Laboratory	**Electronics Regional Test Laboratory (North), Okhla Industrial Area, Phase- II, New Delhi**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Discipline	**Electrical Testing**	**Issue Date**	**18.03.2015**
Certificate Number	**T-1572**	**Valid Until**	**17.03.2017**
Last Amended on	**24.04.2015**	**Page**	**1 of 58**

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
AT LAB				
I.	**SAFETY TESTING FACILITY**			
1.	**Safety of machinery- Electrical equipments for Machines**	Marking and Instructions	IEC/EN 60204-1 Clause 16 & 17	Qualitative
		Power Interface	IEC/EN 60204-1 Clause 4.3.2	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W
		Voltage Unbalance	IEC/EN 60204-1 Clause 4.3.2	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W
		Voltage Interruption		0.1 V to 1000 V AC Upto 30 A
		Harmonics		Upto 40th Harmonic Voltage (at 240 V) Upto 40th Harmonic, Current (at 30 A)
		Incoming Supply Conductor Terminations and Devices for Disconnecting and Switching Off	IEC/EN 60204-1 Clause 18.3	0 to 200 mm 0 to 25 mm 0 to 200 N 0.25 Nm
		Protection Against Electric Shock	IEC/EN 60204-1 Clause 6.0	0 to 200 mm 1 N to 200 N Upto 6.0 Nm dcV: 200 mV to 1000 V acV: 200 mV to 750 V

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	Safety of machinery- Electrical equipments for Machines IEC/EN 60204-1: 2009	Protection of Equipment	IEC/EN 60204-1 Clause. 7.0	Qualitative (Visual Inspection)
		Heating Test	IEC/EN 60204-1 Clause 13, 14	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W 3 mΩ to 30 kΩ Upto 180 °C
		Design and Construction	IEC/EN 60204-1 Clause 8-12 & 15	0 to 200 mm 0 to 25 mm 0 to 2000 N Upto 5 kV AC Upto 6 kV DC
		Earth Continuity Test	IEC/EN 60204-1 Clause. 18.2.2	10 A & 25 A Upto 12 V_{max}
		Insulation Resistance	IEC/EN 60204-1 Clause. 18.3	Upto 50 GΩ, 0 V to 1000 VDC
		Voltage Test	IEC/EN 60204-1 Clause. 18.4	Upto 5 kV AC Upto 6 kV DC
2.	**Information technology equipment to Safety to Part 1: General Requirements IS 13252 (Part 1): 2010 /IEC 60950 (Part 1) Edition 2.2 2013**	Marking and Instructions	IS 13252 (Part 1): 2010 / IEC 60950 (Part 1): 2005 Clause 1.7	Qualitative (Visual Inspection)
		Power Interface	IS 13252 (Part 1): 2010 IEC 60950-1: 2005 Clause 1.6	0.1 V to 300 V AC 0.01 A to 12.5 A 0.01 W to 3000 W

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	Information technology equipment to Safety to Part 1: General Requirements IS 13252 (Part 1): 2010 /IEC 60950 (Part 1) Edition 2.2 2013	Incoming Supply Conductor Terminations and Devices for Disconnecting and Switching Off	IS 13252 (Part 1): 2010 IEC 60950 -1: 2005 Clause 3.1-3.5	0 to 200 mm 0 to 25 mm 0 to 200 N 0.25 Nm
		Protection Against Electric Shock	IS 13252 (Part 1): 2010 IEC 60950-1: 2005 Clause 2.1	0 to 200 mm 1 N to 200 N Upto 6.0 Nm dcV: 200 mV to 1000 V acV: 200 mV to 750 V
		Protection of Equipment	IS 13252 (Part 1): 2010 IEC 60950-1 2005 Clause 2.7	Qualitative (Visual Inspection)
		Heating Test	IS 13252 (Part 1): 2010 IEC 60950 -1: 2005 Clause 4.5	0.1 V to 300 V AC 0.01 A to 12.5 A 0.01 W to 3000 W 3 mΩ to 30 kΩ Upto 180 °C
		Design and Construction	IS 13252 (Part 1) 2010 IEC 60950 (Part 1): 2005 Clause 4.3	0 to 200 mm 0 to 25 mm 0 to 200 N Upto 5 kV AC Upto 6 kV DC

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	Information technology equipment to Safety to Part 1: General Requirements IS 13252 (Part 1): 2010 /IEC 60950 (Part 1) Edition 2.2 2013	Insulation Resistance	IS 13252 (Part 1): 2010 IEC 60950 -1: 2005 Clause 6.2	Upto 50 GΩ, 0 to 1000 VDC
		Voltage Test	IS 13252 (Part 1): 2010 IEC 60950 -1: 2005 Clause. 5.2	Upto 5 kV AC Upto 6 kV DC
		Protection Against Residual Voltages	IS 13252 (Part 1): 2010 IEC 60950 -1: 2005 Clause. 2.1.1.7	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W
3.	**Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use & Subsequent Parts**	Testing In Single Fault Condition	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause. 4.4.2 & 4.4.2.7.2/4.4.2.7.3	3 mΩ to 30 kΩ 0.1 V to 300 V AC 0.01 A to 12.5 A 0.01 W to 3000 W Upto 200 °C
		Power Input	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 4.3.2.5 & 5.1.3	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W
		Verification of Marking and Documentation	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 5.3	Qualitative
		Residual Energy /Touch Current In Normal Condition & Fault Condition	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 6.1, 6.3 & 6.10.3	0.05 mA to 20 mA DC: 200 mV to 1000 V AC: 200 mV to 750 V
		Determination of Accessible Parts	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 6.2, 6.3.1 & 6.3.2	Upto 200 mm 0.999 pF to 10 μF at 1 kHz 99 μH to 10 H at 1 kHz 0.1 Ω to 1 MΩ at 1kHz Upto 6.0 Nm

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	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use & Subsequent Parts	Bonding Impedance / Earth Continuity Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 6.5.2.3 /6.5.2.4 / 6.5.2.5 /6.5.2.6 /6.5.4	Upto 6.0 Nm 0 to 200 mm 10 A & 25 A Upto 12 V_{max}
		Terminals for External Circuits (Capacitive Discharge Test)	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 6.6.2 /6.10.3	DCV: 200 mV to 1000 V ACV: 200 mV to 750 V
		Clearance & Creepage Distances	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 6.7	Upto 200 mm 1 N to 200 N Upto 6.0 Nm 0.01 s to 60 min Upto 100 °C 1 N to 200 N Upto 600 V rms Upto 2.0 A rms 0.01 s to 60 min
		Dielectric Strength Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 6.8.4	Qualitative (Upto 15 kV AC Upto 40 kV DC)
		Cord Anchorage Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 6.10.2	1 N to 200 N Upto 200 mm Upto 6.0 Nm
		Stability Tests	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 7.4	Qualitative (Upto 200 mm) 1 kg to 100 kg

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	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use & Subsequent Parts	Static Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 8	Qualitative (Upto 200 mm) Upto 15 kV AC Upto 40 kV DC
		Dynamic Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 8..2.2	500 gm ∅ 50 mm 2.1 Nm to 3.5 Nm
		Droptest	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 8.3.1 (Wooden Plate form)	Qualitative (Upto 1000 mm 52 mm)
		Flammability Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 9.3.1/14.7	Qualitative (0.5 mm to 9.5 mm 0.01 s to 60 min Upto 100 °C)
		Limiteditionenergy Circuit	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 9.4.	DC: 200 mV to 1000 V AC: 200 mV to 750 V 0.01 A to 60 A
		Heating Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 10.5.1.	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W 3 mΩ to 30 kΩ Upto 200 °C
		Stress Relief Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 10.5.2	Upto 180 °C

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	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use & Subsequent Parts	Test on Insulating Material	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 10.5.3	5 mm (Ball Pressure) 20 N Upto 150 °C (Vicat Tester) 20 N 0.5 mm to 20 mm
		Specially Protect Edition Equipment (IP Rated)	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 11.7	Qualitative (Upto IP 57)
		Ionizing Radiation Test	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 12.2.1	0.1 mR/H to 100 mR/H
		Motor Temperatures	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 14.2	3 mΩ to 30 kΩ 0.1 V to 300V ac 0.01 A to 12.5 A 0.01 W to 3000 W Upto 1300 °C
		Mains Transformers Temperatures	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 14.3	3 mΩ to 30 kΩ 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W Upto 200 °C
		Transient Over Voltage	IEC-61010-1 (Edition 2.0): 2001 & (Edition 3.0): 2010 Clause 14.3	Upto 12 kV
4.	**Lamp control gear**	Marking	IS 15885 (Part 1) IEC 61347-1 Clause. 7.0	Qualitative

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	Lamp control gear	Terminals	IS 15885 (Part 1)/ IEC 61347-1 Clause. 8.0	0 to 200 mm 1 N to 200 N Upto 6.0 Nm 0.01 s to 60 min Upto 200 °C 3 mΩ to 30 kΩ
		Provisions for Protective Earthing	IS 15885 (Part 1)/ IEC 61347-1 Clause. 9.0	Qualitative (10 A & 25 A Upto 12 Vmax)
		Protection Against Accidental Contact With Live Parts	IS 15885 (Part 1)/ IEC 61347-1 Clause 10	0 to 200 mm 1 N to 200 N 0.05 mA to 20 mA dcV: 200 mV to 1000 V acV: 200 mV to 750 V
		Moisture Resistance and Insulation	IS 15885 (Part 1)/ IEC 61347-1 Clause 11	Upto 45°C (temp.) Upto 95 % (RH)
			IS15885 (Part 2/Sec III)/ IEC 61347-2-3 Clause 11 (Annexure J)	Upto 45 °C (temp.) Upto 95 % (RH) Upto 50 GΩ, 0 to 1000 V DC
		Thermal Endurance Test for Windings of Ballasts	IS 15885 (Part 1)/ IEC 61347-1 Clause 13	3 mΩ to 30 kΩ Upto 200 °C Upto 50 GΩ, 0 V to 1000 VDC

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	Lamp control gear	Fault Conditions	IS 15885 (Part 1)/ IEC 61347-1 Clause 14	Upto 200 °C 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W Upto 50 GΩ, 100 V to 1000 VDC
		Creepage Distances and Clearances	IS 15885 (Part 1)/ IEC 61347-1 Clause 16	0 to 200 mm
		Screws, Current-Carrying Parts and Connections	IS 15885 (Part 1)/ IEC 61347-1 Clause 17	1 N to 200 N Upto 6.0 Nm
		Resistance to Heat, Fire and Tracking	IS 15885 (Part 1)/ IEC 61347-1 Clause 18	Upto 200 °C 5 mm 20 N 0 to 200 mm Upto 960 °C 0.1 s to 60 min Upto 600 V rms Upto 2.0 A rms 0.01 s to 60 min
		Resistance to Corrosion	IS 15885 (Part 1)/ IEC 61347-1 Clause 19	0.1 °C to 100 °C Upto 45 °C (temp.) Upto 95 % (RH)
		Protection of Associatedition components	IS15885 (Part 2/Sec III)/ IEC 61347-1 Clause 15	0.01 V to 1000 V 10 nS to 500 mS 1.0 kHz

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	Lamp control gear	Abnormal Conditions	IEC 61347-1 Clause 16	0.1 V to 600V ac 0.01 A to 40 A 0.01 W to 5000 W
		Asymmetric Pulse Test	IEC 61347-1 Clause 17.2	0.1 V to 1500 V 10 nS to 500 mS 10 Hz to 1.0 kHz
		Asymmetric Power Test	IEC 61347-1 Clause 17.3	0.1 V to 1500 V 10 nS to 500 mS Freq. 10 Hz to 1.0 kHz
		Open Filament Test	IEC 61347-1 Clause 17.4	0.1 V to 1500 V 10 nS to 500 mS 10 Hz to 1.0 kHz
		Voltage Across Capacitors	IS15885 (Part 2/Sec 8)/ IEC 61347-2-8 Clause 11	0.1 V to 600V AC 0.01 A to 40 A 0.01 W to 5000 W
		Ballast Heating Test	IS15885 (Part 2/Sec 3)/ IEC 61347-2-8 Clause 15	0.1 V to 600V AC 0.01 A to 40 A 0.01 W to 5000 W 3 mΩ to 30 kΩ Upto 200 °C Upto 250 °C
		High Voltage Impulse Test	IS15885 (Part 2/Sec 8)/ IEC 61347-2-8 Clause 16	Upto 5 kV AC Upto 6 kV DC
			IS15885 (Part 2/Sec 3)/ IEC 61347-2-8 Clause 17.2	Upto 6 kV with HV Probe & DSO Freq. Upto 1 MHz 0 to 25 kV Upto 5 kV AC Upto 6 kV DC

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	Lamp control gear	Ballast Heating Test	IS15885 (Part 2/Sec IX)/ IEC 61347-2-9 Clause 14	0.1 V to 600V AC 0.01 A to 40 A 0.01 W to 5000 W 3 mΩ to 30 kΩ Upto 200 °C
		High Voltage Impulse Test	IS15885 (Part 2/Sec 9)/ IEC 61347-2-9 Clause 15.1	Upto 6 kV with HV Probe & DSO Freq. Upto 1 MHz 0 to 25 kV
			IS15885 (Part 2/Sec 3)/ IEC 61347-2-8 Clause 17.2	0.1 V to 1500 V 10 nS to 500 mS Freq. 10 Hz to 1.0 kHz
		Transformer Heating	IS15885 (Part 2/Sec 13)/ IEC 61347-2-13 Clause 15	0.1 V to 600V AC 0.01 A to 40 A 0.01 W to 5000 W 3 mΩ to 30 kΩ Upto 200 °C
		Vibration Test	IS15885 (Part 2/Sec 3)/ IEC 61347-1 Clause 16.3.3	10 Hz to 55 Hz to 10 Hz 1 Octave/min. 0.35 mm
5.	**Electrical Equipments for Machines Information Technology Equipment**	Verification of Marking and Instructions	IS 13252(Part 1): 2010 IEC 60950 (Part 1): 2013 Clause 1.7 IEC/EN 60204-1 Clause 16 & 17	Qualitative
		Power Interface	IS 13252 (Part 1): 2010 IEC 60950 -1: 2013 Clause 1.6 IEC/EN 60204-1 Clause 4.3.2	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 to 3000W

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	Electrical Equipments for Machines Information Technology Equipment	Voltage Unbalance	IEC/EN 60204-1 Clause. 4.3.2	0.1 V to 300V ac 0.01 A to 12.5 A 0.01 W to 3000 W
		Voltage Interruption		0.1 V to 1000 V AC Upto 30 A
		Harmonics		Upto 40th Harmonic Voltage (at 240 V) Upto 40th Harmonic , Current (at 30 A)
		Incoming Supply Conductor Terminations and Devices for Disconnecting and Switching Off	IEC 60204-1 Clause. 18.3	0 to 200 mm 0 to 25 mm 0 to 2000 N 0.25 Nm
		Protection Against Electric Shock	IS 13252 (Part 1): 2010 /IEC 60950 -1: 2013 Clause 2.1 IEC 60204-1 Clause. 6.0	0 to 200 mm 1 N to 200 N Upto 6.0 Nm DC: 200 mV to 1000 V AC: 200 mV to 750 V
		Protection of Equipment	IEC/EN 60204-1 Clause. 7.0	Qualitative
		Heating Test	IEC/EN 60204-1 Clause 13,14	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W 3 mΩ to 30 kΩ Upto 200 °C

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	Electrical Equipments for Machines Information Technology Equipment	Design and Construction	IS 13252 (Part 1): 2010 / IEC 60950 (Part 1): 2013 Clause 4.3 IEC/EN 60204-1 Clause 8-12 & 15	0 to 200 mm 0 to 25 mm 0 to 2000 N Upto 5 kV A Upto 6 kV DC
		Insulation Resistance	IS 13252 (Part 1): 2010 / IEC 60950 -1: 2013 Clause 6.2 IEC 60204-1 Clause. 18.3	Upto 50 GΩ, 50 VDC to 1000 VDC
		Voltage Test	IS 13252 (Part 1): 2010 / IEC 60950 -1: 2013 Clause 5.2 IEC 60204-1 Clause. 18.4	Upto 5 kV AC Upto 6 kV DC
		Protection Against Residual Voltages	IS 13252(Part 1): 2010 / IEC 60950 -1: 2013 Clause 2.1.1.7 IEC 60204-1 Clause. 18.5	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W
6.	**Self- ballasted lamps for general lighting services**	Verification of Marking	IS 15111 (Part 1) Clause 6 IEC 60968 Clause. 5	Qualitative
		Interchangeability	IS 15111 (Part 1) Clause 7 IEC 60968 Clause. 6	Upto 200 mm

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	Self- ballasted lamps for general lighting services	Protection Against Electric Shock	IS 15111 (Part 1) Clause 8 IEC 60968 Clause. 7	Upto 200 mm 1 N to 200 N Upto 6.0 Nm DC: 200 mV to 1000 V AC: 200 mV to 750 V
		Insulation Resistance and Electric Strength After Humidity Treatment	IS 15111 (Part 1) Clause 9 IEC 60968 Clause 8	Upto 45 °C (temp.) Upto 95 % (RH) Upto 50 GΩ, 0 to 1000 VDC 0.05 mA to 20 mA Upto 5 kV AC Upto 6 kV DC
		Mechanical Strength	IS 15111 (Part 1) Clause. 10 IEC 60968 Clause. 9	0.01 Nm to 20 Nm
		Cap Temperature Rise	IS 15111 (Part 1) Clause. 11 IEC 60968 Clause. 10	Upto 200 °C 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W
		Resistance to the Heat	IS 15111 (Part 1) Clause. 12 IEC 60968 Clause. 11	Qualitative (0.1°C to 80°C) 0 to 200 mm
		Resistance to Flame and Ignition	IS 15111 (Part 1) Clause. 13 IEC 60968 Clause. 12)	Qualitative (5 mm 20 N Upto 25 mm Upto 960 °C 0.1 s to 999 s)

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	Self- ballasted lamps for general lighting services	Fault Conditions	IS 15111 (Part 1) Clause. 14 IEC 60968 Clause. 13	Upto 200 °C 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W Upto 2 GΩ, 100 V 1000 V DC
7.	**Uninterruptible power systems**	Power Interfaces	IEC-62040-1 (Edition 1.1): 2013 Clause. 4.6 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 1.6	0.1 V to 300V ac 0.01 A to 12.5 A 0.01 W to 3000 W
		Durability of Markings	IEC-62040-1 (Edition 1.1): 2013 Clause. 4.7.16 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 1.7.11	Petroleum Sprit
		Power Rating	IEC-62040-1 (Edition 1.1): 2013 Clause. 4.7.2 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 1.7.1	By inspection
		High Leakage Current	IEC-62040-1 (Edition 1.1): 2013 Clause. 4.7.13 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause 5.1	0.05 mA to 20 mA

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	Uninterruptible power systems	Battery	IEC-62040-1 (Edition 1.1): 2013 Clause. 4.7.20) IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 2.1.1.5	Variable resistive load
		Protection Against Electric Shock and Energy Hazards	IEC-62040-1 (Edition 1.1): 2013 Clause. 5.1.1,5.1.2,5.1.3, 5.1.4,5.1.5 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 2.1.1	0.01 V to 100 V 10 nS to 500 mS 1.0 kHz
		Limited Current Circuits	IEC-62040-1 (Edition 1.1): 2013 Clause. 5.2.3 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 2.4	dcV: 200 mV to 1000 V acV: 200 mV to 750 V 0.999 pF to 10 µF at 1 kHz 99 µH to 10 H at 1 kHz 0.1 Ω to 1 MΩ at 1 kHz
		Limited Power Source	IEC-62040-1 (Edition 1.1): 2013 Clause. 5.2.5 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 2.5	dcV: 200 mV to 1000 V acV: 200 mV to 750 V

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	Uninterruptible power systems	Protective Earthing	IEC-62040-1 (Edition 1.1): 2013 Clause. 5.3.2 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 2.10,4.2,2.6.1,5.2	dcV: 200 mV to 1000 V acV: 200 mV to 750 V 0 to 200 mm 10 A & 25 A Upto 12 V_{max}
		Clearances ,Creepage Distances and Distance Through Insulation	IEC-62040-1 (Edition 1.1): 2013 Clause. 5.7 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 2.10	0 to 200 mm Upto 600 V rms Upto 2.0 A rms 0.01 s to 60 min Upto 50 GΩ, 0 to 1000 VDC
		General Provisions for Connection to Power	IEC-62040-1 (Edition 1.1): 2013 Clause.6.2.1 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause.3.2	0 to 200 mm
		Stability	IEC-62040-1 (Edition 1.1): 2013 Clause.7.2 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 4.1	0 to 200 mm
		Mechanical Strength	IEC-62040-1 (Edition 1.1): 2013 Clause.7.3 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 4.2	0 to 200 mm Upto 250N 0.2Nm tp 1Nm

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	Uninterruptible power systems	Construction Details	IEC-62040-1 (Edition 1.1): 2013 Clause.7.4 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 4.3	Upto 200N 0.1 mR/H to 100mR/H
		Resistance to Fire	IEC-62040-1 (Edition 1.1): 2013 Clause.7.5 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 4.7	0.01 s to 60 min
		Temperature Rise	IEC-62040-1 (Edition 1.1): 2013 Clause.7.7 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 4.5	0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W Variable resistive load 3 mΩ to 30 kΩ Upto 200 °C
		General Provision for Earth Leakage	IEC-62040-1 (Edition 1.1): 2013 Clause.8.1 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 5.1	0.05 mA to 20 mA
		Electric Strength	IEC-62040-1 (Edition 1.1): 2013 Clause.8.2 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 5.2	Upto 5 kV AC Upto 6 kV DC

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	Uninterruptible power systems	Abnormal Operating and Fault Condition	IEC-62040-1 (Edition 1.1): 2013 Clause.8.3 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause. 5.3	Upto 180 °C 5 mm (Ball Pressure) 20 N 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W Variable resistive load 3 mΩ to 30 kΩ Upto 200 °C
		Connection to Telecommunication Networks	IEC-62040-1 (Edition 1.1): 2013 Clause.9 IEC-60950–1 (Edition 2.0): 2005 / IS 13252 (Part 1) Clause.2.3,6,2.10	0 to 25 kV Upto 5 kV AC Upto 6 kV DC 0.05 mA to 20 mA dcV: 200 mV to 1000 V acV: 200 mV to 750 V
		Measurement of Insulation Thickness	IS 694: 2010 Clause. 5.3 IEC 60227-2: 1997 Clause. 1.9	Upto 50 mm
		Measurement of Sheath Thickness	IS 694: 2010 Clause. 8 IEC 60227-2: 1997 Clause. 1.10	Upto 50 mm
		Measurement of Overall Dimensions and Ovality	IS 694: 2010 Clause. 9 IEC 60227-2: 1997 Clause. 1.11	Upto 50 mm

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Uninterruptible power systems	Electrical Resistance of Conductor	IS 694: 2010 Clause. 4.2 IEC 60227-2: 1997 Clause. 2.1 (Test Bench)	3 mΩ to 30 kΩ Upto 200 °C Upto 1000 mm
		Voltage Test Carried Out on Completed Cables	IS 694: 2010 Clause. 10.2, 103 IEC 60227-2: 1997 Clause. 2.2	Upto 5 kV AC
		Voltage Test Carried Out on Cores	IS 694:2010 Clause. 10.1 IEC 60227-2: 1997 Clause. 2.3	Upto 5 kV AC
		Insulation Resistance	IS 694: 2010 Table 1 IEC 60227-2: 1997 Clause. 2.4 (Water Bath)	Upto 90 °C Upto 50 GΩ, Upto 1000 V bDC
		Flexing Test	IS 694: 2010 Table 1 IEC 60227-2: 1997 Clause. 3.1	Qualitative (Upto 35A/ mm^2 500 g to 3 kg)
		Bending Test	IEC 60227-2: 1997 Clause. 3.2	Qualitative (500 g)
		Snatch Test	IEC 60227-2: 1997 Clause. 3.3	Qualitative (100 g to 3 kg)
		Test for Separation of Cores	IS 694: 2010 Clause. 11 -14 IEC 60227-2: 1997 Clause. 3.4	Qualitative
		Loss of Mass	IS 694: 2010 Table 1 IEC 60811-3-2 Sub Clause 8.1	Upto 100 g Upto 200 mm
		Pressure Test at High Temperature for Insulation and Sheath.	IS 694: 2010 Table 1 IEC 60811-3-1 Sub Clause 8.1	Qualitative (Upto 90 °C Upto 200 mm)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Uninterruptible power systems	Cold Bending Test for Insulation & Sheath.	IS 694, 2010 Table 1 IEC 60811-1-4 Sub Clause 8.1 & Sub Clause 8.2	Qualitative ((-)15 °C 100 g to 2 kg)
		Cold Elongation Test for Insulation.	IEC 60811-1.4 Sub Clause 8.4	Qualitative ((-)15 °C (temp.) Upto 200 mm) Cold elongation jig
		Impact Test for Insulation & Sheath (Impact Tester with suitable mass)	IS 694: 2010 Table 1	(-)15 °C (temp.) 100 g to 2 kg
		Heat Shock Test for Insulation and Sheath	IS 694: 2010 Table 1 IEC 60811-3-1 Sub Clause 9.1& Sub Clause 9.2	Upto 200 mm Upto 150 °C
		Test of Flame Retardance.	IS 694: 2010 Table 1 IEC 60332-1	Upto 200 mm 0.5 mm to 9.5 mm 0.01 s to 60 min Upto 1000 mm Upto 200 °C
		Long Term Resistance of Insulation to D.C.	IEC 60227-5 & Table 4 Ref. No.1.4	Upto 90 °C (Water Bath)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
8.	**Self-ballast Edition L Edition lamps for general lighting services**	Marking	IS 16102 (Part 1): 2002 Clause. 6 IEC 62560 (Edition 2.0): 2012 Clause. 5	Qualitative
		Interchangeability	IS 16102 (Part 1): 2002 Clause. 7 IEC 62560 (Edition 2.0): 2012 Clause 6	Uptoto 200 mm
		Protection Against Electric Shock (Standard Test Finger)	IS 16102 (Part 1): 2002 Clause. 8) IEC 62560 (Edition 2.0): 2012 Clause 7	Upto 200 mm 1 N to 200 N Upto 6.0 Nm DC V: 200 mV to 1000 V AC V: 200 mV to 750 V
		Insulation Resistance and Electric Strength After Humidity Treatment	IS 16102 (Part 1): 2002 Clause 9 IEC 62560 (Edition 2.0): 2012 Clause 8	Upto 45°C (temp.) Upto 95 % (RH) Upto 50 GΩ, Upto 1000 VDC (±)0.16 μA at 0.099 mA (±)0.4 mA at 3.5 mA Upto 5 kV AC Upto 6 kV DC
		Mechanical Strength	IS 16102 (Part 1): 2002 Clause 10 IEC 62560 (Edition 2.0): 2012 Clause 9	0.01 Nm to 20 Nm

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Self-ballast Edition L Edition lamps for general lighting services	Cap Temperature Rise	IS 16102 (Part 1): 2002 Clause 11 IEC 62560 (Edition 2.0): 2012 Clause. 10	Upto 200 °C 0.1 V to 300V ac 0.01 A to 12.5 A 0.01 W to 3000 W
		Resistance to the Heat	IS 16102 (Part 1): 2002 Clause 12 IEC 62560 (Edition 2.0): 2012 Clause 11	0.1 °C to 80 °C Upto 200 mm
		Resistance to Flame and Ignition	IS 16102 (Part 1): 2002 Clause 13 IEC 62560 (Edition 2.0): 2012 Clause 12	5 mm 20 N Upto 25 mm Upto 960 °C 0.1 s to 999 s
		Fault Conditions	IS 16102 (Part 1): 2012 Clause 14 IEC 62560: 2011 (2012) Clause 13	0.1 °C to 200 °C 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W Upto 2 GΩ, 100 V to 1000 VDC Upto 1000 V DC

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
II.	**MEASURING INSTRUMENTS- ELECTRICAL AND ELECTRONIC (STATIC) ENERGY METERS**			
1.	**Static Energy Meters for Active Energy**	Functional Test	IS 13779: 1999 (RA 2004) Classes 1 & 2, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-21: 2003/ IEC/AS 62053-21: 2005, Classes 1 & 2	30 V to 300 V 1 mA to 120 A
		Impulse Voltage Test		Qualitative (Upto 12 kV 50 Ω & 500 Ω Upto 6 kV 2 Ω & 12 Ω)
		AC Voltage Test		50 V to 5 kV
		Insulation Test		Upto 1000 MΩ
		Test on Limit of error		30 V to 300 V 1 mA to 120 A
		Test of Meter Constant		30 V to 300 V 1 mA to 120 A
		Test of Starting Condition		30 V to 300 V 1 mA to 120 A

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active Energy	Test of no Load Condition	IS 13779: 1999 (RA 2004) Classes 1 & 2, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-21: 2003/ IEC/AS 62053-21: 2005, Classes 1 & 2	Qualitative 30 V to 300 V
		Test of Ambient Temperature influence		30 V to 300 V 1 mA to 120 A
		Test of Repeatability of Error		30 V to 300 V 1 mA to 120 A
		Tests of Influence Quantities		30 V to 300 V 1 mA to 120 A 45 Hz to 65 Hz, Harmonics Upto 21st (Amplitude 40 % max.)
		Test of Power Consumption Test		25 mW to 200 kW_{PK}
		Test of influence of Supply Voltage		30 V to 300 V
		Test of influence of Short Time Over Currents		20 A to 4000 A
		Test of Influence of Self Heating		30 V to 300 V 1 mA to 120 A
		Test of Influence of Heating		Upto to 200 °C
		Test of Influence of Immunity to Earth Fault		30 V to 300 V 1 mA to 120 A
		Radio Interference Measurement Conduced emission Radiated Power		Upto 10 A for 1 phase Upto 32 A for 3 phase Cable diameter:1 cm

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active Energy	Radio interference suppression Conducted emission Radiated emission	IS 13779: 1999 (RA 2004) Classes 1 & 2, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-21: 2003/	Upto 10 A for 1 phase Upto 32 A for 3 phase 3 m distances 30 MHz to 6 GHz
		Fast transient burst Test	IEC/AS 62053-21: 2005, Classes 1 & 2	Qualitative (Upto 16 A for 1 phase Upto 32 A for 3 phase)
		Damped Oscillatory waves immunity Test		Qualitative (For Damp Edition oscillation 16 A per phase)
		Immunity to Electromagnetic RF fields		Qualitative Frequency range 80 MHz to 2000 MHz, Field: 10 V/m &30 V/m
		Immunity to Electrostatic Discharge		Qualitative (Upto 15 kV Air, 8 kV Contact)
		Surge Immunity Test		Qualitative (Upto 16 A for 1 phase Upto 32 A for 3 phase Max amplitude : 4 kV)
		Dry Heat Test		Qualitative (40 ºC to 200 ºC)
		Cold Test		Qualitative ((-)70 ºC to 10 ºC)
		Damp Heat Test (Cycle)		Qualitative (40 ºC, 55 ºC, 65 ºC) R.H.: Ambient to 95 %

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active Energy	Vibration Test	IS 13779: 1999 (RA 2004) Classes 1 & 2, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-21: 2003/ IEC/AS 62053-21: 2005,	Qualitative (5000 kgf (Peak Sine) 5000 kgf (RMS Random) 5 Hz to 2 kHz 50.0 mm (P-P))
		Shock Test	Classes 1 & 2	Qualitative (Acc: 150 m/s^2 to 15000 m/s^2 Duration of Pulse: 0.5 m/s to 18 m/s Pulse shape Half sine, Saw tooth, Triangular & Trapezoidal)
		Spring Hammer Test		Qualitative (0.22 Nm, 0.5 Nm)
		Protection against Penetration of Dust and Water		Qualitative (Upto IP 56 500 mm x 300 mm x 300 mm)
		Resistance to Heat & Fire		Qualitative (Upto 960 °C)
		General and Constructional Requirements		0.02 mm to 200 mm
		Marking of Meters		Qualitative Test
		Climatic Conditions		Qualitative (40 ºC to 200 ºC (-)70 ºC to 10 ºC 40 ºC, 55 ºC, 65 ºC R.H. Ambient to 95 %)
		Electrical Requirements		Qualitative Test

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active Energy	Functional Test	IS 14697: 1999 (RA 2004) & IS 15707: 2006 Classes 0.2 S, 0.5 S & 1.0 S, CBIP 304: 2008 Classes 0.2, 0.5 & 1.0, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-22: 2003/ IEC/AS 62053-22: 2005, Classes 0.2 S & 0.5 S & NMI-M6 Classes 0.2,0.5,1 &1.5	30 V to 300 V & 1 mA to 120 A
		Impulse Voltage Test		Qualitative Upto 12 kV, Source Impedance: 50 Ω & 500 Ω & Upto 6 kV Source Impedance: 2 Ω & 12 Ω
		AC Voltage Test		50 V to 5 kV
		Insulation Test		0 to 250/1000 MΩ
		Test on Limit of Error		30 V to 300 V 1 mA to 120 A
		Test of Meter Constant		30 V to 300 V 1 mA to 120 A
		Test of Starting Condition		30 V to 300 V 1 mA to 120 A
		Test of no load Condition		Qualitative (30 V to 300 V)
		Test of Ambient Temperature influence		30 V to 300 V 1 mA to 120 A
		Test of Repeatability of Error		30 V to 300 V 1 mA to 120 A
		Tests of Influence Quantities		30 V to 300 V 1 mA to 120 A 45 Hz to 65 Hz, Harmonics Upto 21st (Amplitude 40 % max.)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active Energy	Test of Power Consumption Test	IS 14697: 1999 (RA 2004) & IS 15707: 2006 Classes 0.2 S, 0.5 S & 1.0 S,	25 mW to 200 kW_{PK}
		Test of influence of Supply Voltage	CBIP 304: 2008 Classes 0.2, 0.5 & 1.0,	Qualitative (30 V to 300 V)
		Test of influence of short Time over Currents	IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005,	Upto 4000 A
		Test of Influence of Self Heating	IEC/AS 62053-22: 2003/ IEC/AS 62053-22: 2005, Classes 0.2 S & 0.5 S &	30 V to 300 V
		Test of Influence of Heating	NMI-M6 Classes 0.2,0.5,1 &1.5	Upto 200 °C
		Test of Test of Influence of Immunity to Earth Fault		30 V to 300 V & 1 mA to 120 A
		Radio Interference Measurement Conducted Emission Radiated Power		Upto 10 A for 1 phase Upto 32 A for 3 phase Cable diameter:1 cm
		Fast Transient Burst Test		Qualitative (Upto 16 A for 1 phase Upto 32 A for 3 phase)
		Damped Oscillatory Waves Immunity Test		Qualitative For Damp Edition oscillation 16 A per phase
		Immunity to Electromagnetic RF Fields		Qualitative (80 MHz to 1000 MHz 10 V/m)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active Energy	Immunity to Conducted Disturbances Induced by Radio-Frequency Fields	CDN Method Only	Qualitative (32 A , 1 Phase 32 A ,3 Phase 150 kHz to 80 MHz Level 1,3 V,10 V
		Immunity to Electrostatic Discharge		Qualitative (Upto 15 kV Air, 8 kV Contact)
		Surge Immunity Test		Qualitative (Upto 16A for 1phase Upto 32 A for 3 phase Max amplitude : 4 kV)
		Dry Heat Test		Qualitative (40 ºC to 200 ºC)
		Cold Test		Qualitative ((-)70 ºC to 10 ºC)
		Damp Heat Test (Cycle)		Qualitative (40 ºC, 55 ºC, 65 ºC R.H. Ambient to 95 %)
		Vibration Test		Qualitative (5000 kgf (Peak Sine) 5 Hz to 2 kHz 50.0 mm (P-P))
		Shock Test		Qualitative Acc: 150 m/s^2 to 15000 m/s^2 Duration of Pulse: 0.5 m/s to 18 m/s Pulse shape: Half sine, Saw tooth, Triangular & Trapezoidal

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active Energy	Spring Hammer Test	CDN Method Only	Qualitative (0.22 Nm, 0.5 Nm)
		Protection Against Penetration of Dust and Water		Qualitative (Upto IP 56 500 mm x 300 mm x 300 mm)
		Resistance to Heat & Fire		Qualitative (Upto 960 °C)
		General and Constructional Requirements		0.02 mm to 200 mm
		Marking of Meters		Qualitative Test
		Climatic Conditions		Qualitative 40 ºC to 200 ºC (-)70 ºC to 10 ºC 40 ºC, 55 ºC, 65 ºC R.H. Ambient to 95 %
		Electrical Requirements		Qualitative Test
2.	**Static Energy Meters for Reactive Energy**	Functional Test	IS 14697: 1999 (RA 2004) & IS 15707: 2006 Classes 0.2S,0.5 S & 1.0S,	30 V to 300 V 1 mA to 120 A
		Impulse Voltage Test	CBIP 88& 304: 2008 Classes 0.2, 0.5 & 1.0, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, , IEC/AS 62053-23: 2003/ IEC/AS 62053-23: 2005, ,	Qualitative (Upto 12 kV, Source Impedance: 50 Ω & 500 Ω & Upto 6 kV Source Impedance: 2 Ω & 12 Ω)
		AC Voltage Test	Classes 0.2 S & 0.5 S, & NMI-M6 (2nd Edition) (3rd Revision): 2011 Classes 0.2,0.5,1 &1.5	50 V to 5 kV

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Reactive Energy	Insulation Test	IS 14697: 1999 (RA 2004) & IS 15707: 2006	Upto 1000 MΩ
		Test on Limit of Error	Classes 0.2S,0.5 S & 1.0S, CBIP 88& 304: 2008	30 V to 300 V 1 mA to 120 A
		Test of Meter Constant	Classes 0.2, 0.5 & 1.0, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, ,	30 V to 300 V 1 mA to 120 A
		Test of Starting Condition	IEC/AS 62053-23: 2003/ IEC/AS 62053-23: 2005, ,	30 V to 300 V 1 mA to 120 A
		Test of no Load Condition	Classes 0.2 S & 0.5 S, & NMI-M6 (2^{nd} Edition) (3^{rd} Revision): 2011	Qualitative (30 V to 300 V)
		Test of Ambient Temperature Influence	Classes 0.2,0.5,1 &1.5	30 V to 300 V 1 mA to 120 A
		Test of Repeatability of Error		30 V to 300 V 1 mA to 120 A
		Tests of Influence Quantities		30 V to 300 V 1 mA to 120 A 45 Hz to 65 Hz, Harmonics Upto 21^{st} (Amplitude 40 % max.)
		Test of Power Consumption Test		25 mW to 200 kW_{PK}
		Test of Influence of Supply Voltage		30 V to 300 V
		Test of Influence of Short Time Over Currents		Upto 4000 A
		Test of Influence of Self Heating		30 V to 300 V

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Reactive Energy	Test of Influence of Heating	IS 14697: 1999 (RA 2004) & IS 15707: 2006	0 °C to 200 °C
		Test of Test of Influence of Immunity to Earth Fault	Classes 0.2S,0.5 S & 1.0S, CBIP 88& 304: 2008	30 V to 300 V & 1 mA to 120 A
		Radio Interference Measurement	Classes 0.2, 0.5 & 1.0, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, , IEC/AS 62053-23: 2003/	Current limitation of 10 A for 1 phase 32 A for 3 phase
		Conducted Emission	IEC/AS 62053-23: 2005, , Classes 0.2 S & 0.5 S,	
		Radiated Power	& NMI-M6 (2nd Edition) (3rd Revision): 2011	Cable diameter:1 cm
		Radio Interference Suppression Conducted Emission Radiated Emission	Classes 0.2,0.5,1 &1.5	Upto 10 A for 1 phase Upto 32 A for 3 phase 3 m distances 30 MHz to 6 GHz
		Fast Transient Burst Test		Qualitative (Upto 16 A for 1 phase Upto 32 A for 3 phase)
		Damped Oscillatory Waves Immunity Test		Qualitative (For Damp Edition Oscillation16 A per phase)
		Immunity to Electromagnetic RF Fields		Qualitative Frequency range 80 MHz to 1000 MHz, Field: 10 V/m

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Reactive Energy	Immunity to Conduct edition disturbances Induct edition by Radio-Frequency Fields	IS 14697: 1999 (RA 2004) & IS 15707: 2006 Classes 0.2S,0.5 S & 1.0S, CBIP 88& 304: 2008 Classes 0.2, 0.5 & 1.0, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, , IEC/AS 62053-23: 2003/	Qualitative 32 A, 1 Phase 32 A,3 Phase Freq Range : 150 kHz to 80 MHz LEVEL 1 V, 3 V, 10 V Cdn Method Only
		Immunity to Electrostatic Discharge	IEC/AS 62053-23: 2005, , Classes 0.2 S & 0.5 S, & NMI-M6 (2nd Edition) (3rd Revision): 2011	Qualitative Upto 15 kV Air, 8 kV Contact
		Parameter	Classes 0.2,0.5,1 &1.5	
		Surge Immunity Test		Qualitative (Upto 16 A for 1 phase Upto 32 A for 3 phase Max amplitude : 4 kV)
		Dry Heat Test		Qualitative (40 ºC to 200 ºC)
		Cold Test		Qualitative (-)70 ºC to 10 ºC
		Damp Heat Test (Cycle)		Qualitative (40ºC, 55ºC, 65ºC R.H: Ambient to 95 %)
		Vibration Test		Qualitative (5000 kgf (Peak Sine) 5 Hz to 2 kHz 50.0 mm (P-P))

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Reactive Energy	Shock Test	IS 14697: 1999 (RA 2004) & IS 15707: 2006 Classes 0.2S,0.5 S & 1.0S, CBIP 88& 304: 2008 Classes 0.2, 0.5 & 1.0, IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, , IEC/AS 62053-23: 2003/	Qualitative (Acc: 150 m/s^2 to 15000 m/s^2 Duration of Pulse: 0.5 m/s to 18 m/s Pulse shape: Half sine, Saw tooth, Triangular & Trapezoidal)
		Spring Hammer Test	IEC/AS 62053-23: 2005, Classes 0.2 S & 0.5 S, & NMI-M6 (2^{nd} Edition)	Qualitative (0.22 Nm, 0.5 Nm)
		Protection Against Penetration of Dust and Water	(3^{rd} Revision): 2011 Classes 0.2,0.5,1 &1.5	Qualitative (Upto IP 56 500 mm x 300 mm x 300 mm)
		Resistance to Heat & Fire		Qualitative (Upto 960 °C)
		General and Constructional Requirements		0.02 mm to 200 mm
		Marking of Meters		Qualitative Test
		Climatic Conditions		Qualitative (40 ºC to 200 ºC (-)70 ºC to 10 ºC 40 ºC, 55 ºC, 65 ºC R.H. Ambient to 95 %)
		Electrical Requirements		Qualitative Test

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	**Electro-Mechanical Energy Meters for Active Energy**	Functional Test	IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-11: 2003 Classes 0.5, 1.0 & 2.0	30 V to 300 V 1 mA to 120 A
		Impulse Voltage Test		Qualitative (Upto 12 kV, Source Impedance: 50 Ω & 500 Ω & Upto 6 kV Source Impedance: 2 Ω & 12 Ω)
		AC Voltage Test		50 V to 5 kV
		Insulation Test		Upto 1000 MΩ
		Test on Limit of Error		30 V to 300 V 1 mA to 120 A
		Test of Meter Constant		30 V to 300 V 1 mA to 120 A
		Test of Starting Condition		30 V to 300 V 1 mA to 120 A
		Test of no Load Condition		Qualitative (30 V to 300 V 1 mA to 120 A)
		Test of Ambient Temperature Influence		30 V to 300 V 1 mA to 120 A
		Tests of Influence Quantities		(30 V to 300 V 1 mA to 120 A 45 Hz to 65 Hz, Harmonics Upto 21st (Amplitude 40 % max.))

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electro-Mechanical Energy Meters for Active Energy	Test of Power Consumption Test	IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-11: 2003 Classes 0.5, 1.0 & 2.0	25 mW to 200 kW_{PK}
		Test of Influence of Supply Voltage		30 V to 300 V
		Test of Influence of Short Time Over Currents		Upto 4000 A
		Test of Influence of Self Heating		30 V to 300 V
		Test of Influence of Heating		Upto 200 °C
		Test of Test of Influence of Immunity to Earth Fault		30 V to 300 V 1 mA to 120 A
		Range of Adjustment		30 V to 300 V 1 mA to 120 A
		Dry Heat Test		Qualitative (40 ºC to 200 ºC)
		Cold Test		Qualitative ((-)70 ºC to 10 ºC)
		Damp Heat Test (Cycle)		Qualitative (40ºC, 55ºC, 65ºC R.H. Ambient to 95 %)
		Vibration Test		Qualitative (Max. force: 5000 kgf (Peak Sine) 5000 kgf (RMS Random) Freq: 5 Hz to 2 kHz Displacement: 50.0 mm (P-P))

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electro-Mechanical Energy Meters for Active Energy	Shock Test	IEC/AS 62052-11: 2003/ IEC/AS 62052-11: 2005, IEC/AS 62053-11: 2003 Classes 0.5, 1.0 & 2.0	Qualitative (Acc: 150 m/s^2 to 15000 m/s^2 Duration of Pulse: 0.5 m/s to 18 m/s Pulse shape: Half sine, Saw tooth, Triangular & Trapezoidal)
		Spring Hammer Test		Qualitative (0.22 Nm, 0.5 Nm)
		Protection Against Penetration of Dust and Water		Qualitative (Upto IP 56 500 mm x 300 mm x 300 mm)
		Resistance to Heat & Fire		Qualitative (Upto 960 °C)
		General and Constructional Requirements		0.02 mm to 200 mm
		Functional Test	IS 13010: 2002	30 V to 300 V 1 mA to 120 A
		Insulation Resistance		Upto 1000 MΩ
		Running With no Load		30 V to 300 V
		Starting Limit of Error & Interpretation of Test Results		30 V to 300 V 1 mA to 120 A
		Test of Meter Constant		30 V to 300 V 1 mA to 120 A

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electro-Mechanical Energy Meters for Active Energy	Power Loss	IS 13010: 2002	25 mW to 200 k
		Heating		Upto 200 ºC
		Impulse Voltage		Qualitative (Upto 12 kV, Source Impedence: 500 Ω & Upto 6 kV Source Impedence: 2 Ω & 12 Ω)
		AC Voltage Test		Qualitative 50 V to 5 kV
		Effect of Influence Quantities		30 V to 300 V 1 mA to 120 A
		Effect of Short Time Over Currents		Upto 3000 A
		Effect of Self Heating		200 mV to 1000 V
		AC Voltage Test		50 V to 5 kV
		Effect of Influence quantities		30 V to 300 V 1 mA to 120 A
		Effect of Short Time over Currents		Upto 3000A
		Effect of Self Heating		30 V to 300 V 1 mA to 120 A
		Range of Adjustment		30 V to 300 V 1 mA to 120 A

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electro-Mechanical Energy Meters for Active Energy	Independence of adjustment at low load	IS 13010: 2002	30 V to 300 V 1 mA to 120 A
		Sustain Edition accuracy Test		30 V to 300 V & 1 mA to 120 A
		Running at Low load		30 V to 300 V 1 mA to 120 A
		Repeatability Error		30 V to 300 V 1 mA to 120 A
		Shock Test		Qualitative (Acc: 150 m/s^2 to 15000 m/s^2 Duration of Pulse: 0.5 m/s to 18 m/s Pulse shape: Half sine, Saw tooth, Triangular & Trapezoidal)
		Vibration Test		Qualitative (5000 kgf (Peak Sine) 5000 kgf (RMS Random) Freq: 5 Hz to 2 kHz Displacement: 50.0 mm (P-P))
		Test of Material Us Edition In Dial		Qualitative
		Protection Against Penetration of Dust and Water		Qualitative (Upto IP 56 500 mm x 300 mm x 300 mm)
		Mechanical Test of Meter Case		Qualitative (0.22 Nm, 0.5 Nm)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electro-Mechanical Energy Meters for Active Energy	Driving Torque Measurement	IS 13010: 2002	2 g
		General and Constructional Requirements		0.02 mm to 200 mm
		Speedition of Rotation		Qualitative
		Marking of Meters		Qualitative
4.	**Direct Acting Indicating Analogue Electrical Measuring Instruments (Ammeter, Voltmeter, Wattmeter, Frequency Meter, Power Factor Meter)**	Intrinsic Error Variation Due to Ferromagnetic Support, Variation Due to Position, Variation Due to Voltage / Current Component of Ac Measure edition, DC Measure edition quantities Variation Due to p.f, Variation Due to Ambient Temperature & Humidity	IS 1248: 2003	0.5 V to 600 V 0 Hz & 45 Hz to 65 Hz 0.05 A to 100 A Upto 24 kW (±) 0.000 to (±) 1.000 (-)70 ºC to 100 ºC 40 ºC, 55 ºC, 65 ºC
		Variation Due to Battery Voltage, Unbalance Current, Conductive Support, Simultaneous Influence of Voltage and PF, Interaction Between Measuring Elements of Poly-Phase Instruments, Auxiliary Supply Voltage, Frequency, Limit Value of Temperature, Damping, Deviation From Zero, Permissible Overload,	IS 1248: 2003	0.5 V to 600 V 0 Hz & 45 Hz to 65 Hz 0.05 A to 100 A Upto 24 kW (±)0.000 to (±)1.000 40 ºC to 200 ºC (-)70 ºC to 10 ºC 40 ºC, 55 ºC, 65 ºC Qualitative Acc: 150m/s^2 to 15000 m/s^2 Duration of Pulse: 0.5 m/s to 18 m/s Pulse shape: Half sine, Saw tooth, Triangular & Trapezoidal

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Direct Acting Indicating Analogue Electrical Measuring Instruments (Ammeter, Voltmeter, Wattmeter, Frequency Meter, Power Factor Meter)	Overload of Short Duration on Instrument and Accessories, Overload Continuous on Instrument and Accessories, Current Circuit Continuity After High Current, Effect of Vibration and Shock, Self Heating	IS 1248: 2003	Qualitative (Max. force: 5000 kgf (Peak Sine) 5000 kgf (RMS Random) Freq: 5 Hz to 2 kHz Displacement: 50.0 mm (P-P) (1 s to 1 hr))
		Intrinsic Error Influence Error Influence Error Ambient Temperature Influence Error Relative Humidity Influence Error Change In Position Influence Error Supply Voltage Mechanical Load (Vibration and Shock)	IS 13875: 1993 (RA 2006)	Voltage: 0.5 V to 600 V, Frequency: DC & 45 Hz to 65 Hz Current: 0.05 A to 100 A Power: Upto 24 kW Power factor : (±)0.000 to (±)1.000 40 ºC to 200 ºC (-)70 ºC to 10 ºC 40 ºC, 55 ºC, 65 ºC Qualitative Acc: 150m/s^2 to 15000 m/s^2 Duration of Pulse: 0.5 m/s to 18 m/s Pulse shape: Half sine, Saw tooth, Triangular,& Trapezoidal Qualitative Max. force: 5000 kgf (Peak Sine) 5000 kgf (RMS Random) Freq: 5 Hz to 2 kHz Displacement: 50.0 mm (P-P)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	AT SITE			
I.	**MEASURING INSTRUMENTS- ELECTRICAL AND ELECTRONIC (STATIC) ENERGY METERS**			
1.	**Static Energy Meters for Active/Reactive Energy**	Parameter	IS 13779: 1999 (RA 2004), IS 14697: 1999 (RA 2004)	
		Functional Test	CBIP 88& 304: 2008, IS 15707: 2006, IEC62052-11: 2003,	30 V to 300 V & 1 mA to 120 A
		Impulse Voltage Test	IEC-62053-21*: 2003, IEC-62053-22*: 2003 & IEC-62053-23*: 2003	Qualitative Upto 12 kV, Source Impedance: 50 Ω & 500 Ω & Upto 6 kV Source Impedance: 2 Ω & 12 Ω
		Ac Voltage Test		Qualitative 50 V to 5 kV
		Insulation Test		0 to 250/1000 MΩ
		Test on Limit of Error		30 V to 300 V & 1 mA to 120 A
		Parameter	IS 13779: 1999 (RA 2004) , IS 14697: 1999 (RA 2004)	
		Test of Meter Constant	CBIP 88& 304: 2008, IS 15707: 2006, IEC 62052-11: 2003,	30 V to 300 V & 1 mA to 120 A
		Test of Starting Condition	IEC 62053-21*: 2003, IEC 62053-22*: 2003 & IEC 62053-23*: 2003	30 V to 300 V & 1 mA to 120 A
		Test of no Load Condition		Qualitative 30 V to 300 V
		Test of Repeatability of Error		30 V to 300 V & 1 mA to 120

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Static Energy Meters for Active/Reactive Energy	Test of Power Consumption Test		25 mW to 200 kW_{PK}
		Test of Influence of Self Heating		30 V to 300 V
		Test of Influence of Heating		0 to 200 °C
		Test of Influence of Immunity to Earth Fault		30 V to 300 V & 1 mA to 120 A
2.	**Electro-Mechanical Energy Meter For active Energy**	Parameter	IS 13010: 2002	
		Functional Test		30 V to 300 V & 1 mA to 120 A
		Insulation Resistance		0 to 250/1000 MΩ
		Running With no Load		Qualitative 30 V to 300 V
		Starting Limit of Error & Interpretation of Test Results		30 V to 300 V & 1 mA to 120 A
		Test of Meter Constant		30 V to 300 V & 1 mA to 120 A
		Power Loss		25 mW to 200 kW_{PK}
		Heating		0 °C to 200 °C
		Impulse Voltage		Qualitative Upto 12 kV, Source Impedance: 50 Ω & 500 Ω & Upto 6 kV Source Impedance: 2 Ω & 12 Ω
		Ac Voltage Test		Qualitative 50 V to 5 kV

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electro-Mechanical Energy Meter For active Energy	Parameter	IS 13010: 2002	
		Effect of Self Heating		30 V to 300 V
		Range of Adjustment		30 V to 300 V
		Independence of Adjustment at Low Load		30 V to 300 V & 1 mA to 120 A
		Running at Low Load		30 V to 300 V & 1 mA to 120 A
		Repeatability Error		30 V to 300 V & 1 mA to 120 A
II.	**LAMPS, LUMINARIES AND ACCESSORIES**			
1.	**Self Ballast Edition Fluorescent Lamps**	Dimensions	IS 15111 (Part 2): 2002 (RA 2007) IEC 60969 (Edition 1.2)	0.01 mm to 200 mm 0.001 mm to 25 mm
		Starting and Run-Up		0.01 s to 59 m 99 s
		Lamp Wattage		Power : 25 mW to 100 W_{pk}
		Luminous Flux		0.1 Lm to 199990 Lm
		Color		5SDCM
		Lamp Life & Lumen Maintenance		0.000001 hr to 99999.9 hr (0.1 Lm to 199990 Lm)
		Harmonics		Harmonics Upto 99^{th}
		Power Factor		Upto (±)1
		Radiatedition & Conducteditionemission		9 kHz to 30 MHz

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	**Fire Alarm Control Panel (Except Detection System)**	Parameter	IS 2189: 1999 (RA 2004)	
		General and Performance Test		Qualitative Test
		Test Environments		Qualitative Test
		Inspection and Performance Requirements		Qualitative Test
		Operational Test		Qualitative Test
3.	**Electronic Ballast**	Marking	IS 13021(Part II)- 91 (RA 2005)	Qualitative Test
		General Requirement	IEC 60929 Edition 3	Qualitative Test
		Starting Conditions		0.5 V to 600 V
		Operating Conditions		20 µA to 30 A
		Circuit Power Factor		0.5 V to 600 V Upto (±)1.000
		Supply Current		DC & 45 kHz to 65 kHz
		Max. Current In Any Lead of A Cathode		0.05A to 100A
		Current Waveform		Upto 99^{th} harmonic
		Magnetic Screening		0.5 V to 600 V 20 µA to 30 A
		Lumen Factor		0.1 Lm to 199990 Lm

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electronic Ballast	Mains Transient Over Voltage	IS 13021(Part II)- 91 (RA 2005) IEC 60929 Edition 3	Qualitative (Upto 16A for 1 phase Upto 32 A for 3 phase Max amplitude : 4 kV)
		Operational Test for Abnormal Condition		Qualitative
		Endurance		Qualitative
4.	**Double-capp Edition fluorescent lamps**	Parameter	IS 2418: 1977 Part 1,2 ,3 & 4 IEC 60081 (5th Edition)	
		Visual Examination and Checking for Marking		Qualitative
		Lamp & Cap Dimension		0.01 mm to 200 mm 0.001 mm to 25 mm
		Torsion Test		Qualitative 1.0 Nm to 60 Nm
		Burning Test		Qualitative
		Starting Characteristic		0.1 Lm to 199990 Lm Power: 25 mW to 100 W 5 SDCM
		Verification of Marking	IS 10322 (Part 1) IEC 60598-1:2008 (Edition 7.0) Clause. 3.4	Petroleum Sprit
		Lamp holder Pressure Test	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.4.4	0 to 200 N

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Double-capp Edition fluorescent lamps	Voltage Across Lamp holders	IS 10322 (Part 1) IEC 60598-1 : 2008 (Edition 7.0) Clause. 4.4.5	dcV: 200 mV to 1000 V acV: 200 mV to 750 V
		Electro-Mechanical Contact System	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.11.6	dcV: 200 mV to 1000 V acV: 200 mV to 750 V
		Screws and Connections (Mechanical) and Glands Testing	IS 10322 (Part 1) IEC 60598-1 : 2008 (Edition 7.0) Clause. 4.12.1/4.12.5	Test Rods Upto 6.0 Nm
		Mechanical Strength Tests	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.13.1/4.13.44.13.6/ 4.21.4	0.22 Nm to 2.0 Nm (Adj. Spring Hammer) 0 to 200 mm Upto 200 N 500 gm ∅ 50 mm 2.1 Nm to 3.5 Nm
		Adjusting Devices Testing	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.14.1/4.14.2/4.14.3	0 to 12 kg

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Double-capp Edition fluorescent lamps	Insulating Linings and Sleeves Tests / Resistance to Corrosion	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.9.2/4.18.1	Temp: 0 to 180 °C Temperature: 0 to 45 °C, Relative Humidity: 95 % Upto 50 GΩ, 0 V to 1000 VDC Upto 5 kV AC Upto 6 kV DC
		Stress Corrosion	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.18.2 / Annexure F	Temp:0 °C to 180 °C
		Rough Service Luminaries	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.20	10Hz-55Hz-10Hz 1 Octave/min. 0.35 mm
		Attachment to Lamps	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.22	0 to 12 kg
		Protective Measures Against UV Radiation	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.24/Annexure P	
		Short Circuit Protection Test	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 4.26	0 to 12 kg

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Double-capp Edition fluorescent lamps	Pull and Torque Tests on Cord Anchorage--	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 5.2.10.1	0 to 200 mm 0 to 12 kg Upto 0.25 Nm
		Internal Wiring Dimensions	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 5.3	0 to 200 mm 0 to 25 mm
		Earth Continuity Test	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 7.2.3	10 A & 25 A Upto 12 V_{max}
		Protection Against Electric Shock Tests / Capacitor Discharge	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 8.2.5/ 8.2.7	0 to 200 mm {Standard Test finger (figure 6), Straight unjoint Edition Test finger, Test hook (figure 7)} 0 to 25 mm Voltage: 0 to 100 V Time: 10 nS to 500 mS Freq. 0 to 1.0 kHz
		Solid Object Proof Luminaries Testing	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 9.2.0	0 to 200 mm {Standard Test finger (figure 6), straight unjoint EditionTest finger, Test hook (figure 7)}
		Dust Proof Luminaries Tests	IS 10322 (Part 1) IEC 60598-1: 2008(Edition 7.0) Clause. 9.2.1/9.2.2	Upto IP facilities Upto IP5X

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Double-capp Edition fluorescent lamps	Water Proof Luminaires Testing	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 9.2.3,4,5,6,7, 8,9	Upto IP facilities Upto IPX7
		Humidity Tests	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause.9.3.1	Temperature: 0 °C to 45 °C, Relative Humidity: 95 %
		Insulation Resistance Tests	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 10.2.1	Upto 50 GΩ, 0 V to 1000 VDC
		Electric Strength Tests	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 10.2.2	Upto 5 kV ac Upto 6 kV dc
		Leakage Current Testing	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 10.3.1	0.05 mA to 20 mA
		Creepage Distances and Clearances Measurements	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 11.2.1	0 to 200 mm
		Endurance Tests	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 12.3.1	Temp:0 to 35 °C Upto 200 °C 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Double-capp Edition fluorescent lamps	Thermal Tests	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 12.4.1	Temp:0 °C to 35 °C Upto 200 °C 0.1 V to 300V AC 0.01 A to 12.5 A 0.01 W to 3000 W
		Abnormal Operation Testing	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 12.5.1e) Annexure C Fig. C3	Temp.0 to 180 °C 0.1 V to 300V ac 0.01 A to 12.5 A 0.01 W to 3000 W
		Resistance to Heat Test	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 13.2.1	Upto 180 °C 5 mm (Ball Pressure) 20 N
		Resistance to Flame Test	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 13.3.1	0.5 mm to 9.5 mm 0.01 s to 60 min
		Resistance to Flame Test	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 13.3.1	0.5 mm to 9.5 mm 0.01 s to 60 min
		Resistance to Ignition Testing	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 13.3.2	Upto 960 °C 0.01 s to 60 min

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Double-capp Edition fluorescent lamps	Resistance to Tracking Test	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 13.4.1	Upto 600 V rms Upto 2.0 A rms 0.01 s to 60 min
		Screw Terminals	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 14	3 mΩ to 30 kΩ 1 N to 200 N Upto 6.0 Nm
		Screwless Terminals	IS 10322 (Part 1) IEC 60598-1: 2008 (Edition 7.0) Clause. 15	3 mΩ to 30 kΩ Temp:0 °C to 180 °C Upto 6.0 Nm Force: 200N (Pull) 0.01 s to 60 min
		Photometric Test	IS 10322 (Part 5/Sec 1): 2012 16 IEC 60598-2-1, Edition 2.1 (1997)	NA
5.	**Luminaries for Road and Street lighting**	Static Load Test (Wind force Test)	IS 10322 (Part 5/Sec III): 2012 IEC 60598-2-3: 2002, (Edition 3) Amd. 1: 2011 Clause. 3.6.3	Qualitative
		Glass Cover Shattering	IS 10322 (Part 5/Sec III): 2012 IEC 60598-2-3: 2002 (Edition 3) Amd. 1: 2011 Clause. 3.6.5.1	Qualitative

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Luminaries for Road and Street lighting	Glass Cover Shattering	IS 10322 (Part 5/Sec III): 2012 IEC 60598-2-3: 2002, (Edition 3) – Amd. 1: 2011 Clause. 3.6.5.2	Qualitative
6.	**Portable general purpose luminaires**	Overturning Test	IS 10322 (Part 5/Sec IV): 1987 Clause. 6.4 IEC 60598-2-1 (Edition 2.1): 1997 Clause. 4.6.3 / 4.12	Upto 200 mm
7.	**Floodlights**		IS 10322 (Part 5/Sec V): 1987 Clause. 6.5.1 IEC 60598-2-5 (Edition 2.0):1998 Clause. 5.6.5	Qualitative
			IS 10322 (Part 5/Sec V): 1987 IEC 60598-2-5 (Edition 2.0): 1998 Clause. 5.6.8	Qualitative
III.	**POWER STABILIZERS AND UPS**			
1.	**Solid state Inverter**	Visual Examination	IS 13314: 1992 (RA 2003)	Qualitative
		High Voltage Test		Qualitative (50 V to 5 kV)
		Insulation Resistance		Upto 1000 MΩ
		No Load Test		20 mA to 30 A
		Output Test		30 V to 270 V
		Dry Heat Test		Qualitative (40 ºC to 200 ºC)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Solid state Inverter	Damp Heat Test (Cycle)	IS 13314: 1992 (RA 2003)	Qualitative (0 , 55 ºC, 65 ºC R.H. Ambient to 95 %)
		Cold Test		Qualitative ((-)70 ºC to 10 ºC)
		Harmonic Contents		DC to 99th Fundamental
		Marking		Qualitative
2.	**Automatic Line Voltage Corrector (Step Type)**	Physical Examination	IS 8448: 1989 (RA 2003)	Qualitative
		Output Voltage		0 to 300 V & 0 to 120 A
		High Voltage Test		Qualitative 50 V to 5 kV
		Insulation Test		Upto 1000 MΩ
		No Load Current		Upto 300 V Upto 120 A
		Protection Against Electric Shock		Qualitative (5 N to 200 N 0.1 mA to 20 mA 0 to 25 A, 12 V 200 mV to 1000 V 50 V to 5 kV AC 0.01 mm to 200 mm)
		Stability		Qualitative 5 N to 200 N
		Mechanical Strength		Qualitative (Upto 200 N) (Upto 5 Nm)

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Automatic Line Voltage Corrector (Step Type)	Provision for Earthing	IS 8448: 1989 (RA 2003)	Upto 25 A Upto 12 V
		Screws and Connections		Qualitative (0.4 Nm to 50 Nm)
		Temperature Rise		Upto 300 V & Upto 120 A Upto 1000 °C
		Leakage Current		0.001 mA to 20 mA
		Creepage Distances and Clearances		Upto 200 mm
		Induced Voltage		Qualitative (Upto 1000 V Upto 120 Hz)
		Damp Heat		Qualitative (40ºC, 55ºC, 65ºC R.H. Ambient to 95 %)
		Stability Test for Relay Operation		Upto 300 V
		Continuous Operation		0.250 kVA to 5 kVA, Upto 300 V
3.	**Automatic Line Voltage Corrector (servo motor operated)**	Physical Examination	IS 9815: 1994 (RA 2004)	Qualitative
		High Voltage Test		Qualitative 50 V to 5 kV
		Insulation Test		0 to 250/1000 MΩ

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Automatic Line Voltage Corrector (servo motor operated)	Leakage Current	IS 9815: 1994 (RA 2004)	0.001 mA to 20 mA
		Provision for Earthing		0 to 25 A, 12 V
		Output Voltage		0 to 300 V
		No Load Current		Upto 100A
		No Load Losses		25 mW to 200 kW_{PK}
		Load Loss Test and Efficiency		25 mW to 200 kW_{PK}
		Induced voltage		Qualitative Upto 1000V & 120 Hz.
4.	**Reciprocating Internal Combustion Engine Driven Alternator Current Generating Sets**	Sound Power Level	ISO 3744: 1981 ISO 8528-10 (Part 1)	Upto 140 dB
5.	**Photovoltaic Systems - Power Conditioners**	Efficiency	IEC 61683 (1st Edition)	25 mW to 10 kW p.f.-1
6.	**Solid State Inverter**	Visual Examination	IS 13314: 1992 (RA 2003)	Qualitative
		High Voltage Test		Qualitative 50 V to 5 kV
		Insulation Resistance		0 to 250/1000 MΩ
		No Load Test		20 mA to 30 A
		Output Test		10 V to 270 V
		Harmonic Contents		DC to 99th Fundamental

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	**Automatic Line Voltage Corrector (servo motor operatEdition)**	Physical Examination	IS 9815: 1994 (RA 2004)	Qualitative Tests
		High Voltage Test		Qualitative 50 V to 5 kV
		Insulation Test		0 to 250/1000 MΩ
		Provision for Earthing		0 to 25 A, 12 V
		Output Voltage		10 V to 300 V
		No Load Current		Upto 100 A
		No Load Losses		25 mW to 200 kW_{PK}
		Load Loss Test and Efficiency		25 mW to 200 kW_{PK}
8.	**Reciprocating Internal Combustion Engine Driven Alternator Current Generating Sets**	Sound Power Level	ISO 3744: 1981 ISO 8528-10 (Part 10)	Upto 140 dB

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