

Laboratory	Yadav Measurements Private Limited, Plot No. 373-375, RIICO Bhamashah Industrial Area, Kaladwas, Udaipur, Rajasthan		
Accreditation Standard	ISO/IEC 17025: 2005		
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I. MEDICAL DIAGNOSTIC EQUIPMENT

1. MEDICAL ELECTRICAL EQUIPMENT AND MEDICAL ELECTRICAL SYSTEMS	Tests of Effect of Voltage Dips and Short Interruptions	IEC60601-1-2:2001, 2007	At 63.5 V, 110 V & 240 V
	Power Frequency Magnetic Field	IEC 61000-4-8: 2001 IEC60601-1-2:2001, 2007	Upto 1000 AT / 0.2 T
	Electrical Fast Transient Burst Test	IEC60601-1-2:2001, 2007 IEC 61000-4-4: 1995, 2004, 2012	0.5 kV to 7.0 kV 5 ns 50 ns
	Immunity to Electrostatic Discharges	IEC 61000-4-2: 1995, 2008 IEC60601-1-2:2001, 2007	0.2 to 15 kV Contact: 8 kV Air : 30 kV
	Surge Immunity Test	IEC 61000-4-5: 1995, 2005 IEC60601-1-2:2001, 2007	0.5 kV to 12 kV 1.2/50 us 8 /20 us
	Test of Immunity to Conducted Disturbances, Induced by Radio Frequency Fields	IEC60601-1-2:2001, 2007 IEC 61000-4-6: 1996, 2008	150 kHz to 80 MHz 1V to 10 V
	Immunity to Electromagnetic HF Field using Anechoic Chamber	IEC60601-1-2:2001, 2007 IEC 61000-4-3: 2002, 2006	Frequency Range : 80 MHz to 3 GHz Field strength :- Upto 1V/m, 3V/m, 10V/m (3m) 30V/m (1m)

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	MEDICAL ELECTRICAL EQUIPMENT AND MEDICAL ELECTRICAL SYSTEMS	Radio Interference Measurement	IEC60601-1-2:2001, 2007 CISPR 11 :2004,2010 CISPR 14-1 : 2005,2009 CISPR 22 :1997,2006, 2008 EN 55011 : 2007 EN 550022 :2006	Frequency Range:- 0.15 MHz to 30 MHz For power line Frequency Range:- 30 MHz to 6 GHz
		Interruption of the power supply / Supply Mains to ME Equipment	IEC 60601-1:2005+A 1:2012	0 to320V, 47 to 63 Hz 0 to 1000V DC
		Excessive temperatures in ME Equipment		-40°C to 1300°C
		Protective earthing, functional earthing and potential equalization of ME Equipment		0.3mΩ onwards
		Protection against electrical Hazards from ME Equipment		Upto 10kV (AC)
		Insulation		Test Upto 100MΩ Test voltage: Upto 500V DC
		Creepage Distances and Air Clearances		-
		Components and wiring		

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	MEDICAL ELECTRICAL EQUIPMENT AND MEDICAL ELECTRICAL SYSTEMS	Accuracy of controls and instruments and protection against hazardous outputs	IEC 60601-1:2005+A 1:2012	As per standard
		Hazards associated with moving parts		Upto 50 kg
		Fire prevention/ Constructional requirements for fire Enclosures of ME Equipment		0 to 100 N 180 mm depth
		Leakage Currents and Patient Auxiliary Currents		0 to 100 mA
		Hazardous Situations and fault conditions		Upto 10kV
		ME Equipment components and general assembly (heating)		Ambient to 140°C
		ME Equipment identification, marking and documents		-
		Documentation		-
		ingress of water or particulate matter, cleaning and dust test		As per IS12063 Range:-IPX1,X2, IPX3,X4 As per IS12063 Range:IP5X

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	MEDICAL ELECTRICAL EQUIPMENT AND MEDICAL ELECTRICAL SYSTEMS	Mechanical strength	IEC 60601-1:2005+A 1:2012	0.02 Nm to 10Nm Upto 100°C -40 to 180°C 10 to 98%RH
II. INFORMATION TECHNOLOGY EQUIPMENT				
1.	INFORMATION TECHNOLOGY EQUIPMENT	Power interface Clause 1.6	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	240V, 120A
		Marking and instruction (Durability) Clause 1.7		Qualitative test
		Access to energized parts Clause 2.1.1.1		80 mm ± 0.2 mm long probe 44.04 mm long Probe
		Access to ELV wiring Clause 2.1.1.3		10 kV AC 0-200mm Vernier caliper
		Access to hazardous voltage circuit wiring Clause 2.1.1.4		10kV
		Energy hazards Clause 2.1.1.5		80 mm ±0.2 mm long jointed and rigid Finger, Stop watch 0 to 1000 s

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	INFORMATION TECHNOLOGY EQUIPMENT	Manual controls Clause 2.1.1.6	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	10 kV
		Discharge of capacitors in equipment Clause 2.1.1.7		-
		Energy hazard Clause 2.1.1.8		Multimeter : DC Voltage: 200mV, 2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200 mV, 2V, 20V, 200V, 750V DC Current: 20 mA, 200 mA, 10A AC Current (50Hz, Sine wave): 20 mA, 200 mA, 10 A Resistance: 200Ω, 2k Ω, 20kΩ, 200 kΩ, 2MΩ, 20MΩ Frequency : (3 V, sine wave)- 20 kHz, 200 kHz
		Audio amplifiers in IT equipment Clause 2.1.1.9 (IEC 60950-1:2006, A1:2013)		240V 1 kHz to 1.5GHz (signal gen)

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	INFORMATION TECHNOLOGY EQUIPMENT	Protection in service access areas and Protection in restricted access locations Clause 2.1.2, 2.1.3	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	240V DC Voltage: 200mV, 2V, 20V, 200V, 1000V AC Voltage: (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current: 20mA, 200mA, 10A AC Current: (50Hz, Sine wave): 20mA, 200mA, 10A Resistance: 200Ω, 2kΩ, 20kΩ, 200 kΩ, 2MΩ, 20MΩ Frequency (3V, sine wave): 20 kHz, 200 kHz
		SELV circuit Clause 2.2 (2.2.2, 2.2.3)		240 V
		TNV circuit Clause 2.3.1		
		Protection by basic insulation Clause 2.3.2.2		10 kV
		Protection by earthing Clause 2.3.2.3		Range : 1.25 V A to 40 V A

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	INFORMATION TECHNOLOGY EQUIPMENT	Protection by other construction Clause 2.3.2.4	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	10 kV
		Connection of TNV circuits to other circuits Clause 2.3.4		240 V 10 kV
		Test for operating voltages generated externally Clause 2.3.5		10 kV
		Limit values (Annexure D) Clause 2.4.2		2 mA
		Connection of limited current circuits to other circuits (Annexure D) Clause 2.4.3		2 mA 10 kV
		Protective earthing Clause 2.6.1		10 kV
		Size of protective earthing conductors Clause 2.6.3.2		0 to 200 mm Vernier Caliper
		Size of protective bonding conductor Clause 2.6.3.3		0 to 200 mm Vernier Caliper

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	INFORMATION TECHNOLOGY EQUIPMENT	Resistance of earthing conductors and their terminations Clause 2.6.3.4	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	Range : 32A, 0.1Ω
		Protective earthing and bonding terminals Clause 2.6.4.2		0 to 200mm Vernier Caliper
		Short-circuit backup protection Clause 2.7.3		10kV
		Protection requirements Clause 2.8.2		80 mm ±0.2 mm long jointed and rigid Finger, 15 mm+0.0, -0.1 Pin
		Inadvertent reactivation Clause 2.8.3		80 mm ±0.2 mm long jointed and rigid Finger, 15mm+0.0, -0.1 Pin
		Switches and relays Clause 2.8.7		0 to 200 mm Vernier Caliper
		Contacts gaps (Clause 2.8.7.1)		10kV
		Overload test (Clause 2.8.7.2)		10kV
		Endurance test (Clause 2.8.7.3)		Upto 999900 cycles, flexible timer
		Electric strength tests Clause 2.8.7.4		

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	INFORMATION TECHNOLOGY EQUIPMENT	Properties of insulating materials and Humidity conditioning Clause 2.9.1, Clause 2.9.2	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	20 to 95% RH -40°C to +150°C Temp.
		Reduced values for functional insulation Clause 2.10.1.3		0-200mm Vernier Caliper 10kV
		Insulation in circuits generating starting pulses Clause 2.10.1.7		0-200mm Vernier Caliper 10kV
		General Clause 2.10.3.1		80 mm ±0.2 mm long jointed and rigid Finger, 15mm+0.0, -0.1 Pin
		Clearances in primary circuits Clause 2.10.3.3		0 to 200 mm Vernier Caliper
		Clearance in secondary circuits Clause 2.10.3.4		10kV
		Clearances in circuits having starting pulses Clause 2.10.3.5		0.5kV to 12kV (surge) 1.2 us 50 us
		Transients from an a.c. mains supply Clause 2.10.3.6		

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	INFORMATION TECHNOLOGY EQUIPMENT	Transients from a d.c. mains supply Clause 2.10.3.7	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	
		Transients from telecommunication networks and cable distribution systems Clause 2.10.3.8		
		Creepage distances Clause 2.10.4.3 Distances through insulation Clause 2.10.5.2		
		Insulating compound as solid insulation Clause 2.10.5.3		
		Semi conductor devices Clause 2.10.5.4, Clause 2.10.5.5		10 kV
		Separable thin sheet material Clause 2.10.5.7		0 to 200 mm
		Thin sheet material -standard test procedure Clause 2.10.5.9		
		Thin sheet material - alternative test procedure Clause 2.10.5.10		

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	INFORMATION TECHNOLOGY EQUIPMENT	Insulation in wound components Clause 2.10.5.11	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	10 kV
		Wire with solvent-based enamel in wound components Clause 2.10.5.12, 2.10.5.13		10 kV
		Uncoated printed boards Clause 2.10.6.1		0 to 200 mm Vernier Caliper
		Coated printed boards Clause 2.10.6.2		10 kV
		Insulation between conductors on different surfaces of a printed board Clause 2.10.6.4		
		Thermal conditioning Clause 2.10.8.2		20 to 95% RH -40°C to +150°C Temp
		Electric strength test Clause 2.10.8.3		10kV
		Thermal cycling Clause 2.10.9		20 to 98 %RH -40°C to +150°C

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	INFORMATION TECHNOLOGY EQUIPMENT	Test for Pollution Degree 1 environment and for insulating compound Clause 2.10.10	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	10kV
		Tests for semiconductor devices and for cemented joints Clause 2.10.11		
		Enclosed and sealed parts Clause 2.10.12		
		Current rating and overcurrent protection Clause 3.1.1		-40 to 150 °C & ± 0.2°C
		Insulation of conductors Clause 3.1.4		10kV
		Beads and ceramic insulators Clause 3.1.5		10 N ± 1 N 80 mm ±0.2 mm long jointed and rigid Finger, 15mm+0.0, -0.1 Pin
		Termination of conductors Clause 3.1.9		0 to 25 mm Micrometer
		Multiple supply connections Clause 3.2.2		0 to 200 mm Vernier Caliper
		Appliance inlets Clause 3.2.4		

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	INFORMATION TECHNOLOGY EQUIPMENT	Power supply cords Clause 3.2.5	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	
		Supply wiring space Clause 3.2.9		
		Connection of non-detachable power supply cords Clause 3.3.2		
		Conductor sizes to be connected Clause 3.3.4		
		Wiring terminal sizes Clause 3.3.5		
		Wiring terminal design Clause 3.3.6		
		Stability Clause 4.1		250 N \pm 10 N 10°angle Inclined plane setup
		Steady force test, 10 N Clause 4.2.2		10 N \pm 1 N
		Steady force test, 30 N Clause 4.2.3		30 N \pm 3 N
		Steady force test, 250 N Clause 4.2.4		250 N \pm 10 N

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	INFORMATION TECHNOLOGY EQUIPMENT	Impact test Clause 4.2.5	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	500 g \pm 25 g
		Stress relief test Clause 4.2.7		20 to 95% RH -40°C to +150°C Temp.
		Wall or ceiling Clause 4.2.10		50 N \pm 3 N
		Design and construction Except clause 4.3.12, 4.3.13		-
		Handles and manual controls Clause 4.3.2		0 to 5 kg
		Batteries Clause 4.3.8		80 mm \pm 0.2 mm long jointed and rigid Finger, 15mm+0.0, -0.1 Pin 10kV
		Dust, powders, liquids and gases Clause 4.3.10		0 to 200 mm Vernier Caliper
		Protection in operator access areas Clause 4.4.2		80 mm \pm 0.2 mm long jointed and rigid Finger, 15mm+0.0, -0.1 Pin 10kV

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	INFORMATION TECHNOLOGY EQUIPMENT	Temperature tests Clause 4.5.2	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	20 to 98 %RH -40°C to +150°C
		Temperature limits for materials Clause 4.5.3		Glow wire test setup 0 to 1000°C
		Touch temperature limits Clause 4.5.4		
		Resistance to abnormal heat Clause 4.5.5		
		Adhesives for constructional purposes Clause 4.6.5		
		Electrical requirements and simulated abnormal conditions Clause 5.1		0.25 mA to 3.5 mA 2 mA 500 mA 15 mA
		Electric strength Clause 5.2		10 kV
		Abnormal operating and fault conditions Clause 5.3		240 V
		Transformers Clause 5.3.3		0 to 200 mm
		Functional insulation Clause 5.3.4		Vernier Caliper

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	INFORMATION TECHNOLOGY EQUIPMENT	Audio amplifiers in information technology equipment Clause 5.3.6	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	1 kHz to 1.5 Ghz -40 to 150°C & ± 0.2°C
		During the tests Clause 5.3.9.1		10 kV
		After the tests Clause 5.3.9.2		
		Separation of the telecommunication network from earth		10 kV
		Clause 6.1.2 6.1.2.1		0 to 200 mm
		Separation requirements Clause 6.2.1		80 mm ±0.2 mm long jointed and rigid Finger, 44.04 mm long Test Probe
				10 kV
				0 to 200 mm Vernier Caliper
		Steady-state test Clause 6.2.2.2		10 kV

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	INFORMATION TECHNOLOGY EQUIPMENT	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment Clause 7.2 Protection of equipment users from over voltages on the cable distribution system Clause 7.3	IEC 60950-1:2005 A:2013 IS 13252 (Part1):2010	230 V 80 mm ± 0.2 mm long jointed and rigid Finger, 80 mm ± 0.2 mm long probe 44.04 mm long 10 kV 0 to 200 mm Vernier Caliper
2.	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	Conduct of test Clause 4.1, 4.1.4 Normal operating condition Clause 4.2 (excluding 4.2.4) Fault conditions Clause 4.3	IS 616:2010 IEC 60065:2001+ A1: 2005	1cm space, 5cm depth (box) 240V 1kHz to 1.5Ghz (signal gen) 240V 1kHz -40 to 150°C & $\pm 0.2^\circ\text{C}$ 200 g/m ² density (paper) 30° to 60°

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	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	Marking and general requirement Clause 5.0 to 5.4	IS 616:2010 IEC 60065:2001+ A1: 2005	Petroleum spirit or n-hexane, water, Piece of cloth
		Heating under normal operating conditions Clause 7 (7.1 to 7.2)		240V 1kHz to 1.5Ghz -40 to 150 °C & ± 0.2°C
		Construction requirements with regard to the protection against electric shock Clause 8 (8.2,8.3,8.6,8.8, 8.9,8.10,8.11, 8.13,8.14,8.15,8.18		10 kV 20 to 98 %RH -40°C to +150°C 0-200mm, least count 0.01mm
				Range:- -Freq. :10-150-10Hz - amplitude: 0 to 25 mm -duration: 1sec to 75 min -sweep rate: approximately one octave per minute 20N, 50N, 2N

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	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	electric shock hazard under normal operating condition Clause 9.1.1, 9.1.1.1, 9.1.1.2, 9.1.2, 9.1.3, 9.1.4, 9.1.5, 9.1.6, 9.1.7, 9.2	IS 616:2010 IEC 60065:2001+ A1: 2005	2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current- 20mA, 200mA, 10A AC Current (50Hz, Sine wave)- 20mA, 200mA, 10A Resistance : 200 Ω , 2 k Ω , 20k Ω , 200 k Ω , 2M Ω , 20 M Ω Frequency (3 V, sine wave)- 20 kHz, 200 kHz 2 mA (touch current) 80 mm \pm 0.2 mm long jointed Finger Probes: 58.04 mm long 44.04 mm long 15 mm+0.0, -0.1 Pin 4 mm diameter, 100 mm length 1 mm diameter, 100 mm length, 2.5mm diameter, 100 mm length 12 mm diameter, 80 mm length 5 mm length, 8 mmwidth 250 N, 100N (weight)

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	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	Insulation requirement Clause 10.2,10.3.1,10.3.2	IS 616:2010 IEC 60065:2001+ A1: 2005	20 to 98 %RH -40°C to +150°C 200 MΩ (IR) 10kV
		Fault conditions Clause 11.1, 11.2, 11.2.3, 11.2.4, 11.2.5, 11.2.6		DC Voltage- 200mV, 2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current- 20mA, 200mA, 10A AC Current (50Hz, Sine wave)- 20mA, 200mA, 10A Resistance -200Ω, 2k Ω, 20kΩ, 200 kΩ, 2MΩ, 20MΩ Frequency (3 volt, sine wave)- 20kHz, 200 kHz -40 to 150 °C & ± 0.2°C 2mA (touch current) Probes: 58.04 mm long 44.04 mm long 15mm+0.0, -0.1 Pin 4 mm diameter, 100mm length 1mm diameter, 100mm length 2.5mm diameter, 100mm length

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	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	<p>Fault conditions Clause 11.1, 11.2, 11.2.3, 11.2.4, 11.2.5, 11.2.6</p> <p>Mechanical strength Clause 12.1, 12.1.1, 12.1.2, 12.1.3, 12.1.4, 12.1.5, 12.2, 12.4, 12.6, 12.6.1</p>	<p>IS 616:2010 IEC 60065:2001+ A1: 2005</p>	<p>12 mm diameter, 80mm length 5mm length, 8mmwidth 250N, 100N (weight)</p> <p>Wooden table, 5cm height (bump) Range:- -Freq. :10-150-10Hz - amplitude: 0 to 25 mm -duration: 1 sec to 75min -sweep rate: approximately one octave per minute (vibration) 0.22 J to 1J (spring hammer) 500gm,50mm diameter (steel ball) Hardwood 13 mm thick, plywood 19 to 20mm thick (drop) 20 to 95% RH -40°C to +150°C Temp. (env chamber) 2cNm to 30 cNm 40cNm to 300 cNm 4Nm to 10Nm (torque) 100N, 50N, 220N (weights) -200mm (vernier)</p>

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	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	Clearance and creepage distance Clause 13.3.1, 13.3.2, 13.3.3, 13.5, 13.6, 13.7,13.8	IS 616:2010 IEC 60065:2001+ A1: 2005	0 to 200mm, least count 0.01mm (vernier) DC Voltage- 200mV, 2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current- 20mA, 200mA, 10A AC Current (50Hz, Sine wave)- 20mA, 200mA, 10A Resistance -200Ω, 2k Ω, 20kΩ, 200 kΩ, 2MΩ, 20MΩ Frequency (3 volt, sine wave)- 20kHz, 200 kHz 80 mm ±0.2 mm long jointed Finger 20 to 98 %RH -40°C to +150°C

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	Terminals Clause 15.1,15.2, 15.3.2,15.3.5, 15.3.6,15.3.7,15.4.3	IS 616:2010 IEC 60065:2001+ A1: 2005	Range: 0 to 25mm (micrometer) 5N 0 to 200 mm, least count 0.01mm (vernier) 2cNm to 30 cNm 40cNm to 300 cNm 4Nm to 10Nm (torque) Hardwood 13 mm thick, plywood 19 to 20mm thick (drop) 40N to 70N (weight) DC Voltage: 200mV, 2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current- 20mA, 200mA, 10A AC Current (50Hz, Sine wave)- 20mA, 200mA, 10A Resistance: 200Ω, 2k Ω, 20kΩ, 200 kΩ, 2MΩ, 20MΩ Frequency (3 volt, sine wave): 20kHz, 200 kHz

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	AUDIO & VIDEO AND SIMILAR ELECTRONIC APPARATUS	External flexible cord Clause 16.2,16.3,16.4,16.5	IS 616:2010 IEC 60065:2001+ A1: 2005	Range: 0-25mm (micro meter) 10kV -40 to 150 °C & ± 0.2°C 1kHz-1.5Ghz (signal gen)
		Electrical connections and mechanical fixings Clause 17.1,17.2,17.3,17.4		2 cNm-30 cNm 40 cNm-300 cNm 4 Nm-10 Nm 12 mm diameter, 80 mm length 5 mm length, 8 mm width 2N
		Ageing Process Clause 18.2.1		20 to 98 % RH -40°C to +150°C
		Stability and mechanical hazards Clause 19.1, 19.2,19.3,19.4,19.5,19.6		10°angle (inclined plane) 100 N (weight)
				0-200 mm, least count 0.01mm (vernier)

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III. SAFETY TESTING

1. SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE	Marking (Clause 5.1)	IEC 61010-1:2010	240V
	Identification (Clause 5.1.2)		
	Mains supply (Clause 5.1.3)		
	Fuses (Clause 5.1.4)		
	Terminals, connections and operating devices Clause 5.1.5		
	Switches and circuit breakers Clause 5.1.6		
	Equipment protected by Double Insulation or Reinforced Insulation (Clause 5.1.7)		
	Warning marking Clause 5.2		0-200mm Vernier calliper
	Durability of marking Clause 5.3		Qualitative test
	Documentation Clause 5.4		-

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	SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE	Protection against electric shock Clause 6	IEC 61010-1:2010	80 mm \pm 0.2 mm long jointed and rigid Finger
		General Clause 6.1		100 mm long, 4 mm diameter test pin
		Determination of ACCESSIBLE parts Clause 6.2		100 mm long, 4 mm diameter test pin
		Limit values for ACCESSIBLE parts Clause 6.3		0.5mA to 2mA
		Primary means of protection Clause 6.4		0-200mm Vernier Caliper DC Voltage- 200mV, 2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current- 20mA, 200mA, 10A AC Current (50Hz, Sine wave)- 20mA, 200mA, 10A Resistance -200 Ω , 2k Ω , 20k Ω , 200 k Ω , 2M Ω , 20M Ω Frequency (3 volt, sine wave)- 20kHz, 200 kHz

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	SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE	Additional means of Protection in case of SINGLE FAULT CONDITION Clause 6.5	IEC 61010-1:2010	<p>Torque Screw Driver 2cNm-30 cNm 40cNm-300 cNm 4Nm-10Nm</p> <p>DC Voltage- 200mV, 2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current- 20mA, 200mA, 10A AC Current (50Hz, Sine wave)- 20mA, 200mA, 10A</p> <p>Resistance – 200Ω, 2k Ω, 20kΩ, 200 kΩ, 2MΩ, 20MΩ</p> <p>Frequency (3 volt, sine wave)- 20kHz, 200 kHz</p>

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	SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE	Connections to external circuits Clause 6.6 Insulation requirements Clause 6.7	IEC 61010-1:2010	10kV 80 mm ±0.2 mm long jointed and rigid Finger 100 mm long, 4 mm diameter test pin 100 mm long, 4 mm diameter test pin DC Voltage- 200mV, 2V, 20V, 200V, 1000V AC Voltage- (50Hz, Sine wave) 200mV, 2V, 20V, 200V, 750V DC Current- 20mA, 200mA, 10A AC Current (50Hz, Sine wave)- 20mA, 200mA, 10A Resistance -200Ω, 2k Ω, 20kΩ, 200 kΩ, 2MΩ, 20MΩ Frequency (3 volt, sine wave)- 20kHz, 200 kHz 0-200mm Vernier Caliper 10kV

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	SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE	Procedure for voltage test Clause 6.8	IEC 61010-1:2010	10kV
		Constructional requirements for protection against electric shock Clause 6.9		-40°C to +150°C Temp. 20 to 95% RH
		Connection to MAINS source and connections between parts of equipment Clause 6.10		0-200mm Vernier Caliper
		Connection to MAINS source and connections between parts of equipment Clause 6.11		Torque Screw Driver 2cNm-30 cNm 40cNm-300 cNm 4Nm-10Nm
		Protection Against Mechanical Hazards Clause 7		Force Gauge 0.01N-196N
				Torque Screw Driver 2 cNm-30 cNm 40 cNm-300 cNm 4 Nm-10 Nm 0-200mm
				Vernier Caliper 250 N ± 10 N 10°angle Inclined plane setup

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	SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE	Resistance to mechanical stresses Clause 8	IEC 61010-1:2010	30N hard rod 500 g \pm 25g steel ball Hardwood board
		Equipment Temperature Limits and Resistance to Heat Clause 10		Temperature sensor - 38°C to +150°C 20 to 98 %RH -40°C to +150°C 20N Ball Pressure setup
		Protection by interlocks Clause 15		80 mm \pm 0.2 mm long jointed test Finger Interlock reliability setup 10000 cycles
		Hazards resulting from application Clause 16		-
		RISK assessment (Clause 17)		-

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