CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Oruçreis Mahallesi Tekstilkent Caddesi Tekstilkent
A21 10/I 102 Esenler İstanbul/TURKİYE

Deney Raporu
Test Report

Test
TS EN ISO/IEC 17025
AB-1316-T

AB-1316-T
LVD-196-16
07-19

Müşterinin adı /adresi: *Customer name/address*	***HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş./Gullubaglar Mah. Kahramanlar Cad. No:3-1 34906 Pendik / Istanbul / Turkey***
***İstek Numarası* :** Order no.	***09112018ebb2***
Numunenin Adı ve Tarifi : Name and identity of test item	***P08103 Power Pack 2000 ; Güç kaynağı –*** Power supply
Numunenin Kabul tarihi : The date of receipt of test item	***2019-04-30***
Açıklamalar : Remarks	***DGC'ye EN 60950-1 Standardı uyarınca Güvenlik Deneyleri yapılmıştır.*** Safety tests have been applied to EUT according to EN 60950-1.
Deneyin yapıldığı tarih : Date of Test	***2019-06-02 to 2019-06-30***
Raporun Sayfa Sayısı: Number of pages of the Report	***36 sayfa***/pages

Deney laboratuvarı olarak faaliyet gösteren CGS TEST HİZMETLERİ A.Ş., TÜRKAK'tan AB-1316-T ile TS EN ISO/IEC 17025 Nisan 2012 standardına göre akredite edilmiştir.

CGS TEST HİZMETLERİ A.Ş. accredited by TÜRKAK under registration AB-1316-T for TS EN ISO/IEC 17025 April 2012 as test laboratory"

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The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Mühür/Kaşe Seal	***Tarih*** Date	***Deney Sorumlusu*** Person in change of test	***Onaylayan*** Approval
	2019-07-04	***Timur GÜSER***	***Timur GÜSER***

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TEST REPORT
EN 60950-1
Safety of information technology equipment
Part 1-General requirements

Report Reference No. ……:	LVD-196-16
Date of issue……:	2019-07-04
Contents ……:	Test Report: 33 pages Annex 1 (Equipment of measurements): 1 page Annex 2 (Photo documentation): 2 pages
Testing Laboratory……:	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address……:	Oruçreis Mahallesi Tekstilkent Caddesi Tekstilkent A21 10/I 102 Esenler İstanbul/TURKİYE
Testing location ……:	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address ……:	Oruçreis Mahallesi Tekstilkent Caddesi Tekstilkent A21 10/I 102 Esenler İstanbul/TURKİYE
Applicant's name..... :	HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
Address ..... :	Gullubaglar Mah. Kahramanlar Cad. No:3-1 34906 Pendik / Istanbul / Turkey
Test specification:	
Standard..... :	EN 60950-1:2006/A2:2013
Test procedure ..... :	Type test
Non-standard test method……..:	N/A
Test Report Form No..... :	F510_06_R2.0
Test Report Form(s) Originator ..... :	SGS Fimko Ltd

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Test item description ..... :	POWER SUPPLY
Trade Mark ..... :	hera entertainment & architecture lighting
Manufacturer ..... :	HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
Model/Type reference..... :	P08103 Power Pack 2000
Ratings ..... :	Input: 110-264V a.c ; Max.17,5A ; 50-60Hz Output: 48V d.c. ; 8x250W per port

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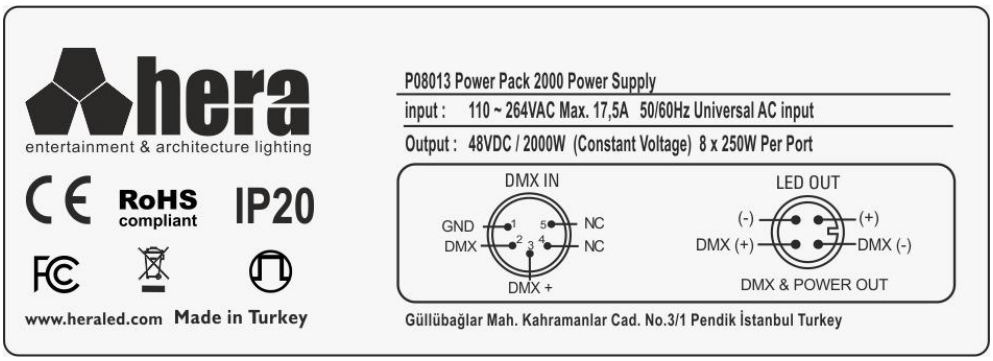
Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
1.6.2 Input current test 1.7.11 Durability Test 2.4 Limited current circuits 2.6 Earth continuity 2.9.2 Humidity Test 4.2 Mechanical Test 4.2.7 Stress Relief Test 4.5 Thermal Test 5.1 Touch current test 5.2 Electrical Test 4.7 Resistance to fire Test 5.3 Abnormal operation	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ Oruçreis Mahallesi Tekstilkent Caddesi Tekstilkent A21 10/I 102 Esenler İstanbul/TURKİYE

Summary of compliance with National Differences:

Copy of marking plate



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Test item particulars..... :	Power supply
Equipment mobility..... :	[] movable [] hand-held [] transportable [X] stationary [] for building-in [] direct plug-in
Connection to the mains..... :	[] pluggable equipment [] type A [] type B [X] permanent connection [] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition ..... :	[X] continuous [] rated operating / resting time:
Access location ..... :	[X] operator accessible [] restricted access location
Over voltage category (OVC) ..... :	[] OVC I [X] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values ..... :	110-264V
Tested for IT power systems ..... :	[] Yes [X] No
IT testing, phase-phase voltage (V) ..... :	
Class of equipment ..... :	[X] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installlation (A) ..... :	17,5A
Pollution degree (PD) ..... :	[] PD 1 [X] PD 2 [] PD 3
IP protection class ..... :	IP20
Altitude during operation (m) ..... :	<2000 m
Altitude of test laboratory (m) ..... :	<2000 m
Mass of equipment (kg) ..... :	---
Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A (or N)
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing .....:	
Date of receipt of test item.....:	2019-04-30
Date(s) of performance of tests.....:	2019-06-02 to 2019-06-30

General remarks:

The test results presented in this report relate only to the object tested.
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"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

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General product information:

Product is a power supply.

Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	OP	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC/EN 60950-1			
Clause	**Requirement + Test**	**Result - Remark**	**Verdict**
1.5	**Components**		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	Components that were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this Standard. Components not certified are used in accordance with their ratings and they comply with IEC60950-1 and the relevant component Standard. Components, for which no relevant IEC Standard exist, have been tested under the condition occurring in the equipment, using applicable parts of IEC60950-1.	P
1.5.3	Thermal controls	No termal controls	N/A
1.5.4	Transformers	No transformers	N/A
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors bridging insulation	No capacitor	N/A
1.5.7	Resistors bridging insulation	No resistor	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs	No VDR	N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced		N/A

	insulation by a VDR		

1.6	**Power interface**		P
1.6.1	AC power distribution systems	TN system	P
1.6.2	Input current	See table 1.6.2	P
1.6.3	Voltage limit of hand-held equipment	No hand-held equipment	N/A
1.6.4	Neutral conductor		N/A

1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings		P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections.....:	No multi supply connections	N/A
	Rated voltage(s) or voltage range(s) (V) ..... :	110-264V	P
	Symbol for nature of supply, for d.c. only..... :	a.c.	P
	Rated frequency or rated frequency range (Hz) ... :	50-60Hz	P
	Rated current (mA or A) ..... :	Max. 17,5A	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark ..... :	hera entertainment & architecture lighting	P
	Model identification or type reference ..... :	P08103 Power Pack	P
	Symbol for Class II equipment only ..... :	Class I equipment	N/A
	Other markings and symbols ..... :	Inspected	P
1.7.2	Safety instructions and marking		P
1.7.2.1	General		N/A
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	No IT systems	N/A
1.7.2.5	Operator access with a tool		N/A
1.2.7.6	Ozone	No ozone	N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment ..... :		N/A
	Methods and means of adjustment; reference to installation instructions ..... :		N/A
1.7.5	Power outlets on the equipment ..... :		N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :	Schurter, 125/250Va.c, 20A, TS-701-HT	P
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals ..... :	Class I equipment	N/A

1.7.7.2	Terminals for a.c. mains supply conductors	Socket	P
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	No controls and indicator	N/A
1.7.8.1	Identification, location and marking ..... :		N/A
1.7.8.2	Colours ..... :		P
1.7.8.3	Symbols according to IEC 60417.....:	Class I equipment	N/A
1.7.8.4	Markings using figures .....:		N/A
1.7.9	Isolation of multiple power sources .....:	No multi power	N/A
1.7.10	Thermostats and other regulating devices .....:	No such parts	N/A
1.7.11	Durability	The label was rubbed with cloth soaked with water for 15s and then again for 15s with the cloth soaked with petroleum spirit.	P
1.7.12	Removable parts	No such part	N/A
1.7.13	Replaceable batteries .....:	No batteries	N/A
	Language(s) .....:	---	—
1.7.14	Equipment for restricted access locations.....:		N/A

2	**PROTECTION FROM HAZARDS**		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	Only SELV circuit are accessible by operator	P
2.1.1.1	Access to energized parts		P
	Test by inspection .....:	Protection established by enclosure	P
	Test with test finger (Figure 2A) .....:	No hazards parts	P
	Test with test pin (Figure 2B) .....:	No hazards parts	P
	Test with test probe (Figure 2C) .....:	---	N/A
2.1.1.2	Battery compartments	No such part	N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)	(see appended tables 2.10.2 and 2.10.5)	—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage circuit wiring	N/A
2.1.1.5	Energy hazards .....:		N/A
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	Approved component is used	N/A
	Measured voltage (V); time-constant (s).....:		
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply ..:	Class I equipment	N/A
	b) Internal battery connected to the d.c. mains supply .....:	No batteries	N/A

2.1.1.9	Audio amplifiers .....:	See cl. 2.1.1.1 See separate test report IEC/EN 60065	N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

2.2	**SELV circuits**		P
2.2.1	General requirements	(see appended table 2.2)	P
2.2.2	Voltages under normal conditions (V) .....:	42.4V peak or 60V d.c. are not exceeded in SELV circuits	P
2.2.3	Voltages under fault conditions (V) .....:	42.4V peak or 60V d.c. are not exceeded in SELV circuits	P
2.2.4	Connection of SELV circuits to other circuits .....:	SELV to SELV	P

2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuits	N/A
	Type of TNV circuits.....:		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions .....:	---	N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....:	---	—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....:	---	—
2.3.5	Test for operating voltages generated externally		N/A

2.4	**Limited current circuits**		P
2.4.1	General requirements		P
2.4.2	Limit values	54,56mA	P
	Frequency (Hz).....:	77,8kHz	—
	Measured current (mA).....:	24,75mA	—
	Measured voltage (V).....:	49,5V	—
	Measured circuit capacitance (nF or µF) .....:	---	—
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	**Limited power sources**	(see appended table 2.5)	N/A
	a) Inherently limited output		N/A

	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....:		—
	Current rating of overcurrent protective device (A) .:		—
	Use of integrated circuit (IC) current limiters	(See Annex CC)	—

2.6	**Provisions for earthing and bonding**		P
2.6.1	Protective earthing	Class I equipment	P
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
	Protective current rating (A), cross-sectional area (mm^2), AWG.....:		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min).....:	0.92Ω , 5.3V, 25A, 2min.	P
2.6.3.5	Colour of insulation .....:		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm) .....:		N/A
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A

2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	**Overcurrent and earth fault protection in primary circuits**		P
2.7.1	Basic requirements	Protective device is integrated in the equipment, see also Sub-clause 5.3.	P
	Instructions when protection relies on building installation	Protective device is integrated in the equipment.	P
2.7.2	Faults not simulated in 5.3.7		N/A
2.7.3	Short-circuit backup protection	Adequate protective device.	P
2.7.4	Number and location of protective devices .....:		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel .....:		N/A

2.8	**Safety interlocks**		N/A
2.8.1	General principles	No safety interlocks	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) .....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test	(see appended table 5.2)	N/A
2.8.8	Mechanical actuators		N/A

2.9	**Electrical insulation**		P
2.9.1	Properties of insulating materials		P
2.9.2	Humidity conditioning		P
	Relative humidity (%), temperature (°C) .....:	%95Rh ; 25°C	—
2.9.3	Grade of insulation	Only functional insulation	P
2.9.4	Separation from hazardous voltages		P
	Method(s) used .....:	Method 1	—

2.10	**Clearances, creepage distances and distances through insulation**		N/A
2.10.1	General	Approved components are used	N/A

2.10.1.1	Frequency .....:	---	N/A
2.10.1.2	Pollution degrees .....:	PD II	N/A
2.10.1.3	Reduced values for functional insualtion		N/A
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage		N/A
2.10.2.1	General		N/A
2.10.2.2	RMS working voltage		N/A
2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances		N/A
2.10.3.1	General		N/A
2.10.3.2	Mains transient voltages		N/A
	a) AC mains supply .....:		N/A
	b) Earthed d.c. mains supplies .....:		N/A
	c) Unearthed d.c. mains supplies .....:		N/A
	d) Battery operation .....:		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.3.4	Clearances in secondary circuits	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.3.5	Clearances in circuits having starting pulses	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.3.6	Transients from a.c. mains supply .....:		N/A
2.10.3.7	Transients from d.c. mains supply .....:		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains suplply		N/A
	For an a.c. mains supply .....:		N/A
	For a d.c. mains supply .....:		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances		N/A
2.10.4.1	General		N/A
2.10.4.2	Material group and caomparative tracking index		N/A
	CTI tests .....:	Material group IIIb is assumed to be used	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.5	**Solid insulation**		N/A

2.10.5.1	General		N/A
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5.	Cemented joints	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.5.6	Thin sheet material – General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs) .....:		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage .....:		N/A
	a) Basic insulation not under stress .....:		N/A
	b) Basic, supplemetary, reinforced insulation .....:		N/A
	c) Compliance with Annex U .....:		N/A
	Two wires in contact inside wound component; angle between 45° and 90° .....:		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test	(see appended table 2.10.5)	—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage .....:		N/A
	- Basic insulation not under stress .....:		N/A
	- Supplemetary, reinforced insulation .....:		N/A
2.10.6	**Construction of printed boards**		N/A
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.6.2	Coated printed boards	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation	(see appended table 2.10.5)	N/A
	Number of insulation layers (pcs) .....:		N/A

2.10.7	**Component external terminations**	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test	(see appended table 5.2)	N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	The cross-sectional area of internal wires and interconnecting cables shall be adequate for the current they are intended to carry when the equipment is operating under normal load such that the maximum permitted temperature of conductor insulation is not exceeded.	P
3.1.2	Protection against mechanical damage	Wireways are smooth and free from sharp edges	P
3.1.3	Securing of internal wiring	The wires are positioned in such a manner that prevents excessive strain, loosening of terminal connections and damage of conductor insulation.	P
3.1.4	Insulation of conductors	(see appended table 5.2)	N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

3.2	**Connection to a mains supply**	P

3.2.1	Means of connection	Socket connection	P
3.2.1.1	Connection to an a.c. mains supply		P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	No multi supply connection	N/A
3.2.3	Permanently connected equipment		
	Number of conductors, diameter of cable and conduits (mm) ..... :		—
3.2.4	Appliance inlets	No such parts	N/A
3.2.5	Power supply cords	No power cords	N/A
3.2.5.1	AC power supply cords	No cords	N/A
	Type ..... :	---	—
	Rated current (A), cross-sectional area (mm^2), AWG ..... :	---	—
3.2.5.2	DC power supply cords	No DC power supply cords	P
3.2.6	Cord anchorages and strain relief	No cord anchorges	N/A
	Mass of equipment (kg), pull (N) ..... :	---	—
	Longitudinal displacement (mm) ..... :	---	—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) ..... :	---	—
	Radius of curvature of cord (mm)..... :	---	—
3.2.9	Supply wiring space		N/A

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Approved component is used	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) ..... :	Special connector	—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) ..... :	Special connector	—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	**Disconnection from the mains supply**		N/A
3.4.1	General requirement	Class I equipment	N/A
3.4.2	Disconnect devices		N/A

3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

3.5	**Interconnection of equipment**		P
3.5.1	General requirements	Considered.	P
3.5.2	Types of interconnection circuits .....:	SELV equipment	P
3.5.3	ELV circuits as interconnection circuits	No ELV circuits	N/A
3.5.4	Data ports for additional equipment		N/A

4	**Physical Requirements**		N/A
4.1	Stability		N/A
	Angle of 10°	The EUT is fixed. Less than 7 kg	N/A
	Test force (N) .....:	---	N/A

4.2	**Mechanical strength**		P
4.2.1	General		P
	Rack-mounted equipment.		P
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		P
4.2.4	Steady force test, 250 N		P
4.2.5	Impact test	No hazardous	P
	Fall test	No hazardous	P
	Swing test	No hazardous	P
4.2.6	Drop test; height (mm) ..... :	No hand held	N/A
4.2.7	Stress relief test	70ºC/7hrs.	P
4.2.8	Cathode ray tubes	No cathode ray tube	N/A
	Picture tube separately certified ..... :	---	N/A
4.2.9	High pressure lamps	No high pressure lamps	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ..... :	No wall or ceiling mounted equipment	N/A
4.2.11	Rotating solid media		N/A
	Test to cover on the door……..:	---	N/A

4.3	**Design and construction**		P
4.3.1	Edges and corners	Inspected	P
4.3.2	Handles and manual controls; force (N)..... :		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment	No direct plug-in	N/A
	Torque ..... :	---	—
	Compliance with the relevant mains plug standard :	---	
4.3.7	Heating elements in earthed equipment	No heating elements	N/A
4.3.8	Batteries	(see appended tables 4.3.8)	N/A
	- Overcharging of a rechargeable battery	No batteries	N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	No oil and grease	N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids .....:	No liquid	N/A
	Quantity of liquid (l) .....:	---	N/A
	Flash point (°C) .....:	---	N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) .....:	---	—
	Measured high-voltage (kV) .....:	---	—
	Measured focus voltage (kV) .....:	---	—
	CRT markings .....:	---	—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification .....:	---	N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:	---	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A
4.3.13.5.1	Lasers (including laser laser diodes)	(see separate test report of IEC/EN 60825-1 / IEC/EN 60825-2)	N/A
	Laser class .....:	---	—
4.3.13.5.2	Light emitting diodes (LEDs)		—

4.3.13.6	Other types .....:		N/A

4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General	No hazardous moving parts	N/A
4.4.2	Protection in operator access areas ..... :	---	N/A
	Household and home/office document/media shredders	(see Annex EE)	N/A
4.4.3	Protection in restricted access locations ..... :	---	N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a)……..:	---	N/A
	Is considered to cause pain, not injury. b) ……:	---	N/A
	Considered to cause injury. c) ……:	---	N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning ……:		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning ……:		N/A

4.5	**Thermal requirements**		P
4.5.1	General		P
4.5.2	Temperature tests		P
	Normal load condition per Annex L ..... :	---	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat ..... :	(see appended table 4.5.5)	N/A

4.6	**Openings in enclosures**		P
4.6.1	Top and side openings		P
	Dimensions (mm) ..... :		—
4.6.2	Bottoms of fire enclosures	Metal enclosure	N/A
	Construction of the bottomm, dimensions (mm) .. :		—
4.6.3	Doors or covers in fire enclosures		P
4.6.4	Openings in transportable equipment	No transportable equipment	N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) ..... :		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A

	Conditioning temperature (°C), time (weeks) ..... :		—

4.7	**Resistance to fire**		N/A
4.7.1	Reducing the risk of ignition and spread of flame	Metal enclosure	N/A
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	N/A
	Method 2, application of all of simulated fault condition tests	(see appended table 5.3)	N/A
4.7.2	Conditions for a fire enclosure		N/A
4.7.2.1	Parts requiring a fire enclosure		N/A
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		N/A
4.7.3.1	General		N/A
4.7.3.2	Materials for fire enclosures		N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		N/A
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		**P**
5.1	**Touch current and protective conductor current**		P
5.1.1	General	(see appended Table 5.1)	N/A
5.1.2	Configuration of equipment under test (EUT)	Class I equipment	N/A
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		P
5.1.4	Application of measuring instrument		P
5.1.5	Test procedure		P
5.1.6	Test measurements		P
	Supply voltage (V) ..... :	290,4V	—
	Measured touch current (mA) ..... :	2,2mA	—
	Max. allowed touch current (mA) ..... :	3,5mA	—
	Measured protective conductor current (mA) ..... :		—
	Max. allowed protective conductor current (mA) .. :		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General ..... :		N/A

5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports ..... :		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	**Electric strength**		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure		P

5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	(see appended Annex B)	N/A
5.3.3	Transformers	(see appended Annex C)	N/A
5.3.4	Functional insulation ..... :	Shorth circuits	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE ..... :	See separate test report IEC/EN 60065	N/A
5.3.7	Simulation of faults		P
5.3.8	Unattended equipment		P
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests		P
5.3.9.2	After the tests		P

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	(see appended table 5.2)	N/A
	Supply voltage (V) .....:		—

	Current in the test circuit (mA) .....:		—
6.1.2.2	Exclusions .....:		N/A

6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test	(see appended table 5.2)	N/A
6.2.2.2	Steady-state test	(see appended table 5.2)	N/A

6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) ..... :		—
	Current limiting method ..... :		—

7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test	(see appended table 5.2)	N/A
7.4.3	Impulse test	(see appended table 5.2)	N/A

A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples ..... :		—
	Wall thickness (mm) ..... :		—
A.1.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.1.3	Mounting of samples ..... :		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D ..... :		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		—

	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material..... :		—
	Wall thickness (mm) ..... :		—
A.2.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.2.3	Mounting of samples ..... :		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C ..... :		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	General requirements	No motor	N/A
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	Test conditions		N/A
B.3	Maximum temperatures	(see appended table 5.3)	N/A
B.4	Running overload test	(see appended table 5.3)	N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days) ..... :		—
	Electric strength test: test voltage (V) ..... :		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A

B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) .....:		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) .....:		N/A
B.8	Test for motors with capacitors	(see appended table 5.3)	N/A
B.9	Test for three-phase motors	(see appended table 5.3)	N/A
B.10	Test for series motors		N/A
	Operating voltage (V) .....:		—

C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**	No transformers	N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
	Method of protection.....:		—
C.1	Overload test	(see appended table 5.3)	N/A
C.2	Insulation	(see appended tables 5.2 and C2)	N/A
	Protection from displacement of windings .....:		N/A

D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A

E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**	N/A

F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**	N/A

G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	Clearances		N/A
G.1.1	General		N/A

G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances		N/A

H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**	N/A

J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		N/A
	Metal(s) used .....:		—

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) .....:		N/A
K.3	Thermostat endurance test; operating voltage (V) .....:		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....:		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation	(see appended table 5.3)	N/A

L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		N/A
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A

L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		N/A

M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) .....:		—
M.3.1.2	Voltage (V) .....:		—
M.3.1.3	Cadence; time (s), voltage (V) .....:		—
M.3.1.4	Single fault current (mA) .....:		—
M.3.2	Tripping device and monitoring voltage .....:		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....:		N/A

N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

P	**ANNEX P, NORMATIVE REFERENCES**		—

Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		N/A
	a) Preferred climatic categories .....:		N/A
	b) Maximum continuous voltage .....:		N/A
	c) Pulse current .....:		N/A

R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A

S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A

S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
		See separate test report	—

U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A
		See separate test report	—

V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A

W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A

X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A

Y	**ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)**		N/A
Y.1	Test apparatus .....:		N/A
Y.2	Mounting of test samples .....:		N/A
Y.3	Carbon-arc light-exposure apparatus .....:		N/A
Y.4	Xenon-arc light exposure apparatus .....:		N/A

Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**	N/A

AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**	N/A

BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**	—

CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		N/A
CC.1	General		N/A
CC.2	Test program 1……..:		N/A
CC.3	Test program 2……..:		N/A

DD	**ANNEX DD, Requirements for the mounting means of rack-mounted equipment**		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N……..:		N/A
DD.3	Mechanical strength test, 250N, including end stops……:		N/A
DD.4	Compliance……:		N/A

EE	**ANNEX EE, Household and home/office document/media shredders**		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols……:		N/A
	Information of user instructions, maintenance and/or servicing instructions……:		N/A
EE.3	Inadvertent reactivation test……:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols……:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A) ……:		N/A
	Test with wedge probe (Figure EE1 and EE2) ……:		N/A

1.5.1	**TABLE: List of critical components**				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1)]
Connector	Neutrik AG	NAC3FCA	250V, 20A, 2.5mm^2	CSA C22.2 No:182.3	UL(E135070), CE
Supplementary protectors. (Fuse)	Schurter AG	TS-701-HT	125/250V;20A	UL 1077	UL (E71572), CE
Power supply	Mean well	RSP-200-48	90-264Vac; 43-67Hz	EN 60950-1	UL(E183223), CE
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

1.5.1	**TABLE: Opto Electronic Devices**	N/A

Manufacturer……: ---

Type ..... :	---

Separately tested ..... :	---
Bridging insulation..... :	---
External creepage distance..... :	---
Internal creepage distance..... :	---
Distance through insulation..... :	---
Tested under the following conditions..... :	---
Input..... :	---
Output ..... :	---
supplementary information	

1.6.2	**TABLE: Electrical data (in normal conditions)**					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
110V, 50Hz	Max.17.5A	15.64A	-	15,64A	20A	Normal load
264V 50Hz	Max.17.5A	7.7A	-	7.7A	20A	Normal load
Supplementary information:						

2.1.1.5 c) 1)	**TABLE: max. V, A, VA test**	N/A

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
supplementary information:				

2.1.1.5 c) 2)	**TABLE: stored energy**	N/A

Capacitance C (µF)	Voltage U (V)	Energy E (J)
supplementary information:		

2.2	**TABLE: evaluation of voltage limiting components in SELV circuits**	P

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
Output	96,8V	48,2V	Normal load

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
supplementary information:	

2.5	**TABLE: limited power sources**	N/A

Circuit output tested:				
Measured Uoc (V) with all load circuits disconnected:				
	I_{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition				
Single fault: …..				
Single fault: …..				
Single fault: …..				
supplementary information:				
Sc=Short circuit, Oc=Open circuit				

2.10.2	**Table: working voltage measurement**	N/A

Location	RMS voltage (V)	Peak voltage (V)	Comments
supplementary information:			

2.10.3 and 2.10.4	**TABLE: Clearance and creepage distance measurements**					N/A
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
Basic/supplementary:						
Reinforced:						
Supplementary information:						

2.10.5	**TABLE: Distance through insulation measurements**				N/A
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Supplementary information:					

4.3.8	**TABLE: Batteries**									N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available										N/A
Is it possible to install the battery in a reverse polarity position?										N/A
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Max. current during normal condition										
Max. current during fault condition										
Test results:										Verdict
- Chemical leaks										

- Explosion of the battery		
- Emission of flame or expulsion of molten metal		
- Electric strength tests of equipment after completion of tests		
Supplementary information:		

4.3.8	**TABLE: Batteries**	N/A

Battery category .....:	(Lithium, NiMh, NiCad, Lithium Ion …)
Manufacturer .....:	
Type / model.....:	
Voltage .....:	
Capacity .....:	mAh
Tested and Certified by (incl. Ref. No.).....:	
Circuit protection diagram:	

MARKINGS AND INSTRUCTIONS (1.7.12, 1.7.15)	
Location of replaceable battery	
Language(s) ……..:	
Close to the battery ……..:	
In the servicing instructions ……..……..:	
In the operating instructions ……..:	

4.5	**TABLE: Thermal requirements**						P
	Supply voltage (V) ..... :	110V, 50Hz					—
	Ambient T_{min} (°C) ..... :	28.4°C					—
	Ambient T_{max} (°C) ..... :	29.5°C					—
Maximum measured temperature T of part/at::		T (°C)					Allowed T_{max} (°C)
Enclosure		34,5°C					60°C
PCB		38,9°C					105°C
Meanwell brand power supply		52,5°C					70
Connector		36,5°C					75°C
Fuse		38,2°C					75°C
Cable		38,9°C					50°C
Supplementary information:							

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class

Supplementary information:							

4.5.5	**TABLE: Ball pressure test of thermoplastic parts**		N/A
	Allowed impression diameter (mm) .....:	≤ 2 mm	—

Part	Test temperature (°C)	Impression diameter (mm)
Supplementary information:		

4.7	**TABLE: Resistance to fire**				N/A
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
Supplementary information:					

5.1	**TABLE: touch current measurement**	P

Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
Enclosure	2,2mA	3,5mA	Normal load
supplementary information:			

5.2	**TABLE: Electric strength tests, impulse tests and voltage surge tests**			
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Positive(+) between metal part		AC	500V	No
Negative(-) between metal part		AC	500V	No
Primary circuits between metal part		AC	1500V	No
Primary circuits and secondary circuits		AC	1500V	No
Supplementary information:				

5.3	**TABLE: Fault condition tests**		P
	Ambient temperature (°C) .....:	27.6°C	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	Heraled, P08103 pawer pack, 48Vd.c. ,8x250W	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Out put	Shorth circuit	264V	2 min	-	-	No hazardous
Supplementary information:						

C.2	**TABLE: transformers**	N/A

Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)

Loc.	Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers

supplementary information:

C.2	**TABLE: transformers**	N/A
Transformer		

ANNEX 1

Equipment of measurements

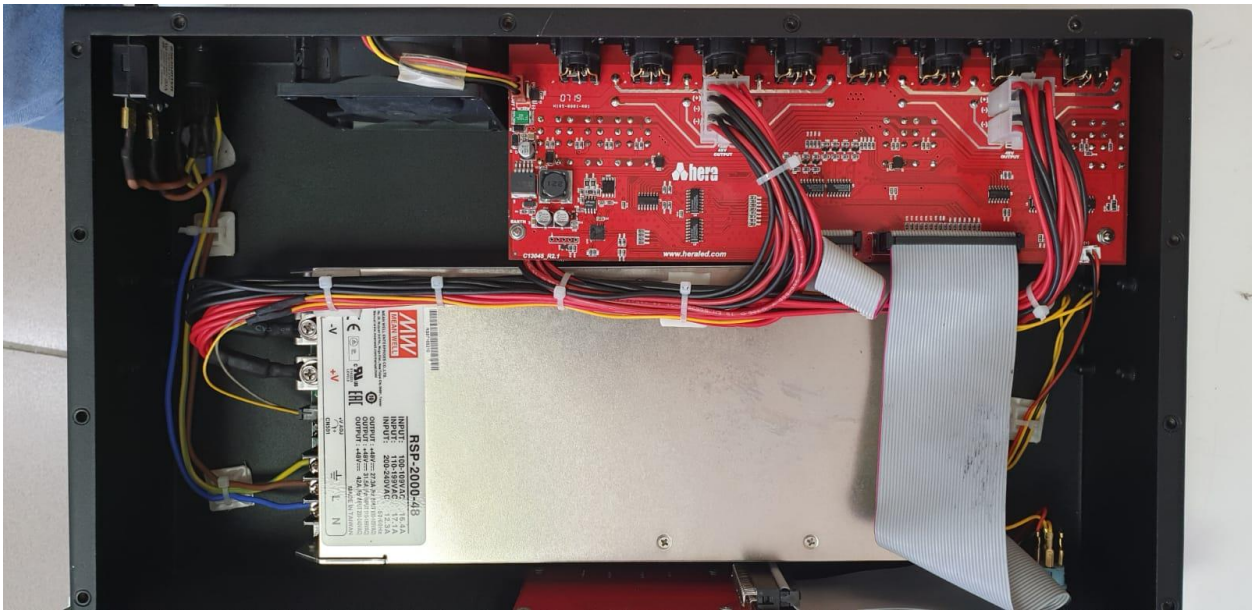
Equipment No	Kind of equipment	Model Type	Manufacturer	Last Cal Date	Next Cal Date	Last Ver Date	Next Ver Date	Test Clause
E-001	CE COMPACT TESTER	MI2094	METREL	08.04.2019	08.04.2020	---	---	---
E-039	AC Supply	---	VARSAN	---	---	---	---	---
E-011	Multimeter	UT61B	UNI-T	29.09.2018	29.09.2019	---	---	---
E-004	Climatic Chamber	---	ULMEKA Mekatronik Sistemler	01.10.2018	01.10.2019	---	---	---
E-039	Tested Box (EN 60598-1 şekil G.2)	---	CSK elektronik	03.01.2019	03.01.2020	---	---	---
E-033	Temperature-Humidity Meter	30.3166.02.S2	TFA	28.09.2018	28.09.2019	---	---	---
E-045	Ball mass	---	Teknik Mekatronik	15.03.2018	15.03.2019	---	---	---
E-034	Etüv oven	T12	Hereaus	01.10.2018	01.10.2019	---	---	---
E-003	Datalogger	DL40	CSK elektronik	01.10.2018	01.10.2019	---	---	---
E-005	Glow wire test	---	ULMEKA MEKATRONİK	01.10.2018	01.10.2019	---	---	---

AB-1316-T
LVD-196-16
07-19

ANNEX 2
Photo Documentation

Photo documentation
Product View
Product View

AB-1316-T
LVD-196-16
07-19

Photo documentation

Product View