



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name INSTITUTE FOR DESIGN OF ELECTRICAL MEASURING INSTRUMENTS,
SWATANTRYAVEER TATYA TOPE MARG, CHUNABHATTI, SION, MUMBAI,
MAHARASHTRA , INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5538 Page No. : 1 / 121

Validity 24/04/2019 to 23/04/2021 Last Amended on 16/05/2019

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
1	ELECTRICAL-DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Audible noise	Clause 7.7, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	50 dB to 130 dB
2	ELECTRICAL-DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Efficiency	Clause 6.2.2, IEC 60146-1-1, IS 16539 (Part1 / Sec 1): 2017	10 % to 99 %
3	ELECTRICAL-DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Harmonic currents	Clause 7.3.6, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Upto 40th harmonic
4	ELECTRICAL-DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Insulation Tests	Clause 7.2, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0.1 kV AC to 5 kV AC, 50 Hz ,0.1 kV DC to 5 kV DC,10 Ohm to 50 G Ohm , 500 V
5	ELECTRICAL-DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Light load and functional Test	Clause 7.3.1, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
6	ELECTRICAL-DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Power factor	Clause 7.4.3, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0 -1-0 PF Lag/ Lead
7	ELECTRICAL-DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Ripple voltage and current	Clause 7.3.5, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0.01 V to 100 V ,Upto 1 A



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8	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Temperature rise	Clause 7.4.2, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	25 °C to 300 °C
9	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of markings	Clause 6.6, IEC 60146- 1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
10	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of properties of control equipment	Clause 7.5.2, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
11	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of protective devices	Clause 7.5.3, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
12	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Inherent voltage regulation	Clause 7.3.4, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	1 V to 300 V
13	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Over-current capability	Clause 7.3.3, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	1 A to 700 A
14	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Rated current	Clause 7.3.2, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0.1 A to 500 A



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15	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of auxiliary devices	Clause 7.5.1, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
16	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances -- commercial dispensing appliances and vending machines- Fans	Mechanical strength	Clause 21 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	0.5 J , 0.1kV to 5 kV,30 N
17	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances - commercial dispensing appliances and vending machines- Fans	Heating	Clause 11 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	Upto 200°C



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18	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances - commercial dispensing appliances and vending machines- Fans	Radiation ,toxicity and similar hazards	Clause 32 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2:2009	Qualitative
19	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Abnormal operation	Clause 19 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1:2012, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75:2004+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2:2009	Upto 300°C



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20	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Classification	Clause 6 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	IP X1 to IP X6
21	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Clearances, creepage distances and solid insulation	Clause 29 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	0.5 mm to 150 mm, Upto 4 kV,Upto 30 N, CTI: Upto 600 V, 1.5 A



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22	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Construction	Clause 22 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	IP 1X to IP 6X,70°C,10N to 50 N,Upto 100 V
23	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Endurance	Clause 18 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	Qualitative



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24	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Internal wiring	Clause 23 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	2 kV
25	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Leakage current and electric strength	Clause 16 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	Upto 10 mA ,Upto 5 kV



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26	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Leakage current and electric strength at operating temperature	Clause 13 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	Upto 10 mA , Upto 5 kV
27	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Marking and instructions	Clause 7 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	Qualitative(Hexane)



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28	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Moisture resistance	Clause 15 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	IP X1 to IP X7,15°C to 35°C, Above 90 % , 48 hrs,Upto 10 mA,Upto 5 kV
29	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Overload protection of transformers and associated circuits	Clause 17 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	Upto 300 V,Upto 300°C



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30	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Power input and current	Clause 10 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	Upto 300 V , 20 A AC , 0-300 V , 5 A DC
31	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Protection against access to live parts	Clause 8 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2: 2009	20 N, Upto 300 V , Upto 10 mA



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32	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Provision for earthing	Clause 27 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	25 A, Upto 510 mohm
33	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Resistance to heat and fire	Clause 30 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	Ball pressure test : Ambient to 130°C, Glow wire test : Ambient to 960 °C Needle flame test:V- 0,V-1



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34	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Resistance to rusting	Clause 31 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	Qualitative
35	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Screws and connections	Clause 28 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	0.1 Nm to 2.5 Nm



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36	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Stability and mechanical hazards	Clause 20 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2:2009	10°to 15°, Upto 300 °C, 5 N
37	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Starting of motor operated appliances	Clause 9 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2-75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2-80:2015, EN 60335-2-80:2003+A1:2004+A2:2009	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
38	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Terminals for external conductors	Clause 26 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	Upto 30 mm ² , 5 N
39	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Household and similar electrical appliances- commercial dispensing appliances and vending machines- Fans	Transient overvoltages	Clause 14 , IS 302 (Part 1):2008 +A1+A2+A3+A4:2016, IS 302(Part2/ Sec80):2003,IEC 60335-1:2010 +A1:2013+A2:2016,EN 60335-1, IEC 60335-2- 75:2012 +A1:2015+A2:2018,EN 60335-2-75+ A2:2008,IEC 60335-2- 80:2015, EN 60335-2- 80:2003+A1:2004+A2: 2009	Upto 10 kV



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
40	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AAC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2),	Insulating encased meter	Cl. 6.7 IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.7, IS 15884:2010, Clause 4.2.2.5.7, CBIP(Publication No.:325,304), Cl. 5.7 IEC/EN 62052- 11:2003+ A1: 2016	Qualitative(Upto 10 N)
41	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Impulse voltage	Clause 12.7.6.2, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014 Clause 5.4.6.2, IS 15884: 2010 Clause 6.10.6,IS 16444:2015, Clause 5.4.6.2, CBIP(Publication No.:325,304), Clause 7.3.2, IEC/EN 62052- 11:2003+ A1: 2016	Qualitative(Upto 6 kV)



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
42	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Immunity to electromagnetic HF fields	Clause 12.9.3/12.8.3, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014 Clause 6.11, IS 16444 2015 Clause 5.5.3, IS 15884: 2010, Clause 7.5.3, IEC/EN 62052-11:2003+ A1: 2016: 2016	Upto 10 V/m, 80 MHz to 1 GHz
43	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	10% of 3rd harmonic in the current	Cl. 12.11, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, IS 15884: 2010, Clause 6.12, IS 16444 : 2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
44	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	AC high voltage	Clause 12.7.6.3, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.4.6.3, IS 15884: 2010, Clause 6.10.6, IS 16444:2015, Clause 5.4.6.3, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	0.1 kV to 5 kV
45	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Ambient temperature influence	Clause 12.12/12.11, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.6.3, IS 15884: 2010, Clause 6.12, IS 16444:2015, Clause 5.6.3, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF ,Temp : Ambient $\pm 15^{\circ}\text{C}$



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
46	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Clearances and creepage distances	Clause 6.6, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.6, IS 15884: 2010, Clause 6.3, IS 16444 : 2015, Clause 4.2.2.5, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	0.1 mm to 150 mm
47	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Cold	Clause 12.6.2, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4 : 2014, Clause 12.6.2,IS 15884: 2010, Clause 5.3.2, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	-25°C,72 hrs



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
48	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt-hour Smart Meter Class 1 and 2	Conducted Emission	Cl. 12.9.5,12.8.5, IS 13779+A1+A2+A3+A4+A5:2015, IS 14697+A1+A2+A3+A4: 2014, Cl. 4.5.3 & 5.5.5, IS 15884: 2010, Clause 6.11, IS 16444:2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	150 kHz to 30 MHz,(-) 140 dBm to 16 dBm
49	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt-hour Smart Meter Class 1 and 2	Connection diagrams and terminal marking	Clause 7.2, IS 13779+A1+A2+A3+A4+A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.2.11.3, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
50	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Continuous 'abnormal' magnetic induction of external origin (67 mT , 0.2 T)	Cl. 12.11 / 12.10, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, IS Cl. 4.6.2 15884: 2010, Clause 6.12, IS 16444:2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V
51	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Continuous magnetic induction of external origin	Clause 6.12, IS 16444: 2015	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
52	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Damp heat cyclic	Clause 12.6.3, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 12.6.3, IS 15884: 2010, Clause 5.3.3, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Temp.:40°C, Humidity : 95% ,6 cycles
53	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	DC and even harmonics in AC current circuit	Cl. 12.11 / 12.10 , IS 13779+A1+A2+A3+A4 +A5:2014, IS 14697+A1+A2+A3+A4: 2015, Cl. 4.6.2 IS 15884 : 2010, Clause 6.12, IS 16444:2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
54	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Display of measured values	Clause 6.10, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.10, IS 15884: 2010, Clause 6.6, IS 16444:2015, Clause 4.2.2.8, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Qualitative
55	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Dry Heat	Clause 12.6.1, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 12.6.1,IS 15884:2010, Clause 5.3.1, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016: 2016	70 °C, 72 hrs



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
56	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Fast transient burst	Clause 12.9.4/12.8.4, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4 : 2014, Clause 5.5.4, IS 15884: 2010, Clause 6.11, IS 16444:2015, Clause 5.5.3, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016: 2016	0.2 kV to 4.4 kV, Rise Time: 5ns, Width: 50 ns, 5 kHz
57	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Frequency variation	Cl. 12.11/12.10, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Cl. 4.6.2 IS 15884: 2010, Clause 6.12, IS 16444:2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016: 2016	40 V to 300 V , 1 mA to 120 A , 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
58	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Immunity to electrostatic discharges	Clause 12.9.2/12.8.2, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.5.2, IS 15884: 2010, Clause 6.11, IS 16444 : 2015, Clause 5.5.2, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	CD: 0.5 kV to 30 kV,AD: 0.5 kV to 30 kV
59	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Influence of heating	Clause 12.7.5, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.4.5, IS 15884: 2010, Clause 6.10.5, IS 16444 : 2015, Clause 5.4.5, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Upto 100°C



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
60	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Influence of immunity to earth fault	Clause 12.8/12.17, IS 13779+A1+A2+A3+A4 +A5:2014, IS 14697+A1+A2+A3+A4: 2014, Clause 6.10.7, IS 16444:2015, Clause 7.4, IEC/EN 62052- 11:2003+ A1: 2016: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
61	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Influence of self heating	Clause 12.7.4:IS 13779 : 1999+A1+A2+A3+A4 : 2015, Clause 4.4.4, IS 15884: 2010, Clause 6.10.4, IS 16444 : 2015, Clause 5.4.4, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1, Clause 7.3, IEC/EN 62053-22:2003+ A1: 2016	40 V to 300 V , 1 mA to 120 A, 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
62	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt-hour Smart Meter Class 1 and 2	Influence of short time over current	Clause 12.7.3, IS 13779+A1+A2+A3+A4+A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.4.3, IS 15884: 2010, Clause 6.10.3, IS 16444:2015, Clause 5.4.3, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016, Clause 7.2, IEC/EN 62053-22:2003+ A1: 2016	Upto 5000A
63	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt-hour Smart Meter Class 1 and 2	Influence of supply voltage	Clause 12.7.2, IS 13779+A1+A2+A3+A4+A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.4.2, IS 15884: 2010, Clause 6.10.2, IS 16444:2015, Clause 7.4, IEC/EN 62053-22:2003+ A1:2016, Clause 5.4.2, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
64	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt-hour Smart Meter Class 1 and 2	Insulation resistance	Clause 12.7.6.4, IS 13779+A1+A2+A3+A4+A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.4.6.4, IS 15884: 2010 Clause 6.10.6, IS 16444: 2015, Clause 5.4.6.4, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	100 kOhm to 50 GOhm
65	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt-hour Smart Meter Class 1 and 2	Interpretation of results	Clause 12.16/12.15, IS 13779+A1+A2+A3+A4+A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.6.6, IS 15884: 2010, Clause 6.12, IS 16444: 2015	40 V to 300 V, 1 mA to 120 A ,0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
66	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Limits of error	Clause 11.1, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Cl. 4.6.1IS 15884: 2010, Clause 6.12, IS 16444: 2015 : 1999, Clause 6.12, IS 16444:2015, Clause 5.6.8, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V , 1 mA to 120 A, 0-1-0 PF
67	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Magnetic induction of external origin (0.5 mT)	Cl. 12.11/ 12.10 , IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.6.2.3 , IS 15884: 2010, Clause 6.12, IS 16444:2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V , 1 mA to 120 A, 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
68	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Marking of smart meter	Clause 7, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.11, IS 15884: 2010, Cl. 4.2.2.11 CBIP(Publication No.:325,304), Clause 6.8, IS 16444 : 2015	Qualitative
69	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Meter case	Clause 6.2, 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4 : 2014, Clause 4.2.2, IS 15884: 2010, Clause 4.2.2.1,CBIP (Publication no. 325,304),IEC/EN 62052-11:2003+ A1: 2016	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
70	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Meter constant	Clause 12.14/12.15, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.6.5, IS 15884: 2010, Clause 5.6.6, CBIP(Publication No.:325,304), Clause 6.12, IS 16444:2015, Clause 8.4, IEC/EN 62052-11:2003+ A1:2016,IEC/EN 62053-21/22:2003+ A1: 2016: 2015	40 V to 300 V , 1 mA to 120 A , 0-1-0 PF
71	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	No load condition	Clause 12.13/12.12, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Cl. 5.6.3 IS 15884: 2010, Clause 5.6.4, CBIP(Publication No.:325,304), Clause 6.12, IS 16444:2015, Clause 8.3.2,IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V , 1 mA to 120 A , 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
72	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Output Device	Clause 6.11,IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 6.7, IS 16444:2015, Clause 4.2.2.9, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Qualitative
73	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Power consumption	Clause 12.7.1, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.4.1, IS 15884: 2010, Clause 6.10.1, IS 16444:2015, Clause 5.4.1, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1:2016, Clause 7.1, IEC/EN 62053- 22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
74	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Protection against penetration of dust and water	Clause 6.9 & 12.5, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.9, IS 15884: 2010, Clause 6.5, IS 16444:2015, Clause 4.2.2.7 & 5.2.5, CBIP(Publication No.:325,304), Clause 5.9,IEC/EN 62052- 11:2003+ A1: 2016	Qualitative(IP 51, IP 54)
75	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Radiated emission	Cl. 12.9.5, 12.8.5, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Cl. 4.5.3, 5.5.5 IS 15884: 2010 Clause 6.11, IS 16444 :2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	30 MHz to 300 MHz, (-)140 dBm to 16 dBm



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
76	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Repeatability of error	Clause 12.17/12.16, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.6.7, IS 15884: 2010, Clause 6.12, IS 16444:2015, Clause 5.6.9, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V
77	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Resistance to heat and fire	Clause 6.8 & 12.4, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.8, IS 15884: 2010, Clause 6.4, IS 16444:2015, Clause 4.2.2.6, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	650 °C to 960 °C



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
78	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Reverse phase sequence	Cl. 12.11, 12.10, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Cl.4.6.2 IS 15884: 2010, Clause 6.12, IS 16444:2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF
79	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Shock	Clause 12.3.1, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.2.2, IS 15884: 2010, Clause 6.5, IS 16444:2015, Clause 5.2.2, CBIP(Publication No.:325,304), Clause 5.2.2.2, IEC/EN 62052- 11:2003+ A1: 2016	Accl.: 40 g, Pulse: ½ Sine,Pulse duration: 18 ms



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
80	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Spring hammer	Clause 12.3.3, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.2.1 , IS 15884: 2010, Clause 5.2.1, CBIP(Publication No.:325,304), Clause 6.5, IS 16444:2015, Clause 5.2.2.1, IEC/EN 62052-11:2003+ A1: 2016	0.22 Nm
81	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Starting condition	Cl. 12.14 / 12.13 IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.6.4, 5.6.4 ,IS 15884: 2010, Clause 5.6.5, CBIP(Publication No.:325,304), Clause 6.12, IS 16444:2015, Clause 8.3.3, IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
82	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Surge immunity	Clause 5.5.6, IS 15884: 2010, Clause 6.11, IS 16444: 2015, IEC/EN 62052-11:2003+ A1: 2016	0.5 kV to 4.0 kV
83	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Terminal cover(s)	Clause 6.5, IS 13779+A1+A2+A3+A4 +A5:2015, Clause 4.2.5,IS 15884: 2010, IS 14697+A1+A2+A3+A4: 2014, Clause 6.2.2, IS 16444:2015, Clause 4.2.2.4, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
84	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Terminals,terminal block(s) and protective earth terminal	Cl. 6.4 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.4, IS 15884: 2010, Clause 6.2.1,IS 16444:2015, Clause 4.2.2.3, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Upto 135°C,1.8 MPa
85	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Verification of Name plate	Clause 7.1, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4 :2014, : 2014	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
86	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Vibration	Clause 12.3.2, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 5.2.3, IS 15884: 2010, Clause 5.2.3, CBIP(Publication No.:325,304), Clause 6.5, IS 16444:2015, Clause 5.2.2.3, IEC/EN 62052-11:2003+ A1: 2016	10 Hz-150 Hz -10 Hz,0.3 mm p-p, 2.0 g
87	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Voltage unbalance	Cl. 12.11/12.10, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014,Cl. 4.6.2 IS 15884: 2010, Clause 6.12,IS 16444: 2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V , 1 mA to 120 A, 0-1-0 PF



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
88	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Voltage variation	Cl. 12.11/ 12.10, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Cl. 4.6.2 IS 15884: 2010, Clause 6.12, IS 16444: 2015, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V , 1 mA to 120 A , 0-1-0 PF
89	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	Window (Transparency)	Clause 6.3, IS 13779+A1+A2+A3+A4 +A5:2015, IS 14697+A1+A2+A3+A4: 2014, Clause 4.2.3, IS 15884: 2010, Clause 4.2.2.2,CBIP (Publication No.325,304),IEC/EN 62052-11:2003+ A1: 2016	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
90	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Direct Connected Watt-hour Meter Class 1 and 2, AC Transformer operated Watthour & Var hour meters Class 0.2s,0.5s,1.0s, Alternating Current Direct Connected Static Prepayment Meter (Class 1 & 2), AC Static Direct Connected Watt- hour Smart Meter Class 1 and 2	'Abnormal' ac magnetic induction of external origin (10 mT)	Clause 12.11/12.10 IS 13779+A1+A2+A3+A4 +A5:2015, Clause 5.6.2.4, IS 15884: 2010, IS 14697+A1+A2+A3+A4: 1999, Clause 6.12, IS 16444:2015, CI 5.6.2 CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V , 1 mA to 120 A , 0-1-0 PF
91	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	AC Static Watt-hour Meters (Class 1 & 2 Specification) AC static transformer operated and VAR-Hour Meters Class 0.2S, 0.5S and 1.0S specifications	Continuous magnetic induction of external origin	IS 13779+A1+A2+A3+A4 +A5: 2014, IS 14697+A1+A2+A3+A4: 2014	40 V to 300 V , 1 mA to 120 A, 0-1-0 PF
92	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Abnormal voltage condition	Clause 4.4.2.6, IS 15884: 2010	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF
93	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Accounting functions	Clause B-3.4, IS 15884: 2010	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
94	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Additional functionalities	Clause A-2, IS 15884: 2010	Qualitative
95	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Basic functionalities - prepayment mode	Clause A-1,IS 15884: 2010	Qualitative
96	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Collection of agreed debt	Clause A-2.3, IS 15884 : 2010	Qualitative
97	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Consumption based charging function	Clause 5.9,IS 15884: 2010	Qualitative
98	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Core functional tests within voltage and temperature range limits	Clause A-1.3,IS 15884: 2010	(-)60°C to 180°C , 40 V to 300 V
99	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Crystal controlled clock	Clause 4.6.6.1, IS 15884: 2010	365 days



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
100	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Crystal controlled clocks	Clause D-2, IS 15884: 2010	365 days
101	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Crystal-controlled clocks in payment meters	Clause D-3.2, IS 15884: 2010	36 hours
102	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Delivery function	Clause B-3.6, IS 15884: 2010	Qualitative
103	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Display function	Clause B-3.9, IS 15884: 2010	Qualitative
104	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Effect of disturbances on time keeping	Clause D-4, IS 15884: 2010	-10°C,23°C,45°C, 24 hours
105	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Function as a single- part payment meter	Clause B-3, IS 15884: 2010	Qualitative

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



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
106	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Functional tests within the limit range of operation with voltage	Clause A-1.4,IS 15884: 2010	-60 °C to 180 °C,40 V to 300 V
107	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Functional tests within the limit range of operation with temperature	Clause A-1.5,IS 15884: 2010	-60°C to 180°C,40 V to 300 V
108	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Generalize payment meter instance	Clause B-2, IS 15884: 2010	Qualitative
109	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Harmonics in the voltage waveform	Clause D-4.3, IS 15884: 2010	3rd harmonic, 10 % Vref 48Hrs
110	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Keeping time	Clause 5.7,IS 15884: 2010	365 days
111	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Meter application process	Clause B-3.2,IS 15884: 2010	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
112	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Metering function	Clause B-3.5, IS 15884: 2010	Qualitative
113	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Operation within the specified operating range	Clause 4.3.1, IS 15884: 2010	-10 °C to 35 °C
114	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Prepayment mode - token handling and data integrity requirements	Clause A-1.6, IS 15884: 2010	Qualitative
115	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Prepayment mode-core functionalities	Clause A-1.2, IS 15884: 2010	Qualitative
116	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Real -time clock setting facilities	Clause D-1.3, IS 15884: 2010	Qualitative
117	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Real-time clock support facilities	Clause D-1.2, IS 15884: 2010	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
118	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Recording functions	Clause B-3.10, IS 15884: 2010	Qualitative
119	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Requirements for other mode of operation	Clause A-2.2, IS 15884: 2010	Qualitative
120	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Robustness of accounting process	Clause 6.2, IS 15884: 2010	Qualitative
121	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Security functions	Clause B-3.11, IS 15884: 2010	Qualitative
122	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	System compliance requirements	Clause A-3, IS 15884: 2010	Qualitative
123	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Test function	Clause B-3.8, IS 15884: 2010	Qualitative



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124	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Time -based charging function	Clause 5.10 , IS 15884: 2010	Qualitative
125	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Time function	Clause B-3.7, IS 15884: 2010	Qualitative
126	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Time-keeping accuracy	Clause D-3, IS 15884: 2010	48 hours
127	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Time-of-Use tariff facilities	Clause A-2.4, IS 15884: 2010	Qualitative
128	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Token carrier to meter interface function	Clause B-3.3, IS 15884: 2010	Qualitative
129	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Voltage dips and short interruption	Clause D-4.2, IS 15884: 2010	40 V to 300 V, 20 ms, 50 ms, 60 s



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
130	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Extended operating range	Clause 4.4.2.3, IS 15884: 2010	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
131	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Limit range of operation	Clause 4.4.2.4, IS 15884: 2010	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
132	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Operation within the limit range of operation	Clause 4.3.2, IS 15884: 2010	-25 °C to 60 °C
133	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Relative humidity	Clause 4.3.4, IS 15884: 2010	30 % to 95 %
134	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Specified operating range	Clause 4.4.2.2, IS 15884: 2010	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF
135	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Standard electrical values	Clause 4.1, IS 15884: 2010	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
136	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Temperature range	Clause 4.3.3, IS 15884: 2010	-25 °C to 70 °C
137	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Token carrier interface	Clause 4.2.12, IS 15884: 2010	Upto 1000 Operation, Upto 10 N
138	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Voltage dips and short interruption	Clause 4.4.2.7, IS 15884: 2010	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
139	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Voltage range	Clause 4.4.2.1 IS 15884: 2010	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF
140	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Alternating Current Direct Connected Static Prepayment meters for Active Energy (Class 1 and 2)	Withstand range	Clause 4.4.2.5, IS 15884: 2010	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
141	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Frequency influence error in the case of a.c. voltage measurement	Clause 3.13(Part 2) ,IS 13875: 1993	45 Hz to 55 Hz



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142	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	High voltage	Clause 5.5, IS 9249: 1979	5 kV AC
143	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Insulation resistance	Clause 5.6, IS 9249: 1979	Upto 5000 Mohm
144	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Intrinsic error	Clause 4.2(Part 1), Clause 3.2(Part 2) ,IS 13875: 1993	Voltmeter: 1000 V AC/DC, Ammeter: 30 A AC/DC , Wattmeter: 600 V, 30 A, 0-1-0 PF, Varmeter: PF meter: 0-1-0 , Frequency meter: 10-100, Ohmmeter: 2 kohm
145	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Mechanical load	Clause 4.9(Part 1), Clause 3.9(Part 2) ,IS 13875: 1993	Shock test: ½ Sine , 18 shocks, 11 ms, 15 g, Vibration test : 0.15 mm, 10-55-10 Hz , 1 octave/min
146	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Overload	Clause 3.15(Part 2) ,IS 13875: 1993	Upto 415 V Upto 32 A



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147	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Self heating	Clause 3.16(Part 2) ,IS 13875: 1993	Up to 100°C
148	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Variation due to Air humidity	Clause 4.5(Part 1), Clause 3.5(Part 2) ,IS 13875: 1993	30 % to 98 %
149	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Variation due to Ambient temperature	Clause 4.4(Part 1), Clause 3.4(Part 2) ,IS 13875: 1993	10 °C to 55 °C
150	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Variation due to Auxiliary supply	Clause 4.8(Part 1), Clause 3.8(Part 2) ,IS 13875: 1993	Upto 300 V AC ,Upto 24 V DC
151	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Digital measuring instrument	Variation due to Changes in position	Clause 4.6(Part 1), Clause 3.6(Part 2) ,IS 13875: 1993	5°
152	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Components and subassemblies	Clause 14,EN 61010- 1,IEC 61010-1:2010 +A1: 2016	Impulse : Upto 10 kV



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153	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Equipment temperature limits and resistance to heat	Clause 10,EN 61010-1,IEC 61010-1:2010 +A1: 2016	0 °C to 200 °C
154	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Hazards resulting from application	Clause 16,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Qualitative
155	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Marking and documentation	Clause 5,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Qualitative
156	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Power input	Clause 5.1.3(c),EN 61010-1,IEC 61010-1:2010 +A1: 2016	Upto 300 V , 12 A, 3600 W AC/DC
157	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Protection against electric shock	Clause 6,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Upto 20 N
158	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Protection against liberated gasses and substances ,explosion and implosion	Clause 13,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
159	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Protection against mechanical hazards	Clause 7,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Upto 200 N
160	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Protection against spread of fire	Clause 9,EN 61010-1,IEC 61010-1:2010 +A1: 2016	0 °C to 200 °C
161	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Protection by interlock	Clause 15,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Qualitative
162	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Resistance to mechanical stresses	Clause 8,EN 61010-1,IEC 61010-1:2010 +A1: 2016	5 J, 30 N
163	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Testing in single fault condition	Clause 4.4,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Upto 10 mA, Upto 200°C
164	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Electrical equipment for measurement, control and laboratory use	Protection against hazard from fluid	Clause 11,EN 61010-1,IEC 61010-1:2010 +A1: 2016	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
165	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Abnormal magnetic field	CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
166	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Abnormal voltage condition	Clause 4.4.7, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
167	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Ambient temperature variation	IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF ,(-) 40°C to 75°C
168	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Application of current and voltage transformer ratios	Clause G-3/6.18, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
169	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Climatic environments	Clause 6.3, IEC/EN 62052-11:2003+ A1: 2016	Qualitative
170	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Communication capability	Clause G-9/6.4, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative



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171	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Continuous magnetic induction of external origin	IEC/EN 62052- 11:2003+ A1:2016, IEC/EN 62053- 21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
172	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	CT polarity reversal	CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
173	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Facility for display and/or meter reading in the absence of power supply	Clause 6.12, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
174	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Facility for high resolution display	Clause 6.11, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
175	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Harmonic components in the currents and voltage circuits	IEC/EN 62052- 11:2003+ A1:2016, IEC/EN 62053- 21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
176	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Historical data recording	Clause 6.19, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative



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177	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Influence quantities	Clause 8.2, IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0 -1 -0 PF
178	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Insulation properties	Clause 7, IEC/EN 62052-11:2003+ A1: 2016	Impulse Voltage Test Upto 10 kV, 1.2/50, 0.5 J, 500 Ohm, Dielectric Strength Test Upto 5kV AC/DC
179	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Load unbalance over and above 25 % between the phases for load above 10 %	CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
180	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Marking and name plates	Clause 4.2.2.11.1, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Qualitative
181	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Marking of meters	Clause 4.2.2.11, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Qualitative
182	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Maximum demand integration period (DIP)	Clause G-5/6.3, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
183	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Meter "Power OFF" data	Clause 6.20, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
184	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Missing Potential	CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
185	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Odd harmonics in the a.c. current circuits	IEC/EN 62052-11:2003+ A1:2016, IEC/EN 62053-21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF
186	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Phasor Diagram	Clause 6.20, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
187	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Power ON/OFF event	CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
188	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Radio interference suppression	Clause 5.5.5/ 5.5.8 CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	30 MHz to 300 MHz



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
189	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Radio interference suppression	Clause 7.5.8, IEC/EN 62052-11:2003+ A1 : 2016	30 MHz to 300 MHz
190	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Registration of reactive and apparent energy at leading power factor	Clause 6.15, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
191	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Registration updation	Clause 6.17, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
192	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Sub-harmonics in the a.c. current circuits	IEC/EN 62052- 11:2003+ A1:2016, IEC/EN 62053- 21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A, 0-1-0 PF
193	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Time accuracy	Clause G-18/6.16, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	365 days
194	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Time of day (TOD) metering	Clause G-8/6.5, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
195	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Variation of current	IEC/EN 62052- 11:2003+ A1:2016, IEC/EN 62053- 21/22:2003+ A1: 2016	40 V to 300 V, 1 mA to 120 A , 0-1-0 PF
196	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Auto display scrolling facility	Clause 6.13, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
197	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Current bypass and/or open condition	CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
198	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Electrical requirement	Clause 5.4,CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Qualitative
199	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Facility for checking correctness of CT,VT connections	Clause 6.14, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
200	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Influence quantities	Clause 4.6.3,5.6.2, CBIP(Publication No.:325,304), IEC/EN 62052-11:2003+ A1: 2016	Upto 300V AC,1mA to 120A,0-1-0 PF, 0.5mT,10mT, 67mT, 0.2T



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
201	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Invalid phase configuration of the voltage	CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
202	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Load profiling capability	Clause 6.9, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
203	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	MD reset	Clause G-4/6.2, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
204	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Measurement of harmonic energy/phase current	Clause G-20/6.6, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
205	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Monitoring of system abnormalities	Clause 6.8, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
206	ELECTRICAL-ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Quantities to be measured and displayed	Clause G-2/6.1,CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative



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207	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Self diagnostic feature	Clause G-19/6.10, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
208	ELECTRICAL- ELECTRICAL INDICATING & RECORDING INSTRUMENTS	Static Energy Meter (1P, 3P)	Tamper and fraud monitoring	Clause G-10/6.7, CBIP (Publication No.325), CBIP (Publication No. 304), IS 14697: 1999+ A1+A2 +A3 +A4: 2014	Qualitative
209	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Change of temperatureRapid Temperature Cycling	IS 9000(Part 14/ Sec 1):1988,IEC/EN 60068- 2-14: 2009, JSS 55555 Test No. 22: 2012	-60 to 180
210	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Damp heat (cyclic)	IS 9000(Part 5/Sec 1 and 2):1981,IEC/EN 60068-2-30: 2005	30 % to 98 % , @ 25°C to 85 °C
211	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Damp heat (Steady state)	IS 9000(Part 4):2008, IEC 60068-2-78:2012, EN 60068-2-78,JSS 55555 Test no. 10: 2012	30 % to 98 % , @ 25°Cto 85 °C



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212	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Degree of protection (Ingress protection)	IEC 60529:1989 +A1:1999 +A2:2013,EN 60529, IEC 60947-1:2007 +A1:2010+A2:2014,EN 60947-1+A2,IEC 61439-1:2011,EN 61439-1,IS/IEC 60947- 1:2007,IS 8623(Part 1): 1993	IP1X,IP2X,IP3X,IP4X, IP5X,IP6X,IPX1, IPX2,IPX3,IPX4,IPX5,I PX6,IPX7,IPX8
213	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Dry cold testLow temperature test	IS 9000(Part 2/ Sec 1 to 4):1977,IEC/EN 60068-2-1: 2007, JSS 55555 Test no. 20: 2012	- 60°C to Ambient
214	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Dry heat test High temperature test	IS 9000(Part 3/ Sec 1 to 5):1977,IEC/EN 60068-2-2: 2007, JSS 55555 Tset no. 17: 2012	Ambient to 180°C
215	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Random vibration test	IEC/EN 60068-2- 64:2008,JSS 55555 Test no. 28 : 2012, IEC/EN 61373: 2010	2000 Kgf ,5 Hz to 2800 Hz,51.0 mm(P-P),70 g
216	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Shock test	IEC 60068-2- 27:2008,EN 60068-2- 27, IEC 60255-21- 2:1988, EN 60255-21- 2,IEC/EN 61373:2010,IS 9000 (Part 7/ Sec 1): 2006, JSSS 55555 Test No.24: : 2012	Upto 50 g



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217	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical and electronic related items	Vibration test	IEC 60068-2-6:2007, EN 60068-2-6, IEC/EN 61373:2010, IEC 60255-21-1:1988, EN 60255-21-1, IS 9000(Part 8):1981, JSS 55555 Test no. 28: 2012	5Hz to 2800 Hz, Upto 51 mm, Acceleration : Upto 70 g
218	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical/ Electronic Equipment	Impact Test	IEC/EN 62262: 2002	Qualitative(IK01 to IK10)
219	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical/ Electronic Product	Bump Test	IEC 60068-2-27:2008, EN 60068-2-27, IEC 60255-21-2:1988, EN 60255-21-2, IEC/EN 61373:2010, IS 9000 (Part 7/ Sec 1): 2006	Upto 50 g, 1/2 sine, Upto 120 Bumps/min
220	ELECTRICAL- ENVIRONMENTAL TEST FACILITY	Electrical/ Electronic Product	Seismic Test	IEC 60255-21-3 : 1993	2000 Kgf , 5 Hz to 2800 Hz, 51.0 mm(P-P), 70 g
221	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Plastics and ebonite High-strength thermosetting laminates and long-fibre-reinforced plastics	Temperature of deflection under load	ISO 75-1:2013, ISO 75-2:2013 , ISO 75-3: 2004, IS 13360 (Part 6/Sec 3): 2017, IS 13360 (Part 6/Sec 17): 2017, IS 13360 (Part 6/Sec 18): 2017	Ambient to 300°C



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224	ELECTRICAL-INSULATING MATERIALS & INSULATORS	Solid insulating material	Resistance to fire (glow wire test)	IEC/EN 60695-2-10:2013, IS 11000(Part 2/ Sec1):2008, IEC 60320-1:2015 +A1:2018, IEC 60884-1:2002 +A1:2006+A2:2013, IEC/EN 60598-1:2014 +A1:2017, IEC/EN 61010-1:2010+A12016, IEC 60601-1:2005 +A1:2012, EN 60601-1+A12, IEC 60950-1:2005+A1:2009+A2:2013, EN 60950-1+A2, IEC 60335-1:2010+A1:2013+A2:2016, EN 60335-1+A11, IEC 60204-1:2016, EN 60204-1+A1, IEC/EN 60065:2014, IEC 61058-1:2016, IEC 60669-1:2017, EN 60669-1+A2, IEC 60898-1:2015, EN 60898-1+A13, IEC/EN 60400:2017, IEC/EN 60512-1:2018, IS 302:2008, IS 10322:2014, I: 1999	Up to 1000°C



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
225	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Solid insulating material	Resistance to heat (ball pressure test)	IEC/EN 60695-10-2:2014, IEC/EN 60320-1:2015+ A1:2018, IEC/EN 60884-1:2002 +A1:2006+A3:2013, IEC 61010-1:2010 +A1:2016, IEC 60601-1:2005 +A1:2012, EN 60601-1+A12, IEC 60950-1:2005 +A1:2009+A2:2013, EN 60950-1+A2, IEC 60335-1:2010 +A1:2013, A2:2016, EN 60335-1+A11, IEC 60204-1:2016, EN 60204-1+A1, IEC/EN 60065:2014, IS 302:2008, IS 10322:2014, IS 13252(Part 1):2010+A2:2016, IS 616: 2017	Ambient to 200°C
226	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Thermoplastic material	Vicat softening temperature (VST)	ISO 306:2013, IS 13360(Part 6/Sec 1): 2018	Ambient to 300°C
227	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Circuit power factor	Clause 9, IS 16104: 2012, IEC 62384:2006 + A1: 2009	0-1-0 PF



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228	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Creepage distances and clearnces	Clause 17, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	0.5 mm to 150 mm
229	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Electric strength	Clause 12, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	0.1 kV AC to 5 kV AC
230	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Marking	Clause 7, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	Qualitative
231	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Operational tests for abnormal conditions	Clause 12, IS 16104: 2012, IEC 62384:2006 + A1: 2009	Qualitative
232	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Output voltage and current	Clause 7, IS 16104: 2012, IEC 62384:2006 + A1: 2016	300 V DC
233	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Resistance to heat, fire and tracking	Clause 19, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	125 °C,Ambient to 960 °C,1 V to 600 V , 1A
234	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Supply current	Clause 10, IS 16104: 2012, IEC 62384:2006 + A1: 2009	300 V AC/DC,1 mA to 20 A, 3000 W
235	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Total circuit power	Clause 8, IS 16104: 2012, IEC 62384:2006 + A1: 2009	3000 W



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
236	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Construction	Clause 16, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	Qualitative
237	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Fault condition	Clause 14, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	300 V AC/DC, 1 mA to 20 A, 100 W ,0 to 200 °C
238	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Marking	Clause 6, IS 16104: 2012, IEC 62384:2006 + A1: 2009	Qualitative
239	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Protection against accidental contact with live parts	Clause 8, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	Qualitative(10 N)
240	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Provision for protective earthing	Clause 10, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	25 A, Upto 510 mohm
241	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Resistance to corrosion	Clause 20, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	Qualitative
242	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Screws, current carrying parts and connections	Clause 18, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	Qualitative
243	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Terminals	Clause 9, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
244	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Moisture resistance and insulation	Clause 11, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	20 °C to 30 °C , 91 % to 95 % ,Upto 5000 mohm , 500 V DC
245	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	DC or AC supplied electronic control gear for LED modules	Transformer heating	Clause 15, IS 15885 (Part 2/ Section 13) : 2012, IEC 61347-2-13: 2014 + A1: 2016	300 V AC/DC, 1 mA to 20 A, 3000 W
246	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Construction	Clause 7, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	Qualitative
247	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Creepage distances and clearance	Clause 8, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	0.5 mm to 150 mm
248	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Marking	Clause 6, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	Qualitative
249	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Protection against electric shock	Clause 12, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	10 N
250	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Resistance to dust and moisture	Clause 14, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	IP 1X-6X, IP X1-X8



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251	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Resistance to heat ,fire and tracking	Clause 16, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	125 °C,Ambient to 960 °C,1 V to 600 V , 1 A
252	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Terminals	Clause 10, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	Qualitative
253	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	External and internal wiring	Clause 11, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	Upto 20 N, Upto 10 mm
254	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Insulation resistance and electric strength	Clause 15, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	Upto 5000 Mohm ,500 V DC,0.1 kV to 5 kV
255	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Fixed general purpose luminaries	Provision for earthing	Clause 9, IS 10322 (Part 5/ Section 1):2012, IEC 60598-2-1: 1979	25 A, Upto 510 mohm
256	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED luminaries	Marking	Clause 4, IS 16107 (Part 2/ Section 1):2012, IEC 62722-2-1: 2014	Qualitative power
257	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED luminaries	Total Input power	Clause 7, IS 16107 (Part 2/ Section 1):2012, IEC 62722-2-1: 2014	3000 W



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
258	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Classification	Clause 6, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2 : 2014	Qualitative
259	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Marking	Clause 7, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Qualitative
260	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Protection against accidental contact with live parts	Clause 10, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Qualitative(10 N)
261	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Provision for protective earthing	Clause 9, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	25 A, Upto 510 mohm
262	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Terminals	Clause 8, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Qualitative
263	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Moisture resistance and insulation	Clause 11, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	20 °C to 30 °C, 91 % to 95 % , Upto 5000 mohm, 500 V DC
264	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Construction	Clause 15, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Qualitative



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
265	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Creepage distances and clearance	Clause 16, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	0.5 mm to 150 mm
266	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Dimensions	Clause 5, IS 16103(Part 2):2012, IEC 62717: 2014 +A1: 2015	Upto 3000 mm
267	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Electric strength	Clause 12, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	0.1 kV AC to 5 kV AC
268	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Emission (radiated and conducted) of radio frequency disturbances	Clause 13, IS 16103(Part 2):2012, IEC 62717: 2014 +A1: 2015	CE: 9 kHz to 30 MHz RE: 9 kHz to 30 MHz
269	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Endurance test	Clause 10.3, IS 16103(Part 2):2012, IEC 62717: 2014 +A1: 2015	(-)10°C to 50°C , Upto 1,00,000 operations
270	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Fault condition	Clause 13, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	300 V AC/DC , 1 mA to 20 A , 100 W, Ambient to 200 °C
271	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Heat management	Clause 21, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Ambient to 200 °C



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
272	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Information luminaire design	Clause 12, IS 16103(Part 2):2012, IEC 62717: 2014 +A1: 2015	Qualitative(IP 10 to IP 68)
273	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Information to luminaire design	Clause 20, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Ambient to 200 °C
274	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Marking	Clause 4, IS 16103(Part 2):2012, IEC 62717: 2014 +A1: 2015	Qualitative
275	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Module power	Clause 7, IS 16103(Part 2):2012, IEC 62717: 2014 +A1: 2015	300 V AC/DC, 1 mA to 20 A,100 W
276	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Resistance to corrosion	Clause 19, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Qualitative
277	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Resistance to heat , fire and tracking	Clause 18, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	125 °C, Ambient to 960 °C,1 V to 600 V, 1A
278	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Screws, current carrying parts and connections	Clause 17, IS 16103(Part 1):2012, IEC 62031: 2008 +A1 :2012 +A2: 2014	Qualitative



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279	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	LED module for general lighting	Verification	Clause 11, IS 16103(Part 2):2012, IEC 62717: 2014 +A1: 2015	Qualitative
280	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Resistance to dust and moisture	Clause 9 IEC 60598-1:2014 + A1: 2017	IP 5X,IP 6X,IP X1,IP X3,IP X4,IP X5,IP X6, IP X7, IP X8,20°C to 30 °C , 91 % to 95 %
281	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Creepage distances and clearances	Clause 11 IEC 60598-1:2014 + A1: 2017	0.5 mm to 150 mm
282	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Electric strength test	Clause 10.3 IEC 60598-1:2014 + A1: 2017	0.1 kV to 5 kV
283	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Leakage current	Clause 10.3 IEC 60598-1:2014 + A1: 2017	0.001 mA to 10 mA
284	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Mechanical Strength test	Clause 14.4 IEC 60598-1:2014 + A1: 2017	0.2 Nm to 1 Nm
285	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Resistance to corrosion	Clause 4.18 IEC 60598-1:2014 + A1: 2017	Qualitative
286	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Resistance to heat (Ball pressure test)	Clause 13.2 IEC 60598-1:2014 + A1: 2017	75 to 125
287	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Resistance to tracking	Clause 13.4 IEC 60598-1:2014 + A1: 2017	1 V to 600 V, 1 A



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288	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Luminaries	Insulation resistance	Clause 10.2 IEC 60598-1:2014 + A1: 2017	Upto 5000 MOhm , 500 V DC
289	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Dimensions	Clause 6(Part 2) IS 16102 : 2017, IEC 62612:2013 +A1: 2015 +A2: 2018	Upto 3000 mm
290	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Emission(radiated and conducted) of radio frequency disturbances	Clause 16 (Part 2) IS 16102 : 2017, IEC 62612:2013 +A1: 2015 +A2: 2018	CE: 9 kHz to 30 MHz;RE: 9 kHz to 30 MHz
291	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Insulation resistance and electric strength after humidity treatment	Clause 8(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	20°C to 30°C , 91 % to 95 % , Upto 5000 Mohm , 500 V DC , 0.1 kVac to 5 kVac
292	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Interchangeability	Clause 6(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	Qualitative (10 Nm)
293	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Marking	Clause 5(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	Qualitative
294	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Marking	Clause 5(Part 2) IS 16102 : 2017, IEC 62612:2013 +A1: 2015 +A2: 2018	Qualitative
295	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Mechanical strength	Clause 9(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	0.01 Nm to 10 Nm



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
296	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Protection against accidental contact with live parts	Clause 7(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	Qualitative(10 N)
297	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Resistance to flame and ignition (Glow wire test)	Clause 12(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	ambient to 960 °C
298	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Cap temperature rise	Clause 10(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	Ambient to 200 °C
299	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Fault condition	Clause 13 (Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	300 V AC/DC, 1 mA to 20 A , 100 W, Ambient to 200°C
300	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Harmonics and power factor	Clause 15 (Part 2) IS 16102 : 2017, IEC 62612:2013 +A1: 2015 +A2: 2018	Upto 39th harmonic ; 0-1-0 PF
301	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Lamp power	Clause 8(Part 2) IS 16102 : 2017, IEC 62612:2013 +A1: 2015 +A2: 2018	300 V AC/DC, 1 mA to 20 A , 100 W
302	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Resistance to heat (ball pressure test)	Clause 11(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	20 N, 125 °C



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303	ELECTRICAL- LAMPS, LUMINARIES & ACCESSORIES	Self ballasted LED lamps	Creepage distances and clearances	Clause 4(Part 1),IS 16102 :2012 + A2: 2017, IEC 62560: 2011 + A1: 2015	0.5 mm to 150 mm
304	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Direction of rotation	Clause 10.6.2, 10.6.3, IS 9079: 2018	Qualitative
305	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	High voltage test	Clause 11.8.1(b), IS 9079: 2018	0.1 kV AC to 5 kV AC
306	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Marking plate	Clause 15.1, IS 9079: 2018	Qualitative
307	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Stator resistance per phase	Clause 11.8.1(a), IS 9079: 2018	10 mohm to 100 ohm
308	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Insulation resistance test	Clause 11.8.1(c), IS 9079: 2018	Upto 50 Mohm
309	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Locked rotor test	Clause 11.8.1(e), IS 9079: 2018	1 V to 415 V,0.01 A to 50 A,0.75 kW to 15 kW,



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310	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	No load test	Clause 11.8.1(d), IS 9079: 2018	1V to 415 V,0.01A to 50 A,0.75 kW to 15 kW,45 Hz to 66 Hz,1450 RPM to 3000 RPM
311	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Pump performance test	Clause 10, IS 9079: 2018	1 m to 200 m, 1 lps to 50 lps,0.01 A to 50 A,0.75 to 15 kW
312	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Reduced voltage running up test	Clause 11.8.1(g), IS 9079: 2018	1 to 415 V,1450 to 3000 rpm
313	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Temperature rise test at rated voltage	Clause 11.4, IS 9079: 2018	0.01 A to 50 A, 1°C to 100 °C
314	ELECTRICAL- ROTATING ELECTRICAL MACHINES	Monoblock pumpset	Temperature rise test at reduced voltage	Clause 11.4 IS 9079: 2018	0.01A to 50 A, 1°C to 100 °C
315	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Accessible parts	Clause 5.1.5, EN 60255-27,IEC 60255-27: 2013	Test finger 10 N, Test pin 100 mm long 4 mm dia, Test pin 3 mm ,IP 1X ,Upto 300 V AC/DC , Upto 10 mA ,350 mJ
316	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Assessment of the fire risk due to a single fault condition	Clause 7.11, EN 60255-27,IEC 60255-27: 2013	Upto 200°C



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317	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Bonding to the protective conductor	Clause 5.1.6, EN 60255-27, IEC 60255-27: 2013	0.5 mm to 150 mm, Upto 5 kV , Upto 510 mohm , 25A, 15 °C to 55 °C, 95 %
318	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Discharge of capacitor	Clause 5.1.3, EN 60255-27, IEC 60255-27: 2013	Upto 500 µC, Upto 100 V, Upto 5 s
319	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	General hazards from overheating and fire	Clause 7.3, EN 60255-27, IEC 60255-27: 2013	0 deg C to 200 deg C
320	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Protection against electric shock	Clause 5, EN 60255-27, IEC 60255-27: 2013	IP 1X - 6X, Test finger 10 N, Test pin 100 mm long , 4 mm dia, Test pin 3 mm, LC: 10 mA
321	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Protection from contact with live parts	Clause 5.1.2, EN 60255-27, IEC 60255-27: 2013	IP 2X , Test finger
322	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Protective conductor connection	CI, 5.1.7, EN 60255-27, IEC 60255-27: 2013	Qualitative (Upto 100 A)
323	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Protective impedance	Clause 5.1.4, EN 60255-27, IEC 60255-27: 2013	Upto 5 kV
324	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Single fault condition	Clause 5.2, EN 60255-27, IEC 60255-27: 2013	Upto 5 kV, Upto 100 V AC/DC, Upto 10 mA , Upto 200°C
325	ELECTRICAL- SAFETY TESTING FACILITY	Measuring relays and protective devices	Solid insulation	Clause 5.1.9, EN 60255-27, IEC 60255-27: 2013	Upto 5 kV , Impulse : Upto 5 kV



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326	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Clearances and creepage distances	Clause 5.1.10, EN 60255-27,IEC 60255-27: 2013	0.5 mm to 150 mm,HV: Upto 5 kV ,Impulse: Upto 5 kV
327	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Fire ignition source	Clause 7.7, EN 60255-27,IEC 60255-27: 2013	Qualitative
328	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Functional Earthing	Clause 5.1.11, EN 60255-27,IEC 60255-27: 2013	Qualitative
329	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Marking ,documentation and packaging	Clause 9, EN 60255-27,IEC 60255-27: 2013	Qualitative
330	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Mechanical aspects	Clause 6, EN 60255-27,IEC 60255-27: 2013	Qualitative
331	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Cabling and fusing	Clause 7.5, EN 60255-27,IEC 60255-27: 2013	Qualitative
332	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Flammability and resistance to fire	Clause 7, EN 60255-27,IEC 60255-27: 2013	Qualitative
333	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	General and fundamental design requirements for safety	Clause 8, EN 60255-27,IEC 60255-27: 2013	Qualitative
334	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	High leakage current	Clause 5.1.8, EN 60255-27,IEC 60255-27: 2013	Upto 10 mA
335	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Limited energy circuits	Clause 7.12, EN 60255-27,IEC 60255-27: 2013	Upto 300 V , Upto 10 A AC/DC



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336	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Mechanical requirements	Clause 6.2, EN 60255-27, IEC 60255-27: 2013	Vibration:10-150-10 Hz,0.035-0.075 mm, 1 g,Shock: 5-10 g, 11 ms,3 shocks, Bump: 10-20 g, 16 ms, 1000 bumps
337	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Mechanical security of termination	Clause 6.3, EN 60255-27, IEC 60255-27: 2013	Qualitative(0.5 sq mm to 66 sq mm,0.1 mm to 4 mm)
338	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Minimization of fire risk	Clause 7.4, EN 60255-27, IEC 60255-27: 2013	Upto 300 V AC/DC
339	ELECTRICAL-SAFETY TESTING FACILITY	Measuring relays and protective devices	Protection against mechanical hazards	Clause 6.1, EN 60255-27, IEC 60255-27: 2013	Upto 15°C
340	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Accuracy related to characteristic quantities	Clause 6.5.2.2 IEC 60255-1:2009, Clause 5.1 IEC 60255-127:2010, Clause 5.1 IEC 60255-151:2009, Clause 12.1,12.2 IS 3231(Part 2/ Sec 1):1987, Clause 5.1,14.2.1 IEC 60255-12:1980, Clause 4.2.1 IEC 60255-13:1980, Clause 5.1,6.2 IEC 60255-149: 2013	300 V, 90 A



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341	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Accuracy related to operating to operating /resetting time test	Clause 6.5.2.3 IEC 60255-1:2009, Clause 5.2,5.3 IEC 60255-127:2010, Clause 5.2,5.3 IEC 60255-151:2009, Clause 3.4 IS 3231(Part 2/ Sec 2):1987, Clause 5.2,5.3,14.2.2 IEC 60255-12:1980, Clause 4.2.2 IEC 60255-13:1980, Clause 5.2,6.3 IEC 60255-149: 2013	500 s
342	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Ambient temperature	Clause 6.7 IEC 60255-149: 2013	-40 °C to 180 °C
343	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Auxiliary burden test	Clause 6.10.4,6.10.5 IEC 60255-1: 2009	15 VA
344	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Auxiliary supply frequency	Clause 6.6 IEC 60255-149: 2013	45 Hz to 55 Hz
345	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Auxiliary supply voltage	IEC 60255-1: 2009	Upto 300 V AC/DC 45 Hz to 60 Hz



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346	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Contact performance test	Clause 6.11 IEC 60255-1:2009, Clause 7.1 IS 3231(Part 2/ Sec 2):1987, Clause 6,9,16 IEC 60255-12:1980, Clause 7,10 IEC 60255-13: 1980	Qualitative
347	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Current transformer	Clause 6.10.2 IEC 60255-1: 2009	15 VA
348	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Dielectric test	Clause 10.5.3.2, IEC 60255-27:2013, Clause 5.0 IS 3231(Part 1/ Sec 2):1986, Clause 11, IEC 60255-12: 1980, Clause 12, IEC 60255-13: 1980	0.1 kV AC to 5 kV AC
349	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Harmonic current	Clause 6.5 IEC 60255-149: 2013	5 th harmonic
350	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Humidity	IEC 60255-1: 2009	30 % to 98 %



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351	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Impulse voltage test	Clause 10.6.4.2, IEC 60255-27:2013, Clause 7.0 IS 3231(Part 1/ Sec 2):1986, Clause 11,IEC 60255-12: 1980, Clause 12, IEC 60255-13: 1980	0.25 kV to 5 kV , 1.2/50 μs, 500 ohm
352	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Insulation resistance test	Clause 10.6.4.4, IEC 60255-27:2013, Clause 11,IEC 60255-12: 1980, Clause 12, IEC 60255-13: 1980	Upto 5000 mohm , 500 V
353	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Interruption of auxiliary supply	IEC 60255-26: 2013	260 V AC/DC
354	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Overshoot time test	Clause 5.4.1 IEC 60255-127:2010, Clause 5.4.2 IEC 60255-151:2009, Clause 7.0 IS 3231(Part 2/ Sec 2): 1987	20 sec
355	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Potential transformer	Clause 6.10.1 IEC 60255-1: 2009	15 VA
356	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Temperature rise test	Clause 7.3.1 IEC 60255-27:2013, Clause 5.1 IS 3231(Part 2/ Sec 2): 1987	Ambient to 200°C



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357	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Thermal requirement	Clause 6.9.1 IEC 60255-1:2009, Clause 5.2,5.3 IS 3231(Part 2/ Sec 2):1987, Clause 6,15 IEC 60255-12:1980, Clause 6 IEC 60255-13: 1980	Qualitative
358	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Static relay for power protection system	Variation due to influential quantities	Clause 6.5.3 IEC 60255-1:2009, Clause 3.6 IS 3231(Part 2/ Sec 2):1987, Clause 3.5.1 IEC 60255-12:1980, Clause 3.2.2 IEC 60255-13:1980, Clause 5.3,6.5,6.6 IEC 60255-149: 2013	Upto 300 V AC/DC ; Upto 20 A ; 45 Hz to 65 Hz ; Variation : Upto 100%
359	ELECTRONICS- EMC TEST FACILITY	Electrical / electronic equipment	Pulse magnetic field immunity test	IEC 61000-4-9 : 2016, EN 61000-4-9: 2016, IS 14700 (Part 4/ Section 9): 2014	1 A/m to 1000 A/m
360	ELECTRONICS- EMC TEST FACILITY	Electrical / electronic equipment, Measuring Relays and protection Equipment	Damped oscillatory wave immunity test	IEC 61000-4-18:2006+ A1:2010, EN 61000-4-18:2006+ A1:2010, IEC/EN 60255-26: 2013	0.25 kV to 3 kV : Slow Damped , 0.45 kV to 4.4 kV : Fast Damped
361	ELECTRONICS- EMC TEST FACILITY	Electrical / Electronics Equipment	RF Radiated Susceptibility Test	IEC/EN 61000-4-20: 2010	1 V/m to 10 V/m, 80 MHz to 1GHz
362	ELECTRONICS- EMC TEST FACILITY	Electrical /electronic equipment	Ring wave test	IEC/EN 61000-4-12: 2017	0.25 kV to 6 kV



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363	ELECTRONICS- EMC TEST FACILITY	Electrical/ Electronic Equipment	Harmonic current emission Test	IEC 61000-3-2:2018, EN 61000-3-2:2014, 14700(Part 3/Sec 2): 2018, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, CISPR 32:2015, EN 55032: 2012	1 harmonic to 39 harmonic
364	ELECTRONICS- EMC TEST FACILITY	Electrical/ Electronic Equipment	Voltage Fluctuation & flicker Test	IEC 61000-3-3: 2013 + A1: 2017, EN 61000-3-3:2013, IS 14700(Part 3/Sec 3): 2018	40 Vpk to 504 Vpk
365	ELECTRONICS- EMC TEST FACILITY	Electrical/ Electronic Equipment	Voltage fluctuation immunity test	IEC 61000-4-14:1999+A1: 2001+A2: 2009, EN 61000-4-14:1999+A2: 2009	1 V to 300 V
366	ELECTRONICS- EMC TEST FACILITY	Electrical/electronic equipment	Damped oscillatory magnetic field test	IEC 61000-4-10 : 2016, EN 61000-4-10: 2017	1 A/m to 100 A/m
367	ELECTRONICS- EMC TEST FACILITY	Electrical/electronic equipment	Gradual shut down/start up test	IEC 60255-26: 2013	1 V to 424 V , Shut down ramp:60 s (max) , Power off: 5 min (max) , Startup ramp: 60 s (max) , 0.01 A to 16 A(max)
368	ELECTRONICS- EMC TEST FACILITY	Electrical/electronic equipment	Harmonics & Inter Harmonics Test	IEC/EN 61000-4-13:2002+ A1: 2009 + A2 :: 2015	1 V to 300 V
369	ELECTRONICS- EMC TEST FACILITY	Electrical/electronic equipment	Ripple on dc input power	IEC/EN 61000-4-17:2009+ A1:2001+ A2: 2008, IEC/EN 60255-26 :: 2013	Upto 300 V DC; Upto 16 A ; Ripple: 2% to 30% of voltage



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370	ELECTRONICS- EMC TEST FACILITY	Electrical/electronic equipment	Unbalance Immunity Test	IEC/EN 61000-4-27:2000+ A1: 2009	1 V to 300 V
371	ELECTRONICS- EMC TEST FACILITY	Electrical/electronic equipment	Variation of Power Frequency Test	IEC/EN 61000-4-28:1999+ A1: 2001+ A2: 2009	1 Vac to 300 Vac
372	ELECTRONICS- EMC TEST FACILITY	Household appliances, electric tools and similar apparatus	Disturbance power test	CISPR 16-2-2:2010, EN 55016-2-2:2011, CISPR 14-1:2016, EN 55014-1: 2017, CISPR 32:2015, EN 55032: 2015	30 MHz to 1000 MHz
373	ELECTRONICS- EMC TEST FACILITY	Industrial, Scientific and Medical (ISM) Radio-frequency Equipment, Electrical Lighting and Similar Equipment, Information Technology Equipment, Sound and Television Broadcast Receivers and Associated Equipment, Household Appliances, Electric tools and similar apparatus, Electrical Motor-operated and Thermal Appliances for Household and Similar Purposes, Electric Tools and Electric Apparatus, Tele-communication network equipments	Conducted Emission Test	IS 6873 : Part 4: 1999, IS 6873 : Part 5: 2012, IS 6873 : Part 7: 2012, IS 6873 : Part 3: 2015, IS 6873 : PART 2 : SEC 1: 2012, ETSI EN 300 386 V 2.1.1: 2016	150 kHz to 30 MHz, (-)140 dBm to 16 dBm



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374	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, household appliances, electric tools and similar apparatus, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), multimedia equipment, residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment,	Conducted emission test	CISPR 11:2015+ A1: 2016, EN 55011:2016+ A1: 2017, CISPR 15:2013+ A1: 2015 EN 55015:2013+ A1: 2015, CISPR 14-1: 2016, EN 55014-1+ A1:2017, CISPR 22: 2008, EN 55022: 2010, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, CISPR 13: 2009+ A1: 2015, EN 55013:2013+A1: 2016, IEC 62040-2: 2016, EN 62040-2: 2018, CISPR 32:2015, EN 55032:2012, IEC 61000-6-3:2006+ AMD 1: 2010, IEC 61000-6-4:2018, IEC 60255-26 : 2013, EN 60255-26: 2013	150 kHz to 30 MHz,(-) 140 dBm to 16 dBm



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375	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment,	Conducted RF Susceptibility Test	IEC 61000-4-6: 2013, EN 61000-4-6: 2014, IEC 61000-6-1: 2016, EN 61000-6-1: 2007, IS 14700(Part 6/Section 1): 2008, IEC 61000-6-2: 2016, EN 61000-6-2: 2005, S 14700(Part 6/Section 2): 2008, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, IEC 60255-26 : 2013, EN 60255-26: 2013, IEC 62040-2: 2016, EN 62040-2: 2018, IS 16242(Part 2): 2014, IEC 61547: 2009, EN 61547: 2009, CISPR 24+ A1: 2015, EN 55024+ A1: 2015, IS 15039:: 2001	1 V to 10 V , 150 kHz to 80 MHz



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
376	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment	AC voltage dips ,short interruption and voltage variation test	IEC 61000-4-11:2004+ A1: 2017, EN 61000-4-11:2004+ A1: 2017, IS 14700(Part 4/Sec 11): 2008, IEC 61000-6-1: 2016, EN 61000-6-1: 2007, IS 14700(Part 6/Section 1): 2008, IEC 61000-6-2: 2016, EN 61000-6-2: 2005, S 14700(Part 6/Section 2): 2008, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, IEC 60255-26 : 2013, EN 60255-26: 2013, IEC 62040-2: 2016, EN 62040-2: 2018, IS 16242(Part 2): 2014, IEC 61547: 2009, EN 61547: 2009, CISPR 24+ A1: 2015, EN 55024+ A1: 2015, IS 1: 2011	0 % to 100 %



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
377	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment	DC voltage dips ,short interruption and voltage variation test	IEC 61000-4-29: 2000, EN 61000-4-29:2001, IEC 61000-6-1: 2016, EN 61000-6-1: 2007, IS 14700(Part 6/Section 1): 2008, IEC 61000-6-2: 2016, EN 61000-6-2: 2005, S 14700(Part 6/Section 2): 2008, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, IEC 60255-26 : 2013, EN 60255-26: 2013, IEC 62040-2: 2016, EN 62040-2: 2018, IS 16242(Part 2): 2014, IEC 61547: 2009, EN 61547: 2009, CISPR 24+ A1: 2015, EN 55024+ A1: 2015, IS 15039: 2001	0 % to 100 %



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378	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment	Power frequency magnetic field immunity test	IEC 61000-4-8: 2009, EN 61000-4-8: 2010, IS 14700(Part 4/Section 8): 2018, IEC 61000-6-1: 2016, EN 61000-6-1: 2007, IS 14700(Part 6/Section 1): 2008, IEC 61000-6-2: 2016, EN 61000-6-2: 2005, S 14700(Part 6/Section 2): 2008, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, IEC 60255-26 : 2013, EN 60255-26: 2013, IEC 62040-2: 2016, EN 62040-2: 2018, IS 16242(Part 2): 2014, IEC 61547: 2009, EN 61547: 2009, CISPR 24+ A1: 2015, EN 55024+ A1: 2015, IS 15039: 2001	1 A/m to 30 A/m



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/Limits of Detection
379	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment,	Electrical Fast Transient (EFT)/Burst Test	IEC 61000-4-4: 2012, EN 61000-4-4: 2012, IEC 61000-6-1: 2016, EN 61000-6-1: 2007, IS 14700(Part 4/Section 4): 2008, IEC 61000-6-2: 2016, EN 61000-6-2: 2005, IS 14700(Part 6/Section 2): 2008, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, IEC 60255-26 : 2013, EN 60255-26: 2013, IEC 62040-2: 2016, EN 62040-2: 2018, IS 16242(Part 2): 2014, IEC 61547: 2009, EN 61547: 2009, CISPR 24+ A1: 2015, EN 55024+ A1: 2015, IS 15039: 2001	0.2 kV to 4.4 kV, Rise Time: 5ns, Width: 50 ns, 5 kHz



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
380	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment,	Electrostatic Discharge Immunity Test	IEC 61000-4-2: 2008, EN 61000-4-2:2009, IS 14700(Part 4/Section 2): 2018, IEC 61000-6-1: 2016, EN 61000-6-1: 2007, IS 14700(Part 6/Section 1): 2008, IEC 61000-6-2: 2016, EN 61000-6-2: 2005, IS 14700(Part 6/Section 2): 2008, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, IEC 60255-26 : 2013, EN 60255-26: 2013, IEC 62040-2: 2016, EN 62040-2: 2018, IS 16242(Part 2): 2014, IEC 61547: 2009, EN 61547: 2009, CISPR 24+ A1: 2015, EN 55024+ A1: 2015, IS 15039: 2001	0.5 kV to 30 kV
381	ELECTRONICS- EMC TEST FACILITY	Multimedia equipment, household appliances, electric tools and similar apparatus, Tele-communication network equipments	Conducted RF Susceptibility Test	CISPR 35:2016 , EN 55035:2017, CISPR 14-2:2015, EN 55014-2:2015, ETSI EN 300 386 V 2.1.1.: 2016	1 V to 10 V, 150 kHz to 80 MHz



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
382	ELECTRONICS- EMC TEST FACILITY	Multimedia equipment, household appliances, electric tools and similar apparatus, Tele-communication network equipments	AC voltage dips ,short interruption and voltage variation test	CISPR 35:2016 , EN 55035:2017, CISPR 14-2:2015, EN 55014-2:2015, ETSI EN 300 386 V 2.1.1: 2016, IS 15039: 2001	0 % to 100 %
383	ELECTRONICS- EMC TEST FACILITY	Multimedia equipment, household appliances, electric tools and similar apparatus, Tele-communication network equipments	DC voltage dips ,short interruption and voltage variation test	CISPR 35:2016 , EN 55035:2017, CISPR 14-2:2015, EN 55014-2:2015, ETSI EN 300 386 V 2.1.1: 2016	0 % to 100 %
384	ELECTRONICS- EMC TEST FACILITY	Multimedia equipment, household appliances, electric tools and similar apparatus, Tele-communication network equipments	Electrical Fast Transient (EFT) Test	CISPR 35:2016 , EN 55035:2017, CISPR 14-2:2015, EN 55014-2:2015, ETSI EN 300 386 V 2.1.1: 2016	0.2 kV to 4.4 kV, Rise Time: 5ns, Width: 50 ns, 5 kHz
385	ELECTRONICS- EMC TEST FACILITY	Multimedia equipment, household appliances, electric tools and similar apparatus, Tele-communication network equipments	Electrostatic Discharge Immunity Test	CISPR 35:2016 , EN 55035:2017, CISPR 14-2:2015, EN 55014-2:2015, ETSI EN 300 386 V 2.1.1: 2016	0.5 kV to 30 kV
386	ELECTRONICS- EMC TEST FACILITY	Multimedia equipment, household appliances, electric tools and similar apparatus, Tele-communication network equipments	Power frequency magnetic field immunity test	CISPR 35:2016 , EN 55035:2017, CISPR 14-2:2015, EN 55014-2:2015, ETSI EN 300 386 V 2.1.1: 2016	1 A/m to 30 A/m



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
387	ELECTRONICS- EMC TEST FACILITY	Multimedia equipment, household appliances, electric tools and similar apparatus, Tele-communication network equipments	Surge Immunity Test	CISPR 35:2016 , EN 55035:2017, CISPR 14-2:2015, EN 55014-2:2015, ETSI EN 300 386 V 2.1.1: 2016	0.25 kV to 7 kV
388	ELECTRONICS- EMC TEST FACILITY	Industrial, scientific and medical equipment, Electrical lighting and similar equipment, Information Technology equipment, Measurement, control & laboratory, Medical electrical equipment, Sound and television broadcast receivers and associated equipment, Uninterrupted power systems (UPS), residential, commercial and light-industrial environments, industrial environments, Measuring Relays and protection Equipment,	Surge Immunity Test	IEC 61000-4-5:2014+A1: 2017, EN 61000-4-5:2014, IS 14700 (Part 4/ Sec 5): 2012, IEC 61000-6-1: 2016, EN 61000-6-1: 2007, IS 14700(Part 6/Section 1): 2008, IEC 61000-6-2: 2016, EN 61000-6-2: 2005, S 14700(Part 6/Section 2): 2008, IEC 61326-1: 2012, EN 61326-1: 2013, IEC 60601-1-2: 2014, EN 60601-1-2: 2015, IEC 60255-26 : 2013, EN 60255-26: 2013, IEC 62040-2: 2016, EN 62040-2: 2018, IS 16242(Part 2): 2014, IEC 61547: 2009, EN 61547: 2009, CISPR 24+ A1: 2015, EN 55024+ A1: 2015, IS 15039: 2001	0.25 kV to 7 kV



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
389	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Apparatus coaxial socket mounted on the apparatus	Clause 12.4, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Upto 300 mm ,10 to 200 N
390	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Apparatus containing coin / button cell batteries	Clause 12.7.1/12.7.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0 to 300 mm: Length, Qualitative requirement
391	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Clearance & creepage distance	Clause 13, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.5 V to 500 V:Voltage,Force: 0 to 200 N , Length: 0 to 300 mm , Impulse upto 10 kV , 1.2/50µs
392	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Construction requirement for the protection against electric shock	Clause 8, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Qualitative(Ambient to 200°C, RH: 95%)
393	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Cord anchorage test	Clause 16, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0 to 200 mm : Pully diameter , Force: 1 to 200 N



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394	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Device forming parts of mains plug	Clause 15.4, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 to 200 N: Force,Torque : upto 6 Nm
395	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Dielectric Strength	Clause 10.3.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.1 kV to 5 kV: High Voltage, Tripping Current : upto 100 mA , Time 60 s
396	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Drawer	Clause 12.4, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 to 200 N : Force Gauge
397	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Drop Test	Clause 12.1.4, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.01 m to 1 m: Scale, Height : 0 to 300 mm, 3 drops
398	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Earth bond test	Clause 15.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.01 ohm to 510 m ohm:Resistance



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399	ELECTRONICS- SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Electric connection & mechanical fixing	Clause 17, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0 to 300 mm: Length, Torque: upto 6 Nm
400	ELECTRONICS- SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Fault condition	Clause 4.3, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.01 V to 300 V : Voltage, 0.01 A to 10 A : Current, 10 ms to 9000 s : Time
401	ELECTRONICS- SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Fixed of actuating elements	Clause 12.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1N to 200N , Up to 200 N , 0.1 kg to 50 kg
402	ELECTRONICS- SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Heating test under fault condition	Clause 11.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.02 ohm to 2 M ohm: 1°C to 200 °C
403	ELECTRONICS- SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Heating under normal operating conditions	Clause 7.1,7.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.02 ohm to 2 M ohm, Ambient to 200 °C



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404	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Humidity Test	Clause 10.2,8.3, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Qualitative(Ambient to 200°CRH: Up to 95%)
405	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Impact Test	Clause 12.1.4, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Qualitative(Impact Joules: 0.2,0.35, 0.5, 0.70, 0.75,1,2,2.5,2.75,3, 3.5 J ; Weight: 500 g @ 50 mm Steel Ball)
406	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Insulation resistance & dielectric strength	Clause 10.4, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 ohm to 50 G ohm : Resistance, High Voltage : 0.1 kV to 5 kV,Current : 0 to 10 mA, Tripping Current : 0 to 250 mA , Time : 60 s
407	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Leakage current under fault condition	Clause 11.1, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.005 mA to 10 mA
408	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Marking & Instructions	Clause 5, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Qualitative



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409	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Normal operating conditions	Clause 4.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.01 V to 300 V : Voltage, 0.01 A to 10 A: Current, 10 ms to 9000 s: time
410	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Stability	Clause 19.1 to 19.6, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Angle: Upto 45°
411	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Terminals	Clause 9.1.4, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 to 200 N : Force,Length : 0 to 300 mm
412	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Tracking Test	Clause 13, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Upto 600 V ; 1 A to 5 A
413	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Wall or ceiling mounting means	Clause 19.6, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 to 200 N : Force, Weight : 1 to 50 kg



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414	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Determination of hazardous live parts	Clause 9.1.1 to 9.1.3, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	0.01 V to 1000 V:Voltage, 0.01 A to 10 A, 0.005 mA to 10 mA : Current, Force : 1 to 200 N
415	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Insulation resistance	Clause 10.3.2, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 ohm to 50 G ohm
416	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Pre-set controls	Clause 9.1.5, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 to 200 N : Force ,Length: 0.1 to 300 mm
417	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Resistance to external forces	Clause 9.1.7, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	1 to 200 N
418	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Stress relief test	Clause 12.1.5, IEC 60065:2014, IS 616: 2010, EN 60065 :2014 + A11:2017,UL 60065: 2015,CSA C22.2 No.60065: 2016	Ambient to 180 °C



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
419	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Vibration Test	Clause 12.1.3, IEC 60065:2014, IS 616:2010, EN 60065 :2014 + A11:2017,UL 60065:2015,CSA C22.2 No.60065: 2016	10 Hz to 55 Hz to 10 Hz : Frequency , Amplitude:0.35 mm,Sweep Rate: 1 octave/min
420	ELECTRONICS-SAFETY TESTING FACILITY	Audio,video and similar electronic apparatus	Withdrawal of mains plug	Clause 9.1.6, IEC 60065:2014, IS 616:2010, EN 60065 :2014 + A11:2017,UL 60065:2015,CSA C22.2 No.60065: 2016	0.1 V to 500 V AC Time: 1μs to 10 s
421	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Abnormal operation tests & single fault conditions	Clause 5.3.1,5.3.8, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	5 mA to 20 A, 0.0001 W to 3600 W, Ambient to 200°C
422	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Access to Energized parts test	Clause 2.1.1.1, 2.8.2,2.8.3, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Qualitative(Force: up to 30 N)



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423	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Clearances	Clause 2.10.3,4.2.2,4.2.3, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	0 N to 200 N : Force Gauge, Creepage Gauge/ Vernier 0.5 to 20mm
424	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Component External Termination and Test on coated component & printed board	Clause 2.10.7.2,2.10.8, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Qualitative(20°C to 30°C , 90 %RH to 95 %RH)
425	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Component failure test	Clause 5.3.1,5.3.4,5.3.6, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	5 mA to 20 A, 0.0001 W to 3600 W, Upto 200°C



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426	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Connection by Plug & Sockets	Clause 4.3.5, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	Qualitative
427	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Cord guard test	Clause 2.1.1.1, 2.8.2,2.8.3, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	1 N to 100 N : Pull guage
428	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Determination of working voltage/clearance and creepage measurement	Clause 2.10.2,2.10.3,2.10.4, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0.5 to 500V, 1 mm to 300 mm, , Upto 5 kV, Upto 10 kV, Upto 300 V , 1 A
429	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Drop Test	Clause 4.2.6,4.2.1, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 to 3 m : Scale , 750 to 1000 m: Drop



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430	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Earthing Test	Clause 2.6.3.4,2.6.1, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	1 A to 40 A : Current AC , 0.01 m ohm to 510 m ohm:Resistance
431	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Electric strength test	Clause 5.2,6.2.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	0.1 kV to 5 kV AC/DC : High voltage , 0 to 100 mA : Tripping current, 60s : Time
432	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Energy hazard measurements	Clause 2.1.1.5,2.1.2,1.2.8.9, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Test finger of 12mm Ø;Upto 300 V;Energy : Upto 20 J;Resistance:10 Ohm to 300 ohm
433	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Field wiring test (Standard Wire)	Clause 3.3.8,3.2.9, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Qualitative



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434	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Heating test (Thermal requirement)	Clause 4.5,4.5.1,1.4.12,1.4.13, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Ambient to 200 °C ,0.02 Ohm to 2 M Ohm
435	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Humidity Test	Clause 2.9.1,2.9.2,5.2.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Ambient to 40°C ; RH: 90% to 95% ;Upto 120 Hrs
436	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Impact Test	Clause 4.2.1, 4.2.5 IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Steel Ball length: 50mm ;Mass: 500 g ; Distance : 1 m to 5m



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437	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Ingress protection	Clause 1.1.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	Qualitative(IP 10 to IP 68)
438	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Knobs/handles pull loading test	Clause 4.3.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 to 200 N: Force gauge
439	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Limited current circuit measurements	Clause 2.4.1,2.4.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0.005 mA to 10 mA
440	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Limited power source measurements	Clause 2.5, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 V to 500 V : Voltage ,0 to 10 A: Current



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441	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Openings in enclosure	Clause 4.6, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 mm to 300 mm
442	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Protection against hazardous moving parts test	Clause 4.4, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 to 200 N : Force , 0 to 300 kg : Mass, 2A,2B,2C,2D : Test finger, Qualitative (Visual)
443	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Protection of equipment users from over voltages on telecom network	Clause 6.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0.1 kV AC to 5 kV AC/DC : High Voltage , 0 to 100 mA : Tripping current , 60s:Time
444	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	SELV reliability test	Clause 2.2.2,2.2.3,2.2.4, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 V to 500 V : Voltage, 0 to 10 A : Current



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445	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Sharp edge test	Clause 4.3.1, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	Qualitative
446	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Spillage test	Clause 4.3.10,5.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0.1 kV to 5 kV : High Voltage, 0 to 250 mA : Tripping current , 60s : Time
447	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Stability tests	Clause 4.1, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	Angle: Upto 45°
448	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Steady force tests	Clause 4.2.1,4.2.4, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 to 250 N : Force gauge , 1 to 5 kg : Weight



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449	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Strain relief test	Clause 3.2.6,4.2.1,4.2.7, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	1 N to 200 N : Pull Gauge
450	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Stress relief test	Clause 4.2.7,4.2.1, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Temperature:25°C to 180°C , Impulse : Upto 10 kV
451	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Switches and relays	Clause 2.8.7, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	0 A to 10 A : Current, 100000 operations
452	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	TNV circuits	Clause 2.3, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	0 V to 1500 V : Voltage , 0 to 10 A : Current, Time 0 to 205ms



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453	ELECTRONICS- SAFETY TESTING FACILITY	Information technology equipment	Touch current test	Clause 5.1, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0.005 mA to 10 mA
454	ELECTRONICS- SAFETY TESTING FACILITY	Information technology equipment	Transformer abnormal operation test	Clause 5.3.3, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	5 mA to 20 mA;0.0001W to 3600W;Upto 200°C
455	ELECTRONICS- SAFETY TESTING FACILITY	Information technology equipment	Transformer abnormal overload operation test Annexure C.1	IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	5 mA to 20 mA;0.0001W to 3600W;Upto 200°C
456	ELECTRONICS- SAFETY TESTING FACILITY	Information technology equipment	Transformer/insulation electric strength test	Clause 2.10.5.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0.1 kV AC to 5 kV AC : High Voltage, 0 to 100 mA : AC/DC Tripping Current, 60 s : Time



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457	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Vibration test	Clause 1.1.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	10 Hz to 55 Hz - 10 Hz : Frequency , Amplitude: 0.35 mm , Sweep rate 1 octave/min
458	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Wall and ceiling mounted equipment	Clause 4.2.10, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	1 mg to 100 kg
459	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Capacitance discharge test	Clause 2.1.1.7, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	Upto 500 μ C; 0.1V to 500V; Time: 1 μ s to 10s; Resistance: 95 M Ohm to 105 M Ohm
460	ELECTRONICS-SAFETY TESTING FACILITY	Information technology equipment	Double or reinforced insulation bridged by components	Clause 1.5.7.3, 2.4.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007, CSA 22.2 60950-1: 2016	0 V to 5 V



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SWATANTRYAVEER TATYA TOPE MARG, CHUNABHATTI, SION, MUMBAI,
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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
461	ELECTRONICS- SAFETY TESTING FACILITY	Information technology equipment	Durability of making test	Clause 1.7.13,1.7.11, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	Qualitative
462	ELECTRONICS- SAFETY TESTING FACILITY	Information technology equipment	Power input test	Clause 1.6.2, IEC 60950-1:2005+ A1:2009+ A2:2013, IS 13252(part 1): 2010, EN 60950-1:2006+ A1:2013, UL 60950-1:2007,CSA 22.2 60950-1: 2016	0 V to 300 V : Voltage AC , 0 to 10 A : Current , 50/60 Hz: Frequency ,0 to 3000 W: Wattage , 0 to 300 V : Voltage DC , 0 to 10 A: Current DC.
463	ELECTRONICS- SAFETY TESTING FACILITY	Medical equipment	Cord anchorage & cord guard	Clause 8.11.3.5 & 8.11.3.6, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1: 2016	Upto 500 N ; Upto 10 mm
464	ELECTRONICS- SAFETY TESTING FACILITY	Medical equipment	Dielectric strength test	Clause 8.8.3, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1: 2016	0.1 kV to 5 kV AC/DC : High Voltage , Tripping Current : 0 to 100 mA, Time : 60 s



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465	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Dielectric strength test for transformer	Clause 15.5.2, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	0.1 kV to 5 kV
466	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Durability of marking(External Labels)	Clause 7.1.3, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	Qualitative
467	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Excessive temperatures	Clause 11.1, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	5 mA to 20 A : Current AC , Wattage: 0.1 W to 4 kW, Temp: 25°C to 200°C
468	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Humidity test	Clause 5.7, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	Ambient to 40°C; RH: 90% to 95% ;Time: 48 Hrs
469	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Leakage current test	Clause 8.7, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	0.005 mA to 10 mA



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470	ELECTRONICS- SAFETY TESTING FACILITY	Medical equipment	Protective earthing test	Clause 8.6, IEC 60601-1:2018, EN 60601-1:2015, UL 60601-1:2003, CAN/CSA C22.2 No.60601-1:2016	Qualitative(1 A to 40 A, 0.1 ohm to 0.510 ohm)
471	ELECTRONICS- SAFETY TESTING FACILITY	Medical equipment	Push test	Clause 15.3.2, IEC 60601-1:2018, EN 60601-1:2015, UL 60601-1:2003, CAN/CSA C22.2 No.60601-1:2016	Upto 200N
472	ELECTRONICS- SAFETY TESTING FACILITY	Medical equipment	Single fault condition	Clause 13.2, IEC 60601-1:2018, EN 60601-1:2015, UL 60601-1:2003, CAN/CSA C22.2 No.60601-1:2016	5 mA to 20 A: Current AC, Wattage: 0.1 W to 4 kW, Temp: 25°C to 200°C
473	ELECTRONICS- SAFETY TESTING FACILITY	Medical equipment	Stability test	Clause 9.4.2, IEC 60601-1:2018, EN 60601-1:2015, UL 60601-1:2003, CAN/CSA C22.2 No.60601-1:2016	0.1 ° to 45 °



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474	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Transformer overload test	Clause 15.5.1.3, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	5 mA to 20 A :Current AC,Wattage: 0.1 W to 4 kW,Temp: 25°C to 200°C
475	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Transformer short circuit test	Clause 15.5.1.2, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	5 mA to 20 A:Current AC , Wattage : 0.1 W to 4 kW, Temp: 25°C to 200°C
476	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Drop test (Hand held ME)	Clause 15.3.4.1, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	1 mm to 1 m
477	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Enclosure test	Clause 9.2 & 9.8, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	Qualitative



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478	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Impact test	Clause 15.3.3, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	1 mm to 1 m: Scale , Steel ball: 50 mm dia. , Weight : 0.5 kg
479	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Internal capacitor discharge test	Clause 8.4.3,8.4.4, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	0.5 V to 500 V AC : Voltage, Time: 1µs to 10 s
480	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Limitations of voltage and/or energy	Clause 8.4, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	5 mA to 10 A : Current AC , Wattage : 0.1 W to 3 kW ,DC Voltage: 0 to 300 V ,Current : 0.05 mA to 10 A DC
481	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Mechanical strength & resistance to heat	Clause 8.8.4.1, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	Ambient to 200°C; RH: 95% ; Upto 5 kV; Upto 250 N



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
482	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Mould stress relief test	Clause 15.3.6, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	Ambient to 70°C
483	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Power input	Clause 4.11, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	1 V to 300 V :Voltage AC , Current AC : 5 mA to 10 A, Wattage : 0.1 W to 3 kW
484	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Creepage distance & clearance	Clause 8.9, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	0.01 mm to 300 mm: Length
485	ELECTRONICS-SAFETY TESTING FACILITY	Medical equipment	Constructional requirement for fire enclosures	Clause 11.2 & 11.3, IEC 60601-1:2018,EN 60601-1:2015,UL 60601-1:2003,CAN/CSA C22.2 No.60601-1:2016	1 mm to 1 m: Scale, Magnifying glass: 10X



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Site Facility					
1	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Audible noise	Clause 7.7, IEC 60146- 1-1:2009, IS 16539 (Part1 / Sec 1): 2017	50 dB to 130 dB
2	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Efficiency	Clause 6.2.2, IEC 60146-1-1, IS 16539 (Part1 / Sec 1): 2017	10 % to 99 %
3	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Harmonic currents	Clause 7.3.6, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Upto 40th harmonic
4	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Insulation Tests	Clause 7.2, IEC 60146- 1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0.1 kV AC to 5 kV AC, 50 Hz ,0.1 kV DC to 5 kV DC,10 Ohm to 50 G Ohm , 500 V
5	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Light load and functional Test	Clause 7.3.1, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
6	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Power factor	Clause 7.4.3, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0 -1-0 PF Lag/ Lead
7	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Ripple voltage and current	Clause 7.3.5, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0.01 V to 100 V ,Upto 1 A

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



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8	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Temperature rise	Clause 7.4.2, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	25 °C to 300 °C
9	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of markings	Clause 6.6, IEC 60146- 1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
10	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of properties of control equipment	Clause 7.5.2, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
11	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of protective devices	Clause 7.5.3, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative
12	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Inherent voltage regulation	Clause 7.3.4, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	1 V to 300 V
13	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Over-current capability	Clause 7.3.3, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	1 A to 700 A
14	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Rated current	Clause 7.3.2, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	0.1 A to 500 A



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15	ELECTRICAL- DOMESTIC ELECTRICAL APPLIANCES	Battery charger	Verification of auxiliary devices	Clause 7.5.1, IEC 60146-1-1:2009, IS 16539 (Part1 / Sec 1): 2017	Qualitative