Laboratory	**Electronics Test & Development Centre, 100 Feet Road, Peenya Industrial Area, Bangalore, Karnataka**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Certificate Number	**TC-6225**	**Page 1 of 39**	
Validity	**22.10.2018 to 21.10.2020**	**Last Amended on 26.10.2018**	

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection

ELECTRONICS TESTING

I.	**EMC TEST FACILITY**			
1.	**EMC Testing of IT Products/House hold/Industrial/ Medical** **1) Power port (Single phase & Three Phase) 32A** **2) Telecom Port/Data line**	Conducted emission	CISPR11 Ed 6.1:2016	150 kHz to 30MHz
			EN55011:2007	150 kHz to 30MHz
			CISPR22 Ed 6.0:2008	150 kHz to 30MHz
			CISPR32 Ed 2.0:2015	150 kHz to 30MHz
			EN55022:2010	150 kHz to 30MHz
			CISPR14-1 Ed 6.0:2016	150 kHz to 30MHz
			CISPR 15 Ed 8.1:2015	9 kHz to 30MHz
			IEC 62040-2 Ed 2.0:2005	150 kHz to 30MHz
			IS13779:1999	150 kHz to 30MHz
			IS6873 (Part 7:1999)	150 kHz to 30MHz
			IEC60571 Ed 3.0:2012	150 kHz to 30MHz
			IEC60601-1-2 Ed 4.0:2014	150 kHz to 30MHz
			IEC870-2-1:1995	150 kHz to 30MHz
			IEC61000-6-3 Ed 2.1:2011	150 kHz to 30MHz
			IEC61000-6-4 Ed 2.1:2011	150 kHz to 30MHz
			TEC/SD/DD/EMC-221/05/OCT-16	150 kHz to 30MHz
			IEC61326-3-2 Ed 1.0:2008	150 kHz to 30MHz
			IEC62236-3-2 Ed 2.0:2008	9 kHz to 30MHz
			IEC60255-26 Ed 3.0:2013	150 kHz to 30MHz
			FCC 47 CFR PART 15	150 kHz to 30MHz
			IS14697:1999	150 kHz to 30MHz
		Radiated emission (Max height of Equipment 1.5 meter)	IEC61000-6-3 Ed 2.1:2011	30MHz to 1GHz
			IEC61000-6-4 Ed 2.1:2011	30MHz to 1GHz
			CISPR11 Ed 6.1:2016	30MHz to 6GHz
			EN55011:2007	30MHz to 1GHz
			CISPR22 Ed 6.0:2008	30MHz to 6GHz
			CISPR32 Ed 2.0:2015	30MHz to 6GHz

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			EN55022:2010	30MHz to 6GHz
			CISPR14-1 Ed 6.0:2016	30MHz to 1GHz
			IEC 62040-2 Ed 2.0:2005	30MHz to 1GHz
			IS13779:1999	30MHz to 1GHz
			IS6873 (Part 7:1999)	30MHz to 1GHz
			FCC 47 CFR PART 15	30MHz to 1GHz
			IEC60571 Ed 3.0:2012	30MHz to 1GHz
			IEC60601-1-2 Ed 4.0:2014	30MHz to 1GHz
			TEC/SD/DD/EMC-221/05/OCT-16	30MHz to 6GHz
			IEC61326-3-2 Ed 1.0:2008	30MHz to 1GHz
			IEC62236-3-2 Ed 2.0:2008	30MHz to 1GHz
			IEC60255-26 Ed 3.0:2013	30MHz to 1GHz
			IEC870-2-1:1995	30MHz to 1GHz
2.	**Energy meter & home appliances**	Disturbance Power	CISPR14-1 Ed 6.0:2016	30MHz to 300MHz
			IS13779-1999; IS14697:1999	30MHz to 300MHz
		Electrical Fast Transient (EFT)	IEC61000-4-4 Ed 3.0:2012	Amplitude:4kV
			IEC61000-6-1 Ed 3.0:2016	Pulse:5/50ns
			IEC61000-6-2 Ed 3.0:2016	Burst duration: 15ms/0.75ms
			IEC60255-22-4 Ed 3.0:2008	Burst period:300ms
			IS13779:1999:IS14697:1999	Repetition rate: 5kHz &100kHz
			IS14700(Part 4/Sec 4):2004	
			CISPR24 Ed 2.1:2015	
			IEC60571 Ed 3.0:2012	
			IEC60601-1-2 Ed 4.0:2014	
			TEC/SD/DD/EMC-221/05/OCT-16	
			IEC62236-3-2 Ed 2.0:2008	
			IEC61326-3-2 Ed 1.0:2008	

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IEC60255-26 Ed 3.0:2013 IEC870-2-1:1995	
		Electrostatic Discharge (ESD)	IEC61000-4-2 Ed 2.0:2008	Level 2kV to 15kV
			IEC61000-6-1 Ed 3.0:2016	Upto 8kV
			IEC61000-6-2 Ed 3.0:2016 IS13779:1999 CISPR24 Ed 2.1:2015 IEC60571 Ed 3.0:2012 IEC60601-1-2 Ed 4.0:2014 IS14700(Part 4/Sec 2):2008 IEC62236-3-2 Ed 2.0:2008 TEC/SD/DD/EMC-221/05/ OCT-16 IEC61326-3-2 Ed 1.0:2008 IEC60255-22-2 Ed 3.0:2008 IEC60255-26 Ed 3.0:2013 IEC870-2-1:1995 IS14697:1999	Air Discharge:Upto 15kV
		RF conducted immunity (CS) 1)Power port 2) Data Line	IEC61000-4-6 Ed 4.0:2013 IEC61000-6-1 Ed 3.0:2016 IEC61000-6-2 Ed 3.0:2016 CISPR24 Ed 2.1:2015 IS13779:1999 IEC60571 Ed 3.0:2012 IEC60601-1-2 Ed 4.0:2014 TEC/SD/DD/EMC-221/05/OCT-16 IEC62236-3-2 Ed 2.0:2008 IEC61326-3-2 Ed 1.0:2008	150kHz to 230MHz Test levels $1V_{rms}$ to $10V_{rms}$ Modulation 1 kHz Modulation depth: 80% AM

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IEC60255-26 Ed 3.0:2013 IEC870-2-1:1995	
		Power frequency Magnetic Field test (Maximum EUT size 0.5mx0.5mx0.6m height)	IEC61000-4-8 Ed 2.0:2009 IEC61000-6-1 Ed 3.0:2016 IEC61000-6-2 Ed 3.0:2016 CISPR24 Ed 2.1:2015 IS13779:1999 IEC60571 Ed 3.0:2012 IEC60601-1-2 Ed 4.0:2014 IEC61326-3-2 Ed 1.0:2008 IEC60255-26 Ed 3.0:2013 IEC870-2-1:1995	1 A/m continuous to 30 A/m continuous
		Impulse	IS13779:1999 IEC61180-1:1992 IS14697:1999 IS13010:2002	1.2µs/50µs, 0.5kV to 12kV
		Harmonic Current Emission	IEC61000-3-2 Ed 4.0:2014 IEC61326-3-2 Ed 1.0:2008 IEC60601-1-2 Ed 4.0:2014 IEC870-2-1:1995	Upto 40th Harmonics (at 50Hz)
		Flicker	IEC61000-3-3 Ed 3.0:2013 IEC61326-1Ed 2.0:2012 IEC870-2-1:1995	230V, Single phase, Frequency 50Hz
		Voltage dips & short Interruption	IEC61000-4-11 Ed 2.0:2004 IEC61000-6-1 Ed 3.0:2016 IEC61000-6-2 Ed 3.0:2016 CISPR24 Ed 2.1:2015 IEC60601-1-2 Ed 4.0:2014	0% 40% 70% 80%

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			TEC/SD/DD/EMC-221/05/ OCT-16	Duration 1/2 to 250 Cycle 10ms to 5s
			IEC61326-3-2 Ed 1.0:2008	
			IEC870-2-1:1995	
		Radiated immunity (RS)	IEC61000-4-3 Ed 3.2:2010	80MHz to 1GHz 1V/m to 20V/m@ 3meter & 1meter
			IEC61000-6-1 Ed 3.0:2016	Window Method (1 GHz to 6 GHz) 3V/m, 10V/m, 20V/m@1 meter
			IEC61000-6-2 Ed 3.0:2016	
			IS13779:1999	
			CISPR24 Ed 2.1:2015	
			IEC60571 Ed 3.0:2012	
			IEC60601-1-2 Ed 4.0:2014	
			TEC/SD/DD/EMC-221/05/ OCT-16	
			IEC62236-3-2 Ed 2.0:2008	
			IEC61326-3-2 Ed 1.0:2008	
			IEC60255-26Ed 3.0:2013	
			IEC870-2-1:1995	
		Damped Oscillatory	IEC61000-4-18 Ed 1.1:2011	0.25kV to 2.5kV
			IEC60255-22-1Ed 3.0:2007	
			IEEE C37.90.1:2002	
			IEC60255-26Ed 3.0:2013	
		Damped Oscillatory Magnetic field	IEC61000-4-10 Ed 1.1:2001	10A/m to 100A/m
II.	**ENVIRONMENTAL TEST FACILITY**			
1.	**Electrical/Electronic components/**	Cold (Low Temperature)	IS 9000 (Part II/Sec 1 to 4) 2013 IEC 68-2-1:2007 JSS 50101:1996 &	Ambient to 60 ºC

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Equipments		JSS 55555:2012 MIL-STD 202G:2002 MIL 810G:2014 QM 333/Issue-2010	
		Dry Heat (High Temperature)	IS 9000:(Part III/Sec 1 to 5) 2010, IEC-68-2-2:2007 QM 333/Issue-2010	Ambient to 180 ºC 180 ºC to 250 ºC
		Temperature cyclic	IS 9000 (Part 14):2015 IEC 68-2-14:NB:2009 JSS 50101:1996 JSS 55555:2012 MIL-STD 202G:2002 MIL 810G:2014 QM 333/Issue-2010 QM301:2002	(-) 60ºC to 180 ºC
		Temperature Shock	IS 9000 (Pt 14):2015 IEC 68-2-14-NC:2009 JSS 50101:1996 JSS 55555:2012 MIL-STD 202G:2002 MIL 810G:2014 QM 333/Issue-2010	(-) 60ºC to 180 ºC 180 ºC to 250 ºC
		Damp Heat Steady State	IS 9000 (Pt IV):2015 IEC 68-2-78:2012 JSS 50101:1996 JSS 55555:2012	25 ºC to 55 ºC with 40% RH to 95% RH
		Damp Heat Cyclic	IS 9000 (Pt V):2010 IEC 68-2-30:2005 MIL-STD 202G:2002 MIL 810G:2014 QM 333/Issue-2010	25ºC to 55ºC with 95 % RH

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Salt spray (Corrosion)	IS 9000 (Pt XI):2010 JSS 50101:1996 JSS 55555:2012 MIL-STD 202G:2002 MIL 810G:2014 QM 333/Issue-2010 ASTM B117	35ºC with 95% RH & Spray of 5% NaCl & 35 ºC to 50 ºC with 95% RH storage
		Dust	IS 9000 (Pt XII):2010 JSS 50101:1996 JSS 55555:2012 QM 333/Issue-2010	Size 1m x 1m x 1m Dust collect 25 g Ambient to (-)40 ºC
		Composite Temperature Humidity	IS 900 (Pt VI):2010 JSS 50101:1996 JSS 55555:2012	(-) 10ºC to 55ºC With 95% RH
		Vibration (Sinusoidal)	IS 9000(Pt VIII):2015 IEC 68-2-6:2007 JSS 50101:1996 JSS 55555:2012 MIL-STD 202G:2002 MIL 810G:2014 QM 333/Issue-2010	5 Hz to 2.0 KHz Displacement (±)0.035 mm to 35mm 100 m/sec² to 500 m/sec² for 0.5kg to 20kg load
		Bump	IS 9000 (Pt VII/sec 2):2013 IEC 68-2-29: JSS 50101:1996 JSS 55555:2012 QM 333/Issue-2010	400 m/sec² at 6msec
		Drop & Topple, Freefall	IS 9000 (Pt VII/Sec 3 & 4:2013) QM 333/Issue-2010	Drop height 25, 50, 100, 250, 500mm & 1000mm.
2.	**Inverters, Regulator**	**Performance Check** -Verification of Marking -Tests & Performance requirements -Visual Inspection -High Voltage	IS 13314:1992 (RA 2018) Cl. 6 Cl. 7 Cl. 7.5 Cl. 7.6	 Qualitative 0.1 kV to 10 kV Qualitative 1 V to 1000 V

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		-Insulation Resistance -No-Load -Output Test-Output Voltage regulation, Frequency, Efficiency & overload -Climatic Tests -Harmonic Content	Cl. 7.7 Cl. 7.8 Cl. 7.9 Cl. 7.10 Cl. 7.11	Upto 100GΩ Upto 500mA Upto 20V and Upto 500VA (-) 10°C to 70°C Upto 40th
3.	**IT Products: Personal Computers**	Specified processor, speed, memory, availability of interface I. Routine Test II. Acceptance test i)Performance Requirement -Visual Examination -Functional performance -Effect of power supply variations III. Safety Requirements - Earth leakage current - Dielectric - Markings	IS 14896:2001 Cl. 10.2 Cl. 10.3 Cl. 7 Cl. 5.1 Cl. 5.1 Cl. 8	 Qualitative Qualitative Qualitative 100 V to 270 V 10mA, 1MHz 0.1 kV to 10 kV Qualitative
		IV. EMC requirements - ESD - EFT	Cl. 6 & IS 6873 (Part 7) IS 61000-4-2: 2008 IS 61000-4-4: 2012-	2 kV to 15 kV 4kV, Pulse: 5/50ns, Burst duration:15ms; Bust periodr:300ms, Prf:5 kHz

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		V. Environmental Tests	Cl. 10.4	
		- Vibration	Cl 10.4.1	10Hz to 55Hz, 1g, 45 mins/axis, x.y.z axis
		- Burn-in	Cl. 10.4.2	45ºC
		- Dry Heat	Cl. 10.4.3	55 ºC
		- Damp heat cyclic	Cl. 10.4.4	40 ºC/95% RH
		- Cold	Cl. 10.4.6	-10 ºC
		- Free fall	Cl. 10.4.7	25mm height
		- Bump	Cl. 10.4.8	1000bumps @ 40g
4.	**IT Products: Dot Matrix Printer**		IS 14486:1997 Cl. 4.0	
		Physical Requirements	Cl. 4.1	Qualitative
		Functional Requirements	Cl. 4.2	100V to 270V
		Printing Method	Cl. 4.2.1	10 operations/min
		Print head	Cl. 4.2.2	Qualitative
		No. of print digits	Cl. 4.2.3	Qualitative
		Standard Character	Cl. 4.2.4	Qualitative
		Stationary & Paper handling	Cl. 4.2.5	Qualitative
		Ribbon	Cl. 4.2.6	Qualitative
		Print Speed	Cl. 4.2.7	10 CPI
		Self-Test	Cl. 4.2.8	Qualitative
		Status Display/Indicators	Cl. 4.2.9	Qualitative
		Duty Cycle	Cl. 4.2.10	
		Power Supply requirements	Cl. 4.3	$100V_{ac}$ to $300V_{ac}$
		EMI/EMC Requirements.	Cl. 4.4	
		- EFT	Cl. 4.4.1.1 IEC 61000-4-4:2012	4kV, Pulse: 5/50ns, Burst duration:15ms; Bust periodr:300ms, Prf:5 kHz
		- ESD	Cl. 4.4.1.3	2 kV to15 kV

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IEC 61000-4-2:2008	
		Electrical Safety Req.:	Cl. 4.5	
		- Earth Leakage Current	Cl. 4.5.1	10mA
		- Dielectric Strength	Cl. 4.5.2	0.1 kV to 10 kV AC/DC
		Acoustic Noise	Cl. 4.7	50 dB to 130 dB
		Climatic Test	Cl. 4.8	
		Requirements	Cl. 4.8.1.1 & Cl. 4.8.2.1	40 ºC & 55 ºC ± 2ºC
		Dry Heat	IS 9000 (P3/Sec5)	
			Cl. 4.8.1.2 & 4.8.2.2	(-)10 ºC & +5 ºC ± 3ºC
		Cold	IS 9000 (P2/Sec4)	
			Cl. 4.8.1.3 & 4.8.2.3	40 ºC ± 2 ºC,
		Damp Heat	IS 9000 (P4)	RH:93% + 2%, - 3%
		Vibration	Cl. 4.9.1	10 Hz to 150Hz, 1g, 45 mins/axis, 1 axis only
			Cl. 4.9.2	25 mm height
		Free fall test	Cl. 4.10.1	1000bumps @ 40g
		Bump	Cl. 4.10.2	Drop height:Upto760 mm
		Vertical Drop		
		MTBF/MCBF @ quoated duty cycle		
5.	**SPL Measurement (Electrical & Electronic products) Sound Level Meter**	**Sound level meter testing** - Peak C sound level	IEC 61672-3:2013,Cl. 8,9	1kHz, 94dB
6.	**UPS Upto 5 kVA**	Marking and Instructions	IEC 62040-3:2011 IS 16242 (Part 3):2014 Cl. 5.1.2	Qualitative
		Cable and	Cl. 6.2.2.2	Qualitative

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Interconnection Check		
		Light Load and Functional	Cl. 6.2.2.3	Upto 300 V, 50Hz
		No Load	Cl. 6.2.2.4	Upto 300 VAC, 50 Hz
		Full Load	Cl. 6.2.2.5	Upto 300 VAC,50 Hz
		AC Input Failure	Cl. 6.2.2.7	Upto 300 VAC,50 Hz
		Transfer to Bypass	Cl. 6.2.2.9	Upto 300 VAC,50 Hz
		Steady-State Input Voltage Tolerance	Cl. 6.4.1.1	Upto 300 VAC,50 Hz
		Inrush Current	Cl. 6.4.1.3	Time: Upto 5 min Inrush Current: Upto 100 A peak
		Harmonic Distortion Of Input Current	Cl. 6.4.1.4	Upto 39th harmonic
		Power Factor	Cl. 6.4.1.5	5 mA to 35 A Power Factor:0.2 to 1
		Efficiency	Cl. 6.4.1.6	0.1 W to 5 kW @ 25%,50%,75% & 100% load
		Output-Linear Load Normal Mode-No Load	Cl. 6.4.2 Cl. 6.4.2.1	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Normal Mode-Full Load	Cl. 6.4.2.2	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Storage Energy Mode-No Load	Cl. 6.4.2.3 IEC 62040-3:2011 IS 16242 (Part 3):2014	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Storage Energy Mode-Full Load	Cl. 6.4.2.4	Upto 300 V, 50Hz 5 mA to 35 A 0.1 W to 5 kW

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
				Power Factor:0.2 to 1
		DC Component	Cl. 6.4.2.6	Upto 300 V Upto 5 min
		Output Overload	Cl. 6.4.2.8	Upto 300 V, 50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Overload and Fault Clearing Capability Overload-Normal Mode	Cl. 6.4.2.10 Cl. 6.4.2.10.1	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Overload-Storage Energy Mode	Cl. 6.4.2.10.2	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Fault Clearing Capability-Normal Mode	Cl. 6.4.2.10.3	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Fault Clearing Capability-Stored Energy Mode	Cl. 6.4.2.10.4	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1
		Stored and Restored Energy	Cl. 6.4.4.1 to 6.4.4.4	Upto 300 V,50Hz 5 mA to 35 A 0.1 W to 5 kW Power Factor:0.2 to 1 THD:0.1 % to 10 %
		Storage at: i) Dry Heat Chamber Temp ii)Damp heat chamber Temp Cold :	IEC 62040-3:2011 IS 16242 (Part 3):2014 Cl. 6.5.3	 Ambient to 180 °C 25 °C to 85 °C RH:45 % to 97 % (-) 25°C ±3 °C

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Operation at: I. Dry Heat Chamber Temp: II. Damp heat chamber Temp III. Cold	Cl. 6.5.4	 Ambient to 180 °C 25 °C to 85 °C RH:45 % to 97 % (-) 25°C ±3 °C
		Acoustic Noise	Cl. 6.5.5	30 dB to 130 dB
III.	**LAMPS, LUMINARIES & ACCESSORIES**			
1.	**Solar/LED/CFL Based Products-Lanterns, Home Lighting & Street lights**	Performance Check i. Visual, Markings & Indications ii. Waveform type, crest factor iii. Efficiency iv. Idle current v. I/p variation, operating & Cutoff Voltage. I/p, O/p Power vi. Light output vii. Electronic Protections	MNRE Technical specification for Solar photovoltaic lighting systems & Power packs (Off grid solar applications scheme 2016-17.)	 Qualitative Qualitative 10% to 100% 1mA to 100mA Qualitative 0.5V to 60V 0.5W to 100W 1 lux to 1000 lux Qualitative
2.	**Electronic Driver/dc or ac Control Gear for LED Modules**	Verification of Marking	IEC 62384,Cl. 6 IS 16104	Qualitative
		Total Circuit Power	IEC 62384,Cl. 8 IS 16104	1W to100W
		Operating conditions	IEC 62384,Cl. 7 IS 16104	Qualitative
		Circuit Power Factor	IEC 62384,Cl. 9 IS 16104	0.2 to 1
		Supply Current	IS 16104,Cl. 10 IS 62384	0.1A to 10 A
		Operational Test for Abnormal Conditions	Cl. 12 IS 16104,Cl. 12	Qualitative

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 62384	
		Endurance	IEC 62384,Cl. 13 IS 16104	Qualitative
3.	**Safety of Machinery-Electric Equipment of Machines (in-house & On-site)**	Verification of continuity of the protective bonding circuit	IEC 60204-1:2005+A1:2008 Cl. No:18.2.2	8V,30A, 4 mΩ to 600mΩ
		Insulation Resistance	IEC 60204-1:2005+A1:2008 Cl. 18.3	500 V Dc, 10 TΩ (Max.)
		Voltage	IEC 60204-1:2005+A1:2008 Cl. 18.4	0.1 kV to 5 kV
4.	**Household and similar Electrical Appliances (Cooking range, grill, toaster, Microwave Oven, clock)**	Verification of Marking	IEC/EN 60335-1:2010+A1: 2013 +A2:2016,Cl. 7 IEC/EN 60335-2-6:2014, Cl. 7 IEC/EN 60335-2-9:2008+ A1: 2012+A2:2016,Cl. 7, IEC/EN 60335-2-21:2012, Cl. 7 IEC/EN 60335-2-25:2014, Cl. 7 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 7 IS 302-1:2008+A4:2014, Cl. 7 IS 302-2-21:211,Cl. 7 IS 302-2-25:2014,Cl. 7 IS 302-2-26:2014,Cl. 7	0.1s to 60s
		Protection against Electric shock	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 8 IEC/EN 60335-2-6:2014, Cl. 8 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 8, IEC/EN 60335-2-21:2012,	Qualitative

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 8 IEC/EN 60335-2-25:2014, Cl. 8 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 8 IS 302-1:2008+A4:2014, Cl. 8 IS 302-2-21:211,Cl. 8 IS 302-2-25:201,Cl. 8 IS 302-2-26:2014,Cl. 8	
		Power input and current	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 10 IEC/EN 60335-2-6:2014, Cl. 10 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 10, IEC/EN 60335-2-21:2012, Cl. 10 IEC/EN 60335-2-25:2014, Cl. 10 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 10 IS 302-1:2008+A4:2014, Cl. 10 IS 302-2-21:211,Cl. 10 IS 302-2-25:201,Cl. 10 IS 302-2-26:2014,Cl. 10	10 mA to 30A Upto 1000 V
		Heating/Temperature rise	IEC/EN 60335-1:2010+ A1: 2013+ A2:2016,Cl. 11 IEC/EN 60335-2-6:2014, Cl. 11 IEC/EN 60335-2-9:2008+A1: 2012+A 2:2016,Cl. 11, IEC/EN 60335-2-21:2012,	25°C to 250°C 1mΩ to 20kΩ

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 11 IEC/EN 60335-2-25:2014, Cl. 11 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 11 IS 302-1:2008+A4:2014, Cl. 11 IS 302-2-21:211,Cl. 11 IS 302-2-25:2014,Cl. 11 IS 302-2-26:2014,Cl. 11	
		Operation Under overload conditions	IS 302-1:2008+A4:2014, Cl. 12 IS 302-3-25:1994,Cl. 12 IS 302-2-202:1992,Cl. 12	1 mA to 30A Upto 1000 V
		Leakage Current (At Operating temperature)	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 13 IEC/EN 60335-2-6:2014, Cl. 13 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 13, IEC/EN 60335-2-21:2012, Cl. 13 IEC/EN 60335-2-25:2014, Cl. 13 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 13 IS 302-1:2008+A4:2014, Cl. 13 IS 302-2-21:211,Cl. 13 IS 302-2-25:1994 (RAF 2009),Cl. 13 IS 302-2-26:2014,Cl. 13	Upto 10mA
		Electric Strength (At operating temperature)	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 13 IEC/EN 60335-2-6:2014,	100V to 5kV

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 13 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 13, IEC/EN 60335-2-21:2012, Cl. 13 IEC/EN 60335-2-25:2014, Cl. 13 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 13 IS 302-1:2008+A4:2014, Cl. 13 IS 302-2-21:211,Cl. 13 IS 302-2-25:201,Cl. 13 IS 302-2-26:2014,Cl. 13	
		Transient Voltage	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 14 IEC/EN 60335-2-6:2014, Cl. 14 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 14, IEC/EN 60335-2-21:2012, Cl. 14 IEC/EN 60335-2-25:2014, Cl. 14 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 14 IS 302-1:2008+A4:2014, Cl. 14 IS 302-2-21:211,Cl. 14 IS 302-2-25:1994 (RAF 2009),Cl. 14 IS 302-2-26:2014,Cl. 14	500V to 10000V
		Moisture resistance	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 15 IEC/EN 60335-2-6:2014,	20°C to 100°C 30%RH to 98%RH

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 15 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 15, IEC/EN 60335-2-21:2012, Cl. 15 IEC/EN 60335-2-25:2014, Cl. 15 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 15 IS 302-1:2008+A4:2014, Cl. 15 IS 302-2-21:211, Cl. 15 IS 302-2-25:1994 (RAF 2009),Cl. 15 IS 302-2-26:2014,Cl. 15	
		Leakage current (After Humidity)	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 16 IEC/EN 60335-2-6:2014, Cl. 16 IEC/EN 60335-2-9:2008+A1: 2012+A2:2016,Cl. 16, IEC/EN 60335-2-21:2012, Cl. 16 IEC/EN 60335-2-25:2014, Cl. 16 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 16 IS 302-1:2008+A4:2014, Cl. 16 IS 302-2-21:211, Cl. 16 IS 302-2-25:201, Cl. 16	Upto 10mA

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 302-2-26:2014, Cl. 16	
		Electric strength (After Humidity)	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 16 IEC/EN 60335-2-6:2014, Cl. 16 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 16, IEC/EN 60335-2-21:2012, Cl. 16 IEC/EN 60335-2-25:2014, Cl. 16 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 16 IS 302-1:2008+A4:2014, Cl. 16 IS 302-2-21:211,Cl. 16 IS 302-2-25:1994 (RAF 2009),Cl. 16 IS 302-2-26:2014,Cl. 16	Upto 5kV
		Overload protection	IEC/EN 60335-1:2010+A1: 2013+A2:2016, Cl. 17 IEC/EN 60335-2-6:2014, Cl. 17 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016, Cl. 17, IEC/EN 60335-2-21:2012, Cl. 17 IEC/EN 60335-2-25:2014, Cl. 17 IS 302-1:2008+ A4:2014, Cl. 17	Upto 600V Upto 30A

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 302-2-21:211,Cl. 17 IS 302-2-25:2014,Cl. 17	
		Endurance	IEC/EN 60335-1:2010+A1:2013+A2:2016,Cl. 18 IEC/EN 60335-2-25:2014, Cl. 18 IS 302-1:2008+A4:2014, Cl. 18 IS 302-2-21:211,Cl. 18 IS 302-2-25:2014,Cl. 18	Upto 600V Upto 30A
		Abnormal operation	IEC/EN 60335-1:2010+A1:2013+A2:2016,Cl. 19 IEC/EN 60335-2-6:2014, Cl. 19 IEC/EN 60335-2-9:2008+A1:2012+A2:2016,Cl. 19, IEC/EN 60335-2-21:2012, Cl. 19 IEC/EN 60335-2-25:2014, Cl. 19 IEC/EN 60335-2-26:2002+A1:2008,Cl. 19 IS 302-1:2008+A4:2014, Cl. 19 IS 302-2-21:211,Cl. 19 IS 302-2-25:2014,Cl. 19 IS 302-2-26:2014,Cl. 19	Upto 600V Upto 30A
		Stability and mechanical hazards	IEC/EN 60335-1:2010+A1:2013+A2:2016,Cl. 20 IEC/EN 60335-2-6:2014, Cl. 20 IEC/EN 60335-2-9:2008+A1:2012+A2:2016,Cl. 20, IEC/EN 60335-2-21:2012, Cl. 20	0.15 J to 1 J 1º to 20º

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IEC/EN 60335-2-25:2014, Cl. 20 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 20 IS 302-1:2008+A4:2014, Cl. 20 IS 302-2-21:211,Cl. 20 IS 302-2-25:2014,Cl. 20 IS 302-2-26:2014,Cl. 20	
		Mechanical strength	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 21 IEC/EN 60335-2-6:2014, Cl. 21 IEC/EN 60335-2-9:2008+A1: 2012+A2:2016,Cl. 21, IEC/EN 60335-2-21:2012, Cl. 21 IEC/EN 60335-2-25:2014, Cl. 21 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 21 IS 302-1:2008+A4:2014, Cl. 21 IS 302-2-21:211,Cl. 21 IS 302-2-25:1994 (RAF 2009),Cl. 21 IS 302-2-26:2014,Cl. 21	2mm to 25mm 0.2J to 1J 2N to 40N
		Verification of Construction	IEC/EN 60335-1:2010+ A1:2013+A2:2016,Cl. 22 IEC/EN 60335-2-6:2014, Cl. 22 IEC/EN 60335-2-9:2008+ A1: 2012+A2:2016,Cl. 22, IEC/EN 60335-2-21:2012,	Upto 10º 2N to 50N Upto 150mm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 22 IEC/EN 60335-2-25:2014, Cl. 22 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 22 IS 302-1:2008+A4:2014, Cl. 22 IS 302-2-21:211,Cl. 22 IS 302-2-25:2014,Cl. 22 IS 302-2-26:2014,Cl. 22	
		Verification of Component	IEC/EN 60335-1:2010+A1: 2013+A2:2016,Cl. 24 IEC/EN 60335-2-6:2014, Cl. 24 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016,Cl. 24, IEC/EN 60335-2-21:2012, Cl. 24 IEC/EN 60335-2-25:2014, Cl. 24 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 24 IS 302-1:2008+A4:2014, Cl. 24 IS 302-2-21:211,Cl. 24 IS 302-2-25:2014,Cl. 24 IS 302-2-26:2014,Cl. 24	Qualitative
		Supply connection and external flexible cords	IEC/EN 60335-1:2010+ A1: 2013+A2:2016,Cl. 25 IEC/EN 60335-2-6:2014, Cl. 25 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016, Cl. 25, IEC/EN 60335-2-21:2012,	Qualitative Upto 5 kV IR: Upto 1000 V, 10TΩ (Max.) Upto 150mm 2 N to 100 N

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 25 IEC/EN 60335-2-25:2014, Cl. 25 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 25 IS 302-1:2008+A4:2014, Cl. 25 IS 302-2-21:211, Cl. 25 IS 302-2-25:1994(RAF 2009), Cl. 25 IS 302-2-26:2014,Cl. 25	
		Terminal for external conductor	IEC/EN 60335-1:2010+ A1:2013+A2:2016, Cl. 26 IEC/EN 60335-2-6:2014, Cl. 26 IEC/EN 60335-2-9:2008+ A1:2012+A2:2016, Cl. 26, IEC/EN 60335-2-21:2012, Cl. 26 IEC/EN 60335-2-25:2014, Cl. 26 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 26 IS 302-1:2008+A4:2014, Cl. 26 IS 302-2-21:211,Cl. 26 IS 302-2-25:2014,Cl. 26 IS 302-2-26:2014,Cl. 26	Upto 150mm
		Provision for earthing	IEC/EN 60335-1:2010+ A1:2013+A2:2016,Cl. 27 IEC/EN 60335-2-6:2014,	Upto 5V,30A, 0.1Ω to 600Ω

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 27 IEC/EN 60335-2-9:2008+A1:2012+A2:2016,Cl. 27, IEC/EN 60335-2-21:2012, Cl. 27 IEC/EN 60335-2-25:2014, Cl. 27 IEC/EN 60335-2-26:2002+A1:2008,Cl. 27 IS 302-1:2008+A4:2014, Cl. 27 IS 302-2-21:211,Cl. 27 IS 302-2-25:2014,Cl. 27 IS 302-2-26:2014,Cl. 27	
		Screws and Connections	IEC/EN 60335-1:2010+A1:2013+A2:2016,Cl. 28 IEC/EN 60335-2-6:2014, Cl. 28 IEC/EN 60335-2-9:2008+A1:2012+A2:2016,Cl. 28, IEC/EN 60335-2-21:2012, Cl. 28 IEC/EN 60335-2-25:2014, Cl. 28 IEC/EN 60335-2-26:2002+A1:2008,Cl. 28 IS 302-1:2008+A4:2014, Cl. 28 IS 302-2-21:211,Cl. 28 IS 302-2-25:1994(RAF 2009), Cl. 28 IS 302-2-26:2014,Cl. 28	2 kgf-cm to 26 kgf-cm
		Creepage distance and	IEC/EN 60335-1:2010+	0.01mm to150mm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		clearances	A1:2013+A2:2016,Cl. 29 IEC/EN 60335-2-6:2014, Cl. 29 IEC/EN 60335-2-9:2008+ A1: 2012+A2:2016,Cl. 29, IEC/EN 60335-2-21:2012, Cl. 29 IEC/EN 60335-2-25:2014, Cl. 29 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 29 IS 302-1:2008+A4:2014, Cl. 29 IS 302-2-21:211,Cl. 29 IS 302-2-25:2014,Cl. 29 IS 302-2-26:2014,Cl. 29	
		Resistance to rusting	IEC/EN 60335-1:2010+ A1:2013+A2:2016,Cl. 31 IEC/EN 60335-2-6:2014, Cl. 31 IEC/EN 60335-2-9:2008+ A1: 2012+A2:2016,Cl. 31, IEC/EN 60335-2-21:2012, Cl. 31 IEC/EN 60335-2-25:2014, Cl. 31 IEC/EN 60335-2-26:2002+ A1:2008,Cl. 31 IS 302-1:2008+A4:2014, Cl. 31 IS 302-2-21:211,Cl. 31 IS 302-2-25:2014,Cl. 31 IS 302-2-26:2014,Cl. 31	15°C to 100°C Upto 90% RH
		Radiation Hazards	IEC/EN 60335-1:2010+ A1:2013+A2:2016,Cl. 32	Upto 10mW/cm²

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IEC/EN 60335-2-6:2014, Cl. 32 IEC/EN 60335-2-25:2014, Cl. 32 IS 302-1:2008+A4:2014, Cl. 32 IS 302-2-25:2014,Cl. 32	
5.	**Safety of Information Technology Equipment and UPS**	Input Current	IEC 60950:2005+A1:2009+ A2:2013,Cl. 1.6 IEC 62040-1-1:2004, Cl. No.1.6 IEC 62040-1-2:2004,Cl. 1.6 IS 13252 (Part 1): 2010+A1:2013+A2:2015, Cl. 1.6 IS 16242(Part 1):2014 Cl. 1.6	10 mA to 30A Upto 1000 V
		Verification of Marking	IEC 60950:2005+A1:2009+ A2:2013,Cl. 1.7.1.1 IEC 62040-1-1:2004, Cl. No.1.7.1.1 IEC 62040-1-2:2004, Cl. 1.7.1.1 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 1.7.1.1 IS 16242 (Part 1):2014 Cl. 1.6	Qualitative
		Protection from Hazards	IEC 60950:2005+A1:2009+ A2:2013,Cl. 2..1.1 IEC 62040-1-1:2004, Cl. No.2.1.1 IEC 62040-1-2:2004, Cl. 2.1.1 IS 13252 (Part 1):	Qualitative

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			2010+A1:2013+A2:2015 Cl. 2.1.1 IS 16242(Part 1):2014 Cl. 2.1.1	
		Discharge of capacitors in equipment	IEC 60950:2005+A1:2009+ A2:2013,Cl. 2..1.1.7 IEC 62040-1-1:2004, Cl. No.2.1.1.7 IEC 62040-1-2:2004, Cl. 2.1.1.7 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 2.1.1.7 IS 16242(Part 1):2014 Cl. 2.1.1.7	0.1 s to 100s 1 V to 50V
		Resistance of earthing conductors	IEC 60950:2005+A1:2009+ A2:2013,Cl. 2.6.3.4 IEC 62040-1-1:2004, Cl. No.2.6.3.4 IEC 62040-1-2:2004, Cl. 2.6.3.4 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 2.6.3.4 IS 16242(Part 1):2014 Cl. 2.6.3.4	Upto 5V, 30A 0.1Ω to 600Ω
		Creepage/ Clearance distance	IEC 60950:2005+A1:2009+ A2:2013,Cl. 2.10 IEC 62040-1-1:2004, Cl. No.2.10 IEC 62040-1-2:2004, Cl. 2.10 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 2.10	0.01mm to150 mm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 16242(Part 1):2014 Cl. 2.10	
		Working Voltage	IEC 60950:2005+A1:2009+ A2:2013, Cl. 2.10.2 IEC 62040-1-1:2004, Cl. No.2.10.2 IEC 62040-1-2:2004, Cl. 2.10.2 IS 13252 (Part 1):2010+ A1:2013+A2:2015 Cl. 2.10.2	Upto 250 MHz
		Creepage distance	IEC 60950:2005+A1:2009+ A2:2013,Cl. 2.10.4 IEC 62040-1-1:2004, Cl. No.2.10.4 IEC 62040-1-2:2004, Cl. 2.10.4 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 2.10.4 IS 16242(Part 1):2014 Cl. 2.10.4	0.01mm to 150mm
		Measurement of transient voltage	IEC 60950:2005+A1:2009+ A2:2013,Cl. 2.10.3.9 IEC 62040-1-1:2004, Cl. No.2.10.3.9 IEC 62040-1-2:2004, Cl. 2.10.3.9 IS 13252 (Part 1): 2010+A1:2013 +A2:2015 Cl. 2.10.3.9 IS 16242(Part 1):2014	500V to 10 kV

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 2.10.3.9	
		Thermal cycling and thermal ageing	IEC 60950:2005+A1:2009+ A2:2013,Cl. 2.10.9 IEC 62040-1-1:2004, Cl. No.2.10.9 IEC 62040-1-2:2004, Cl. 2.10.9 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 2.10.9 IS 16242(Part 1):2014 Cl. 2.10.9	100°C to 180°C
		Stability	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.1 IEC 62040-1-1:2004, Cl. 4.1 IEC 62040-1-2:2004, Cl. 4.1 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 4.1 IS 16242(Part 1):2014 Cl. 4.1	Upto 15°C
		Steady Force	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.2.2, 4.2.3, 4.2.4 IEC 62040-1-1:2004, Cl. 4.2.2,4.2.3,4.2.4 IEC 62040-1-2:2004, Cl. 4.2.2,4.2.3,4.2.4 IS 13252 (Part 1):2010+ A1:2013+A2:2015 Cl. 4.2.2,4.2.3,4.2.4	Upto 100N Upto 250N

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 16242(Part 1):2014 Cl. 4.2.2,4.2.3,4.2.4	
		Impact	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.2.5 IEC 62040-1-1:2004, Cl. No.4.2.5 IEC 62040-1-2:2004, Cl. 4.2.5 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. No.4.2.5 IS 16242(Part 1):2014 Cl. 4.2.5	Dia:50mm/500g
		Stress relief	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.2.7 IEC 62040-1-1:2004, Cl. No.4.2.7 IEC 62040-1-2:2004, Cl. 4.2.7 IS 13252 (Part 1): 2010+A1:2013+A2:2015. Cl. No.4.2.7 IS 16242(Part 1):2014 Cl. 4.2.7	25 ºC to 180º C
		Handle and Manual Control	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.3.2 IEC 62040-1-1:2004, Cl. 4.3.2 IEC 62040-1-2:2004, Cl. 4.3.2 IS 13252 (Part 1):2010+A1:2013+ A2:2015 Cl. 4.3.2	Upto 100 N

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 16242(Part 1):2014 Cl. 4.3.2	
		Direct Plug in equipment	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.3.6 IEC 62040-1-1:2004, Cl. 4.3.6 IEC 62040-1-2:2004, Cl. 4.3.6 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 4.3.6	Upto 0.5Nm
		Protection against hazardous moving parts	IEC 60950:2005+A1:2009+ A2:2013, Cl. 4.4 IEC 62040-1-1:2004, Cl. 4.4 IEC 62040-1-2:2004, Cl. 4.4 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 4.4 IS 16242(Part 1):2014 Cl. 4.4	Qualitative
		Thermal requirements	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.5 IEC 62040-1-1:2004, Cl. No.4.5 IEC 62040-1-2:2004, Cl. No.4.5 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. No.4.5 IS 16242(Part 1):2014	25°C to 250°C Winding resistance: 1mΩ to 20kΩ

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 4.5	
		Resistance to abnormal (Ball pressure)	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.5.5 IEC 62040-1-1:2004, Cl. 4.5.5 IEC 62040-1-2:2004, Cl. 4.5.5 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 4.5.5 IS 16242(Part 1):2014 Cl. 4.5.5	0.05mm 25°C to 150°C Upto 150mm
		Evaluation of larger opening	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.6.4 2 IEC 62040-1-1:2004, Cl. 4.6.4 2 IEC 62040-1-2:2004, Cl. 4.6.4 2 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 4.6.4 2 IS 16242(Part 1):2014 Cl. 4.6.4.2	0.01 mm to 150mm
		Adhesives for construction purposes	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.6.5 IEC 62040-1-1:2004, Cl. 4.6.5 IEC 62040-1-2:2004, Cl. No.4.6.5 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 4.6.5 IS 16242(Part 1):2014	180 °C

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 4.6.5	
		Resistance to fire	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.7.3 IEC 62040-1-1:2004, Cl. 4.7.3 IEC 62040-1-2:2004, Cl. No.4.7.3 IS 13252 (Part 1):2010+A1: 2013+A2:2015 Cl. No.4.7.3 IS 16242(Part 1):2014 Cl. 4.7.3	Up to 850° C
		Materials In high voltage components	IEC 60950:2005+A1:2009+ A2:2013,Cl. 4.7.3 .6 IEC 62040-1-1:2004, Cl. 4.7.3.6 IEC 62040-1-2:2004, Cl. No.4.7.3.6 IS 13252 (Part 1):2010+A1: 2013+A2:2015 Cl. No.4.7.3.6 IS 16242(Part 1):2014 Cl. 4.7.3.6	Qualitative
		Touch Current	IEC 60950:2005+A1: 2009+A2:2013,Cl. 5.1 IEC 62040-1-1:2004, Cl. 5.1 IEC 62040-1-2:2004, Cl. No.5.1 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. No.5.1 IS 16242(Part 1):2014	Upto 10mA

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Cl. 5.1	
		Electric Strength	IEC 60950:2005+A1:2009+ A2:2013,Cl. 5.2 IEC 62040-1-1:2004, Cl. 5.2 IEC 62040-1-2:2004, Cl. No.5.2 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. No.5.2 IS 16242(Part 1):2014 Cl. 5.2	Upto 5 kV_{ac} Upto 8 kV_{dc}
		Impulse	IEC 60950:2005+A1:2009+ A2:2013,Cl. 6.2.2.1 IEC 62040-1-1:2004, Cl. 6.2.2.1 IEC 62040-1-2:2004, Cl. 6.2.2.1 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 6.2.2.1 IS 16242(Part 1):2014 Cl. 6.2.2.1	1.2µsec/50µsec, 12kV
		Voltage source	IEC 60950:2005+A1:2009+ A2:2013,Cl. 7.4.2 IEC 62040-1-1:2004, Cl. 7.4.2 IEC 62040-1-2:2004, Cl. No.7.4.2 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 7.4.2	Upto10 kV
		Impulse	IEC 60950:2005+A1:2009+	Upto 12kV

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			A2:2013,Cl. 7.4.3 IEC 62040-1-1:2004, Cl. 7.4.3 IEC 62040-1-2:2004, Cl. No.7.4.3 IS 13252 (Part 1): 2010+A1:2013+A2:2015 Cl. 7.4.3 IS 16242(Part 1):2014 Cl. 7.4.3	
6.	**Electrical equipment for measurement, control and laboratory use**	Input voltage/input Current/Power/Frequency	IEC/EN 61010-1:2010 Ed. 3Cl. 4.3.2.5/5.1.3	10 mA to 30A1000 V
		temperature measurement	IEC/EN 61010-1:2010 Ed. 3Cl. 4.4.4.2/10.4	25°C to 250°C 1mΩ to 20kΩ
		Accessibility	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.2	Qualitative
		Accessibility voltage/ current/capacitance/store d energy	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.3.1/6.3.2	Upto 250 MHz, Upto 1000V
		Bonding impedance/ earth continuity	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.5.1/6.5.1	Upto 5V, 30A, 0.1Ω to 600Ω
		terminal for external circuit (capacitive discharge)	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.6.2/6.10.3b	0.1 s to 100 s 1V to 50V
		Clearance & Creepage	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.7/6.10.5.1	Upto 150mm
		equipment for tracking index	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.7.1.2	25V to 600V AC & SC:1A
		Dielectric strength	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.8.4	Upto 5 kV_{ac} Upto 8 kV_{dc}
		Cord entry	IEC/EN 61010-1:2010 Ed. 3 Cl. 6.10.2.1	Upto 150mm
		Stability	IEC/EN 61010-1:2010 Ed. 3 Cl. 7.3	Upto 15°

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Static	IEC/EN 61010-1:2010 Ed. 3 Cl. 8.2.1	1N to 100N
		Dynamic	IEC/EN 61010-1:2010 Ed. 3 Cl. 8.2.2	Steel ball:Ø50mm,500g
		Drop	IEC/EN 61010-1:2010 Ed. 3 Cl. 8.3.1	Qualitative
		Flammability	IEC/EN 61010-1:2010 Ed. 3 Cl. 9.3..1/14.7	Burner dia:9.5±0.5mm
		Enclosure	IEC/EN 61010-1:2010 Ed. 3 Cl. 10.5.2	Upto 180°
		Insulating materials	IEC/EN 61010-1:2010 Ed. 3 Cl. 10.5.3	Ball pressure ; >0.05mm, Upto 150mm
		Motor	IEC/EN 61010-1:2010 Ed. 3 Cl. 14.2	Upto 250°C
7.	**Audio, Video and Similar Electronics Apparatus safety Requirements**	Normal operating condition	IEC/EN 60065:2014,Cl. 4.2.2 IS 616:2017,Cl. 4.22	10 mA to 30A 1000 V
		Verification of Marking Legibility	IEC/EN 60065:2014,Cl. 5 IS 616:2017,Cl. 5	0.1s to 60s
		Heating under normal operating condition	IEC/EN 60065:2014,Cl. 7 IS 616:2017,Cl. 7	Upto 250°C
		hygroscopic materials	IEC/EN 60065:2014,Cl. 8.3 IS 616:2017,Cl. 8.3	Upto 42°C 90 %RH to 95 %RH
		External forces-windows and covers	IEC/EN 60065:2014, Cl. 8.13,8.14 IS 616:2017,Cl. 8.13,8.14	Upto 50N,10s
		Internal forces	IEC/EN 60065:2014, Cl. 8.15 IS 616:2017,Cl. 8.15	Upto 2N
		protection against electric shock Accessibility	IEC/EN 60065:2014, Cl. 9,9.1.1.2,9.2 IS 616:2017,Cl.	Upto 3N Upto 22N

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			9,9.1.1.2,9.2	
		Protection against electric shock-opening in enclosure	IEC/EN 60065:2014,Cl. 9.1.3 IS 616:2017,Cl. 9.1.3	4mm to 100mm
		Protection against electric shock-Terminals	IEC/EN 60065:2014,Cl. 9.1.4 IS 616:2017,Cl. 9.1.4	Upto 22mm Upto 11N
		Withdrawal of main plug	IEC/EN 60065:2014,Cl. 9.1.6 IS 616:2017,Cl. 9.1.6	Upto 10S
		Resistance to external forces	IEC/EN 60065:2014,Cl. 9.1.7 IS 616:2017,Cl. 9.1.7	Upto 250N 10s
		Surge	IEC/EN 60065:2014,Cl. 10.1 IS 616:2017,Cl. 10.1	10 kV (50 discharges @ 12/min.)
		Insulation Resistance	IEC/EN 60065:2014,Cl. 10.3 IS 616:2017,Cl. 10.3	$500V_{dc}$ Upto 10TΩ
		Dielectric Strength	IEC/EN 60065:2014,Cl. 10.3 IS 616:2010,Cl. 10.3	Upto 10kV
		Humidity Treatment	IEC/EN 60065:2014,Cl. 10.2 IS 616:2017,Cl. 10.2	28°C to 42°C 90%RH to 95 %RH
		Fault Conditions Tests	IEC/EN 60065:2014,Cl. 11 IS 616:2017,Cl. 11	25°C to 250°C
		Mechanical Strength Bump	EN/IEC 60065:2001 Ed 7.2 2011-02,Cl. 12.1.1 IS 616:2010,Cl. 12.1.1	7 kg Upto 5cm
		Mechanical Strength impact	IEC/EN 60065:2014, Cl. 12.1.3 IS 616:2017,Cl. 12.1.3	0.2J to 1J
		Mechanical Strength	IEC/EN 60065:2014,	At 70° C

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		stress relief	Cl. 12.1.5 IS 616:2017,Cl. 12.1.5	
		Torque Test-Rod Antenna	IEC/EN 60065:2014, Cl. 12.1.6 IS 616:2017,Cl. 12.1.6	Upto 20N
		Creepage and Clearance Distance	IEC/EN 60065:2014,Cl. 13 IS 616:2017,Cl. 13	Upto 150mm
		Verification of Component-Resistors	IEC/EN 60065:2014,Cl. 14.1 IS 616:2017,Cl. 14.1	Qualitative
		Component protective Devices	IEC/EN 60065:2014,Cl. 14.5 IS 616:2017,Cl. 14.5	Upto 10mm
		Provision for protective resistance	IEC/EN 60065:2014,Cl. 15.2 IS 616:2017,Cl. 15.2	Upto 5V 30A 0.1Ω to 600Ω
		Strain relief	IEC/EN 60065:2014,Cl. 16.5 IS 616:2010,Cl. 16.5	Max 40 N,1 min Upto 25Nm
		torque test on Screw Terminals	IEC/EN 60065:2014,Cl. 17.1 IS 616:2017,Cl. 17.1	Upto 6mm Upto 2.5Nm
		Torque test on Covers	IEC/EN 60065:2014,Cl. 17.7 IS 616:2010,Cl. 17.7	Upto 10N
		Stability	IEC/EN 60065:2014,Cl. 19.1 IS 616:2017,Cl. 19.1	1° to 15°
		Resistance to Heat, Fire and tracking (Glow wire)	IEC/EN 60065:2014, Cl. 20, annex G IS 616:2017,Cl. 20, Annex G	Up to 850° C

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Resistance to Heat, Fire and tracking (Needle flame)	IEC/EN 60065:2014, Cl. 20, annex G IS 616:2017, Cl. 20, annex G	0.58g copper slug propane gas 99% purity, 35mm(needle burner), Upto 1 hr 2 mm to 12mm 100°C to 700°C
		Resistance to Heat, Fire and tracking(Flame)	IEC/EN 60065:2014, Cl. 20, annex G IS 616:2017, Cl. 20, annex G	50 V to 400V Upto 50mm Upto 4 kV
8.	**Mobile Phone handsets**	Inputting of text	IS 16333(Part 3):2017,Cl. 5.1	Qualitative
		Message readability	IS 16333(Part 3):2017, Cl. 5.2	Qualitative