, distribution and auto transformers	Lightning impulse test for the line and neutral terminals	IS 2026 (Part 3) : 2018 / IEC 60076-3-2013, AMD1:2018
185	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power, distribution, traction and auto transformers	Chopped lightning impulse test	BS EN 60076-3:2013, A1-2018
186	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power, distribution, traction and auto transformers	Lightning impulse test	BS EN 60076-3:2013, A1-2018
187	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power, distribution, traction and auto transformers	Separate source voltage withstand tests	IS 2026 (Part 3) : 2018 / IEC 60076-3-2013, AMD 1
188	ELECTRICAL- INDUCTORS & TRANSFORMERS	Railway applications – Traction transformers and inductors on board rolling stock	Lightning impulse voltage withstand test	IEC 60310-2016
189	ELECTRICAL- INDUCTORS & TRANSFORMERS	Railway applications – Traction transformers and inductors on board rolling stock	Separate source voltage withstand test	IEC 60310
190	ELECTRICAL- INDUCTORS & TRANSFORMERS	Reactors	Lightning impulse voltage test	IEC 60076-4:2002 / IS 2026-6:2017 / IEC 60076-6-2007
191	ELECTRICAL- INDUCTORS & TRANSFORMERS	Reactors	Separate source voltage withstand test	IS 2026-6:2017/ IEC 60076-6
192	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED Lamps for General Lightning Services	Cap Temperature rise test	IS 16102 (Part-1):2012. Amd 1: 2015, Amd 2 : 2015, Amd 3-2020
193	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED Lamps for General Lightning Services	Creepage distance and clearances	IS 16102 (Part-1):2012. Amd 1: 2015, Amd 2 : 2015, Amd 3-2020
194	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED Lamps for General Lightning Services	Lamp power	IS 16102 (Part-2): 2017, Amd 1-2020
195	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED Lamps for General Lightning Services	Mechanical strength - Torsion resistance of Unused Lamps	IS 16102 (Part-1):2012. Amd 1: 2015, Amd 2 : 2015, Amd 3-2020
196	ELECTRICAL- SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Artificial pollution tests for outdoor insulators - by salt fog method	IEC 62271-1:2017, A1:2021 / IS/IEC 62271:Part 1:2017/ IEC 62271-100:2021 / IS/IEC 62271:Part 100: 2021 / IS 8704
197	ELECTRICAL- SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Electromagnetic Compatibility test -Emission test from the main circuits / Radio interference voltage test (RIV)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271:Part 1:2017 / IEC 62271-100:2021 / IS/IEC 62271:Part 100

This is annexure to 'Certificate of Accreditation' and does not require any signature.



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198	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Lightning impulse voltage test	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 (Part 1):2017, RA: 2018 / IEC 62271-100:2021 / IS/IEC 62271 (Part 100): 2008, RA-2017
199	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Partial discharge tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-100:2021 / IS/IEC 62271:Part 100
200	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Power-frequency voltage tests (Dry and Wet Conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271:Part 1:2017 / IEC 62271-100:2021 / IS/IEC 62271 :Part 100
201	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Resistance measurement of contacts and connections in the main circuit as a condition check	IEC 62271-1:2017, A1:2021 / IS/IEC 62271:Part 1:2017 / IEC 62271-100:2021 / IS/IEC 62271 :Part 100
202	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Switching impulse voltage tests (Dry and Wet conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 (Part 1):2017, RA: 2018 / IEC 62271-100:2021 / IS/IEC 62271 (Part 100): 2008, RA-2017
203	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC Circuit Breakers	Visible discharge test/ Corona inception and extinction voltage test / Corona test/Corona extinction voltage test	SOP 1: 04.09.2015 / SOP 2: 04.09.2015
204	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Artificial pollution tests for outdoor insulators - by salt fog method	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017 / IEC 62271-102:2022 / IS/IEC 62271 :Part 102:2018 / IS 8704:2018 / IEC 60507
205	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Continuous current tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-102:2022 / IS/IEC 62271 :Part 102
206	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Lightning impulse voltage tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 (Part 1):2017, RA: 2018 / IEC 62271-102:2018 / IS/IEC 62271 (Part 102)-2018
207	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Partial discharge tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-102:2022/ IS/IEC 62271 : Part 102



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208	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Power-frequency voltage tests (Dry and Wet conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 : Part 1:2017/ IEC 62271-102:2022 / IS/IEC 62271 : Part 102
209	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Radio interference voltage test (RIV) / Electromagnetic Compatibility test -Emission test from the main circuits	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 : Part 1:2017/ IEC 62271-102:2022/ IS/IEC 62271 : Part 102
210	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Resistance measurement of contacts and connections in the main circuit as a condition check	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017 / IEC 62271-102:2022 / IS/IEC 62271 :Part 102
211	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Switching impulse voltage tests (Dry and Wet conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 (Part 1):2017, RA: 2018 / IEC 62271-102:2018 / IS/IEC 62271 (Part 102)-2018
212	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC disconnectors and earth switches	Visible corona test / Corona test/ Corona inception and extinction voltage test / Corona extinction voltage test	SOP 1:04.09.2015 / SOP 2:04.09.2015
213	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC metal enclosed switchgear and controlgear	Lightning impulse voltage tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 (Part 1):2017, RA: 2018 / IEC 62271—200:2021 / IS/IEC 62271 (Part 200):2011, RA -2018
214	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC metal enclosed switchgear and controlgear	Resistance measurement of contacts and connections in the main circuit as a condition check	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271—200:2021 / IS/IEC 62271 :Part 200
215	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC metal enclosed switchgear and controlgear	Visible corona test / Corona test/ Corona inception and extinction voltage test/ Corona extinction voltage test	SOP 1:04.09.2015 / SOP 2:04.09.2015
216	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC metal-enclosed switchgear and controlgear	Power-frequency voltage tests (Dry and Wet conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271—200:2021 / IS/IEC 62271 :Part 200
217	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages above 1 kV up to and including 52 kV	Continuous current tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 : Part 1:2017/ IEC 62271-103:2021 / IS/IEC 62271 :Part 103
218	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages above 1 kV up to and including 52 kV	Lightning impulse voltage tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 : Part 1:2017/ IEC 62271-103:2021 / IS/IEC 62271 :Part 103: 2021



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219	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages above 1 kV up to and including 52 kV	Power-frequency voltage tests (Dry and Wet Conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-103:2021 / IS/IEC 62271 :Part 103
220	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages above 1 kV up to and including 52 kV	Resistance measurement of contacts and connections in the main circuit as a condition check	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 : Part 1:2017 / IEC 62271-103:2021 / IS/IEC 62271 :Part 103
221	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages above 1 kV up to and including 52 kV	Visible corona test / Corona test/ Corona inception and extinction voltage test / Corona extinction voltage test	SOP 1:04.09.2015 / SOP 2:04.09.2015
222	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Artificial pollution tests for outdoor insulators - by salt fog method	IEC 60507:2013 / IS 8704:2018 / IEC 62271-104:2020 / IS/IEC 62271 :Part 104
223	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Continuous current tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-104:2020 / IS/IEC 62271 : Part 104
224	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Lightning impulse voltage tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-104:2020 / IS/IEC 62271 :Part 104: 2020
225	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Power-frequency voltage tests (Dry and Wet conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-104:2020 / IS/IEC 62271 :Part 104
226	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Radio interference voltage (RIV) test / Electromagnetic compatibility tests (EMC) - Emission tests from the main circuits	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-104:2020 / IS/IEC 62271 : Part 104
227	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Resistance measurement of contacts and connections in the main circuit as a condition check	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-104:2020 / IS/IEC 62271 :Part 104
228	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Switching impulse voltage tests (Dry and Wet Conditions)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-104:2020 / IS/IEC 62271 :Part 104: 2020
229	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	AC switches for rated voltages higher than 52 kV	Visible corona test / Corona inception and extinction voltage test/ Corona test/ Corona extinction voltage test	SOP 1:04.09.2015 / SOP 2:04.09.2015



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230	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Gas insulated metal enclosed switchgear	Lightning impulse voltage tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271: Part 1:2017/ IEC 62271-203:2011 (withdrawn) / IEC 62271-203:2022 / IS/IEC 62271 (Part 203)-2022
231	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Gas insulated metal enclosed switchgear	Partial discharge tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-203:2022 / IS/IEC 62271 :Part 203
232	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Gas insulated metal enclosed switchgear	Power-frequency voltage tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-203:2022 / IS/IEC 62271 :Part 203
233	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Gas insulated metal enclosed switchgear	Radio interference voltage (RIV) test / Electromagnetic compatibility tests (EMC)	IEC 62271-1:2017, A1:2021 / IS/IEC 62271 :Part 1:2017/ IEC 62271-203:2022 / IS/IEC 62271 : Part 203
234	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Gas insulated metal enclosed switchgear	Switching impulse voltage tests	IEC 62271-1:2017, A1:2021 / IS/IEC 62271: Part 1:2017/ IEC 62271-203:2011 (withdrawn) / IEC 62271-203:2022 / IS/IEC 62271 (Part 203)-2022
235	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Gas insulated metal enclosed switchgear	Visible corona test / Corona test	SOP 1:04.09.2015 / SOP 2:04.09.2015
236	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Aluminium conductor for overhead transmission lines	Corona Inception and Extinction voltage test / Visible corona test/ Corona extinction voltage test /Corona test	SOP1:04.09.2015 / SOP 2:04.09.2015
237	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Aluminium conductor for overhead transmission lines	Corona test	IEC 61284:1997 / IS 398 (Part 5):1992, RA
238	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Aluminium conductor for overhead transmission lines	Radio interference voltage test	IEC 61284:1997 / (withdrawn standard) IEC 60437:1997 / IEC 60437:2023 / IS 398 (Part 5):1992, RA
239	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Artificial pollution test for porcelain insulators - by salt fog method	IS 8704:2018 / IEC 60507:2013 / IEC 60137:2017 / IS/IEC 60137
240	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Dielectric dissipation factor	IEEE C57.19.00: 2023/ IEEE C57.19.01: 2017 / IEEE C57.19.100



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241	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Dry lightning impulse voltage withstand test	IEC 60137:2017 / IS/IEC 60137:2017 / IEEE C57.19.01-2017
242	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Dry or wet power-frequency voltage withstand test	IEC 60137:2017 / IS/IEC 60137
243	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Dry or wet switching impulse voltage withstand test	IEC 60137:2017 / IS/IEC 60137-2017
244	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Electromagnetic compatibility tests (EMC)	IEC 60137:2017 / IS/IEC 60137
245	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Long duration power-frequency voltage withstand test (ACLD) along with measurement of partial discharge quantity	IEC 60137:2017 / IS/IEC 60137
246	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Measurement of capacitance	IEEE C57.19.00: 2023/ IEEE C57.19.01:2017 / IEEE.C57.19.100
247	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Measurement of capacitance at ambient temperature	IEC 60137:2017 / IS/IEC 60137
248	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Measurement of dielectric dissipation factor (tan delta) at ambient temperature	IEC 60137:2017 / IS/IEC 60137
249	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Measurement of partial discharge quantity	IEC 60137:2017 / IS/IEC 60137
250	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Power frequency voltage withstand tests (Dry & Wet)	IEEE.C57.19.00:2023 / IEEE C57.19.01: 2017 / IEEE.C57.19.100
251	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Switching impulse voltage withstand test (dry& wet)	IEEEC57.19.01-2017



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252	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Tests of tap insulation	IEC 60137:2017 / IS/IEC 60137
253	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Verification of dimensions	IEC 60137:2017 / IS/IEC 60137
254	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Bushings for alternating voltages	Visible discharge test / Corona inception and extinction voltage test/ Corona extinction voltage test/ Corona test	SOP 1:04.09.2015 / SOP 2 :04.09.2015
255	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and capacitive dividers	AC-withstand test on low-voltage terminal of the equipment and voltage test between low voltage terminal and earth terminal	IEC 60358-1:2012 / IEC 60358-2:2013 / IS/IEC 60358-1:2012 / IS/IEC 60358-2
256	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and capacitive dividers	Capacitance measurement at power-frequency	IEC 60358-1:2012 / IEC 60358-2:2013 / IS/IEC 60358-1:2012 / IS/IEC 60358-2:2013, IEC 62146-1:2013, A1:2016, IEC 62146-2:
257	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and capacitive dividers	Chopped impulse test for a.c. equipment and d.c. dividers	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358 (Part-1):2012 / IS/IEC 60358 (Part-2):2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5) 2015, RA-2020, IEC 62146-1:2013, A1:2016, IEC 62146-2
258	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Discharge test for d.c. coupling/filter capacitor and discharge test	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358 (Part-1):2012 / IS/IEC 60358 (Part-2):2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5) 2015, RA-2020:
259	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Lightning impulse test	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358 (Part-1):2012 / IS/IEC 60358 (Part-2):2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5) 2015, RA-2020, IEC 62146-1:2013, A1:2016, IEC 62146-2



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260	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Measurement of High frequency capacitance	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358 (Part-1):2012 / IS/IEC 60358 (Part-2):2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5) 2015, RA-2020
261	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Measurement of equivalent series resistance	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358 (Part-1):2012 / IS/IEC 60358 (Part-2):2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5) 2015, RA-2020
262	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Measurement of stray conductance	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358 (Part-1):2012 / IS/IEC 60358 (Part-2):2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5) 2015, RA-2020
263	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Measurement of tan delta at power-frequency	IEC 60358-1:2012 / IEC 60358-2:2013 / IS/IEC 60358-1:2012 / IS/IEC 60358-2:2013, IEC 62146-1:2013, A1:2016, IEC 62146-2
264	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and capacitive dividers	Partial discharge measurement test	IEC 60358-1:2012 / IEC 60358-2:2013 / IS/IEC 60358-1:2012 / IS/IEC 60358-2:2013, IEC 62146-1:2013, A1:2016, IEC 62146-2
265	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Radio Interference voltage test	IEC 60358-1:2012 / IEC 60358-2:2013 / IS/IEC 60358-1:2012 / IS/IEC 60358-2
266	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitive dividers	Switching impulse voltage withstand test (Dry & Wet)	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 (withdrawn) / IS/IEC 60358 (Part-1):2012 / IS/IEC 60358 (Part-2):2013 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5) 2015, RA-2020, IEC 62146-1:2013, A1:2016, IEC 62146-2



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267	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitor dividers	Measurement of Stray capacitance	IEC 60358-1:2012 / IEC 60358-2:2013 / IS 9348:1998, RA:2018 / IEC 61869-5:2011 / IS/IEC 16227 (Part 5)2015, RA-2020
268	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Coupling capacitors and Capacitor dividers	Wet test for outdoor equipment: AC/DC withstand wet test and AC voltage test dry or wet	IEC 60358-1:2012 / IEC 60358-2:2013 / IS/IEC 60358-1:2012 / IS/IEC 60358-2
269	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Fittings for Overhead lines and Substations	Corona test	IEC 61284
270	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	High Voltage fuses: Current limiting fuses and expulsion fuses	Lightning impulse voltage dry test	IS 9385 (Part 2):2018 / IEC 60282-1:2020 / IEC 60282-2:2008 / IEC 60282-4-2020
271	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	High Voltage fuses: Current limiting fuses and expulsion fuses	Power-frequency voltage dry and wet test	IS 9385 (Part 2):2018 / IEC 60282-1:2020 / IEC 60282-2:2008 / IEC 60282-4
272	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	High voltage insulators	Corona inception and extinction voltage test / Corona extinction voltage test/ Visible corona test/Corona test	SOP 1 : 04.09.2015 / SOP 2:04.09.2015
273	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	High voltage insulators	Corona test	IEC 61284
274	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	High voltage insulators	Radio interference voltage test	Withdrawn standard IEC 60437:1997 / IEC 60437:2023 / IEC 61284
275	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	HV Fuses (Horn gap)	Dry and Wet power frequency voltage withstand test	IEEE C37.40-2003(R
276	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	HV Fuses (Horn gap)	Dry power frequency voltage withstand test	IEEE C37.40-2003(R
277	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators	Power frequency puncture test	IS 731:1971, RA:2021 / IS 1445:1977, RA



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278	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators and similar equipment up to 800 kV DC system	Dry and Wet DC voltage long duration withstand test	IEC 61325:1995 / IEC 60060-1-2010
279	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators and similar equipment up to 800 kV DC system	Dry and Wet DC voltage withstand and flashover tests	IEC 61325:1995 / IEC 60060-1-2010
280	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators and similar equipment up to 800 kV DC system	Dry and Wet switching impulse voltage test	IEC 61325:1995 / IEC 60060-1-2010
281	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators and similar equipment up to 800 kV DC system	Dry DC voltage withstand and flashover test, Wet DC voltage withstand and flashover test	IEC 60060-1-2010
282	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators and similar equipment up to 800 kV DC system	Lightning impulse voltage test	IEC 61325:1995 / IEC 60060-1-2010
283	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators and similar equipment up to 800 kV DC system	Radio Interference Voltage (RIV)	IEC 60437:2023 / withdrawn standard IEC 60437:1997 (withdrawn) / IEC 61284-1997
284	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators and similar equipment up to 800 kV DC system	Visible corona test / Corona inception and extinction voltage test/ Corona test	IEC 61284:2017 / SOP 3: 04.09.2015 / SOP 4:04.09.2015
285	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Dry lightning-impulse withstand voltage test - using the withstand voltage procedure and using the 50 % flashover voltage procedure	IEC 60383-1:2023 / IEC 60383-1:1993 (withdrawn) / IEC 60383-2:1993 / IEC 62217:2012 / IEC 60433:2021 / IEC 61109:2008 / IS 731:1971,RA -2021
286	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Artificial pollution test - by salt fog test	IEC 60507:2013 / IS 8704
287	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Dry and wet power-frequency flashover voltage	IEC 60383-1:2023 / Withdrawn Standard IEC 60383-1:1993 / IEC 60383-2:1993 / IEC 62217:2012 / IEC 60433:2021 / IEC 61109:2008 / IS 731:1971,RA



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288	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Dry and wet power-frequency withstand voltage test	IEC 60383-1:2023 / Withdrawn Standard IEC 60383-1:1993 / IEC 60383-2:1993 / IEC 62217:2012 / IEC 60433:2021 / IEC 61109:2008 / IS 731:1971, RA
289	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Dry or wet switching-impulse withstand voltage tests – using the withstand voltage procedure and using the 50 % flashover voltage procedure	IEC 60383-1:2023 / IEC 60383-1:1993 (withdrawn) / IEC 60383-2:1993 / IEC 62217:2012 / IEC 60433:2021 / IEC 61109:2008 / IS 731:1971, RA -2021
290	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Radio Interference Voltage test	Withdrawn standard IEC 60437:1997 / IEC 60437:2023 / IS 8263
291	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Visible corona test / Corona extinction voltage test/ Corona inception and extinction voltage test/ Corona test	SOP 1 : 04.09.2015 / SOP 2:04.09.2015
292	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Insulators for OH lines with a nominal voltage above 1000 V, Insulator strings, long rod insulators strings, pin insulators, line post insulators, traction insulators	Voltage distribution test	SOP 5:04.09.2015
293	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Line Traps for AC power systems	Measurement of Radio Influence Voltage	IEC 60353:1989 / IS 8793:1995, RA
294	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Onload tap changers and tap changers	Lightning impulse voltage withstand test	IEC 60214-1:2014 / IS 8468 (Part 1)-2018
295	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Onload tap changers and tap changers	Power-frequency voltage withstand test	IEC 60214-1:2014 / IS 8468 (Part 1)
296	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Porcelain insulators for OH lines with nominal voltage up to and including 1000 V	Dry and Wet Power-frequency voltage withstand test, flashover test and power-frequency puncture withstand test	IS 1445:1977, RA
297	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Porcelain insulators for OH lines with nominal voltage up to and including 1000 V	Visual examinations and verification of dimensions	IS 1445:1977, RA



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298	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Porcelain insulators for OH lines with nominal voltage up to and including 1000 V	Visual examinations and verifications of dimensions	IS 1445:1997, RA
299	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Artificial Pollution test on insulators - by salt fog method	IEC 60507:2013 / IS 8704
300	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Dry and wet power-frequency flashover voltage	IEC 60168:1994 + A1:1997 + A2:2000 / IS/IEC 60168:2000 / IS 5350 (Part I):1970, RA:2019 / IS 5350 (Part II):1973, RA:2019 / IS 5350 (Part III):1971, RA:2019 / IS/IEC 62155:2003 / IEC 62231
301	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Dry and wet power-frequency withstand voltage test	IEC 60168:1994 + A1:1997 + A2:2000 / IS/IEC 60168:2000 / IS 5350 (Part I):1970, RA:2019 / IS 5350 (Part II):1973, RA:2019 / IS 5350 (Part III):1971, RA:2019 / IEC 62217:2012 / IS/IEC 62155:2003 / IEC 62231
302	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Dry lightning-impulse withstand voltage test - using the withstand voltage procedure and using the 50 % flashover voltage procedure	IEC 60168:1994 + A1:1997 + A2:2000 / IS/IEC 60168:2000 / IS 5350 (Part I):1970, RA:2019 / IS 5350 (Part II):1973, RA:2019 / IS 5350 (Part III):1971, RA:2019 / IS/IEC 62155:2003 / IEC 62231-2006
303	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Dry or wet switching-impulse withstand voltage tests - using the withstand voltage procedure and using the 50 % flashover voltage procedure	IEC 60168:1994 + A1:1997 + A2:2000 / IS/IEC 60168:2000 / IS 5350 (Part I):1970, RA:2019 / IS 5350 (Part II):1973, RA:2019 / IS 5350 (Part III):1971, RA:2019 / IS/IEC 62155:2003 / IEC 62231-2006
304	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Radio Interference Voltage test	Withdrawn standard IEC 60437:1997 / IEC 60437 :2023 / IS 8263
305	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Reference dry power frequency test and Dry power frequency voltage test	IEC 62217



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306	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Verification of Dimensions	IEC 60168:1994 + A1:1997 + A2:2000 / IS/IEC 60168:2000 / IS 5350 (Part I):1970, RA:2019 / IS 5350 (Part II):1973, RA:2019 / IS 5350 (Part III):1971, RA:2019 / IS/IEC 62155:2003 / IEC 62231
307	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Post Insulators	Visible corona test / Corona inception and extinction voltage test / Corona extinction voltage test / Corona test	SOP 1 :04.09.2015 / SOP 2:04.09.2015
308	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Power connectors, clamps, fittings and accessories	Corona test	IS 5561:2018 / IEC 61284
309	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Power connectors, clamps, fittings and accessories	Radio interference voltage (RIV) test	IS 5561:2018 / IEC 61284:1997 / Withdrawn standard IEC 60437 / IEC 60437
310	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Power connectors, clamps, fittings and accessories	Visible corona test / Corona inception and extinction voltage test/ Corona extinction voltage test / Corona test	SOP 1 :04.09.2015 / SOP 2:04.09.2015
311	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Spacers, dampers and other accessories, viz. joints, repair sleeves	Corona test	IEC 61284:1997 / IEC 61854:2020 / IS 10162:1982, RA
312	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Spacers, dampers and other accessories, viz. joints, repair sleeves	Radio interference voltage test (RIV)	IEC 61284:1997 / IEC 61854:2020 / IS 10162:1982, RA: 2018 / withdrawn standard IEC 60437:1997 / IEC 60437
313	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Spacers, dampers and other accessories, viz. joints, repair sleeves	Visible corona test/ Corona inception and extinction voltage test / Corona extinction voltage test/ Corona test	SOP 1 : 04.09.2015 / SOP 2:04.09.2015
314	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge arrester for alternating current system	Contamination/Pollution test on Lightning arrester	Withdrawn Standard IS 3070 (Part-3) 1993, RA-2004
315	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge arrester for alternating current system	Contamination/Polution test on Lightning arrester	ANSI/IEEE C62.11
316	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge arrester for alternating current system	Power frequency voltage withstand tests of arrester housing (Dry and Wet)	"Withdrawn Standard" IS 3070 (Part-3):1993



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317	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge arrester for alternating current system	Switching impulse voltage test on arrester housing (Dry & Wet)	"Withdrawn Standard" IS 3070 (Part-3):1993
318	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge Arresters: Metal Oxide surge arresters without gap for ac systems	Dry and wet Power-frequency voltage withstand tests on the arrester housing	IEC 60099-4:2014 / IS 15086 (Part 4)
319	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge Arresters: Metal Oxide surge arresters without gap for ac systems	Internal Partial discharge test	IEC 60099-4:2014 / IS 15086 (Part 4)
320	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge Arresters: Metal Oxide surge arresters without gap for ac systems	Lightning impulse voltage test on the arrester housing (dry)	IEC 60099-4:2014 / IS 15086 (Part 4)-2017
321	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge Arresters: Metal Oxide surge arresters without gap for ac systems	Radio Interference Voltage (RIV) test	IEC 60099-4:2014 / IS 15086 (Part 4)
322	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge Arresters: Metal Oxide surge arresters without gap for ac systems	Switching impulse voltage withstand test on the arrester housing(Dry & Wet)	IEC 60099-4:2014 / IS 15086 (Part 4)-2017
323	ELECTRICAL-TRANSMISSION LINE EQUIPMENT & ACCESSORIES	Surge Arresters: Metal Oxide surge arresters without gap for ac systems	Visible Corona test / Corona extinction voltage test/ Corona inception and extinction voltage test/Corona test	SOP 1:04.09.2015 / SOP 2 :04.09.2015
324	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Colour Nomenclature, variation	IS 16102 (Part-2): 2017, Amd 1:2020 / IESNA LM 79-08 / IS 16106:2012, RA -2017
325	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Colour Rendering Index	IS 16102 (Part-2): 2017, Amd 1:2020 / IESNA LM 79-08 / IS 16106:2012, RA -2017
326	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Colour Variation Categories (CCT and Chromaticity co-ordinates)	IESNA LM 79-08 / IS 16106:2012, RA-2017
327	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Endurance test - Supply voltage Switching cycle test	IS 16102 (Part-2): 2017, Amd 1-2020
328	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Endurance test - Temperature cycle test	IS 16102 (Part-2): 2017, Amd 1-2020
329	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Lumen Maintenance	IS 16102 (Part-2): 2017, Amd 1-2020

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330	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Luminous Efficacy	IESNA LM 79-08 / IS 16106:2012, RA-2017
331	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Luminous Flux	IS 16102 (Part-2): 2017, Amd 1:2020 / IESNA LM 79-08 / IS 16106:2012, RA -2017
332	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Luminous Intensity Distribution	IESNA LM 79-08 / IS 16106:2012, RA-2017
333	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Peak Intensity	IS 16102 (Part-2): 2017, Amd 1:2020 / IESNA LM 79-08 / IS 16106:2012, RA -2017
334	PHOTOMETRY- LIGHT SOURCES (ELECTRIC LAMP)	Self ballasted LED Lamps for General Lightning Services	Test for Total Luminous flux measurement	IESNA LM 79-08 / IS 16106:2012, RA-2017