IEC IECEE CB SCHEME

Ref. Certif. No.

JPTUV-051062

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product Produit	GPS Navigation System
Name and address of the applicant Nom et adresse du demandeur	TomTom International BV. Rembrandtplein 35 1017 CT Amsterdam, Netherlands
Name and address of the manufacturer Nom et adresse du fabricant	TomTom International BV. Rembrandtplein 35 1017 CT Amsterdam, Netherlands
Name and address of the factory Nom et adresse de l'usine	See additional page(s)
Ratings and principal characteristics Valeurs nominales et charactéristiques principales	DC 5V; 1.2A; Class III
Trademark (if any) Marque de fabrique (si elle existe)	TomTom
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	N/A
Model / Type Ref. Ref. de type	4FA50**, 4FL50** (* = A-Z, 0-9 or blank)
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	For model differences, refer to the test report.
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60950-1:2005+A1 National differences see test report
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	11032942 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

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Global Technology Assessment Center
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Date: 06.05.2013

Signature: Dipl.-Ing. F. Stoelzel

1. Tech-Front (Shanghai) Computer Co., Ltd.
No. 2, Lane 58, Sanzhuang Rd.
Songjiang Export Processing Zone
Shanghai 201613, P.R. China

2. Tech-Com (Shanghai) Computer Co., Ltd.
No. 68, Sanzhuang Road
Songjiang Export Processing Zone
Shanghai 201613, P.R. China

3. Tech-Giant (Shanghai) Computer Co., Ltd.
No. 68, Rongjiang Road,
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Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 11032942 001

Date: 06.05.2013

Signature: Dipl.-Ing. F. Stoelzel

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT

IEC 60950-1
Information technology equipment – Safety – Part 1: General requirements

Report Number	11032942 001
Date of issue	Apr. 26, 2013
Total number of pages	51
CB Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address	No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya District, Taichung City, 428 Taiwan
Applicant's name	TomTom International BV.
Address	Rembrandtplein 35, 1017 CT Amsterdam, Netherlands
Manufacturer's name	Same as applicant.
Address	Same as applicant.
Test specification:	
Standard	IEC 60950-1:2005 (Second Edition) + Am 1:2009
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No	IEC60950_1C
Test Report Form(s) Originator	SGS Fimko Ltd
Master TRF	Dated 2012-08

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	GPS Navigation System
Trade Mark	TomTom
Manufacturer	Same as applicant.
Model/Type reference	4FA50**, 4FL50** (*= A-Z, 0-9 or blank)
Ratings	5Vdc, 1.2A

Testing procedure and testing location:		
☒	**CB Testing Laboratory**:	Refer to page 1
Testing location/ address..... :		Refer to page 1
☐	**Associated CB Laboratory:**	
Testing location/ address..... :		
Tested by (name + signature).....:	Carol Huang	
Approved by (name + signature) .....:	John W.H. Chuang	
☐	Testing procedure: **TMP**	
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature) .....:		
☐	Testing procedure: **WMT**	
Testing location/ address..... :		
Tested by (name + signature).....:		
Witnessed by (name + signature).....:		
Approved by (name + signature) .....:		
☐	Testing procedure: **SMT**	
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature) .....:		
Supervised by (name + signature)....:		
☐	Testing procedure: **RMT**	
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature) .....:		
Supervised by (name + signature)....:		

List of Attachments (including a total number of pages in each attachment):

- Photo documentation
- Measurement Section
- National Differences

Total number of pages in each attachment is indicated in individual attachment.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
All applicable tests as described in Test Case and Measurement Sections were performed. • The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 35℃. • Max. normal load for this equipment is to search GPS continually and charge an empty battery pack under max. contrast, max. brightness of LED backlight condition. • Unless otherwise specified, tests were performed on model 4FA50** to represent other similar models.	All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.

Summary of compliance with National Differences

List of countries addressed:

EU Group Differences, EU Special National Conditions, CA, DE, FI, IL, KR, US.

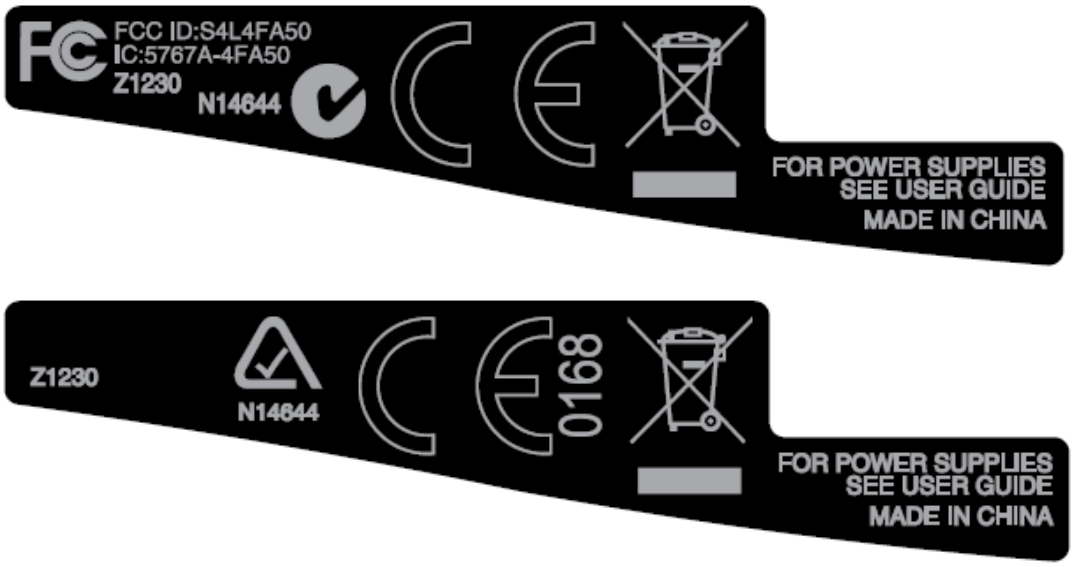
Explanation of used codes: CA = Canada, DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea, US = United States of America.

☒ The product fulfils the requirements of EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011

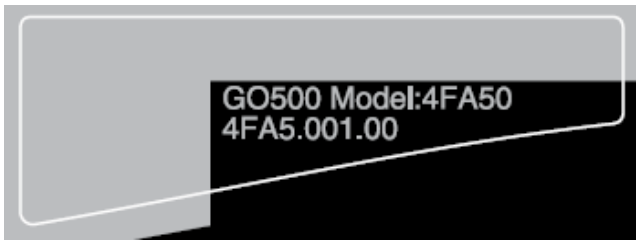
Copy of marking plate

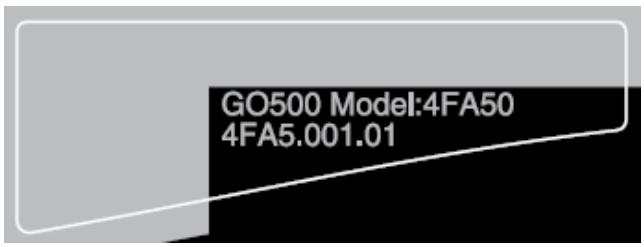
The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

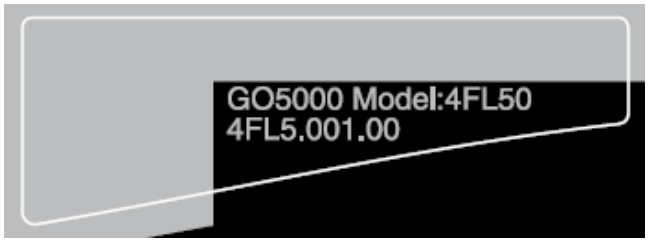
Trademark “TomTom” provided on product.



Below model label is used with above label:







Test item particulars.....:	
Equipment mobility.....:	[] movable [X] hand-held [X] transportable [] stationary [] for building-in [] direct plug-in
Connection to the mains .....:	[] pluggable equipment [] type A [] type B [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [X] 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 [] OVC II [] OVC III [] OVC IV [X] other: not directly connected to the mains
Mains supply tolerance (%) or absolute mains supply values .....:	Not directly connected to the mains
Tested for IT power systems .....:	[] Yes [X] No
IT testing, phase-phase voltage (V) .....:	N/A
Class of equipment .....:	[] Class I [] Class II [X] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) .....:	N/A
Pollution degree (PD) .....:	[] PD 1 [X] PD 2 [] PD 3
IP protection class .....:	IPX0
Altitude during operation (m) .....:	Up to 2000
Altitude of test laboratory (m) .....:	Less than 2000
Mass of equipment (kg) .....:	242g
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A
- test object does meet the requirement..... :	P (Pass)
- test object does not meet the requirement..... :	F (Fail)
Testing..... :	
Date of receipt of test item..... :	Apr., 2013
Date(s) of performance of tests..... :	Apr., 2013

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(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.

Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☒ Yes ☐ Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :	1) Tech-Com (Shanghai) Computer Co., Ltd. No. 68, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai 201613, P. R. China 2) Tech-Com (Shanghai) Computer Co., Ltd. No.6 Lane 58, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China 3) Tech-Com(Shanghai)Computer Co., Ltd No.4, Lane 58, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China 4) Tech-Front (Shanghai) Computer Co., Ltd. No. 2, Lane 58, Sanzhuang Rd., Songjiang Export Processing Zone, Shanghai 201613, P. R. China 5) Tech-Com (Shanghai) Computer Co., Ltd. No.7, Lane 58, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai 201613, P.R. China 6) Tech-Giant (Shanghai) Computer Co., Ltd. No. 68, Rongjiang Road, Songjiang Export Processing Zone, Shanghai, P.R. China 7) Tech-Com (Shanghai) Computer Co., Ltd. No. 5, Lane 58, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P.R. China

General product information:

This equipment models 4FA50**, 4FL50** (*= A-Z, 0-9 or blank) are GPS Navigation System for using in the scope of this equipment. All models are identical except for model designation.

The internal battery pack is a CB approval competent according to IEC 62133. The compliance of IEC 60950-1 has been evaluated in this report. See below table for the battery pack information (alternative used, see table 1.5.1 for details):

Manufacturer	Type	Technical specification
Formosa	VF6D	Maximum charging voltage: 4.25V Maximum charging current: 920mA Maximum discharging current: 920mA
Formosa	VFAD	Maximum charging voltage: 4.25V Maximum charging current: 1000mA Maximum discharging current: 1000mA

Additional Information

- The external power adapter and car charger used with the product is a certified product which was investigated according to the standard of earlier version. The suitability of use has been evaluated in this report.
- This report contains national differences as the class III equipment itself and is subject of this CB report. Destination countries should investigate this matter for external adapter while the equipment is submitted for national approval.
- The Label in Copy of marking plate is a draft of an artwork pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Definition of variable(s):

Variable:	Range of variable:	Content:
*	A-Z,0-9 or blank	Marketing purpose, no technical difference.

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 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		P
1.5	**Components**		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Components certified to IEC standards and/or their harmonized standards, are used within their ratings and are checked for correct application. Non-certified components are checked for correct application, used within their ratings, tested as part of the equipment and subjected to applicable tests of the component standard. Components, which no relevant IEC-Standard exists, are used within their ratings and are tested under the conditions occurring in the equipment.	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation		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		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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	**Power interface**		P
1.6.1	AC power distribution systems		N/A
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	5Vdc.	P
1.6.4	Neutral conductor		N/A
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings	See below.	P
1.7.1.1	Power rating marking	(no direct connection to the mains supply)	N/A
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V) ..... :	(no direct connection to the mains supply)	N/A
	Symbol for nature of supply, for d.c. only..... :	(no direct connection to the mains supply)	N/A
	Rated frequency or rated frequency range (Hz) ... :		N/A
	Rated current (mA or A) ..... :	(no direct connection to the mains supply)	N/A
1.7.1.2	Identification markings	See below.	P
	Manufacturer's name or trade-mark or identification mark ..... :	See copy of marking plates.	P
	Model identification or type reference ..... :	See copy of marking plates.	P
	Symbol for Class II equipment only ..... :		N/A
	Other markings and symbols ..... :	Other markings and symbols do not give rise to misunderstanding.	P
1.7.2	Safety instructions and marking	See below:	P
1.7.2.1	General	Instructions are available.	P
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		N/A
1.7.2.5	Operator access with a tool		N/A
1.2.7.6	Ozone	*Remark: correct subclause reference is 1.7.2.6.*	N/A
1.7.3	Short duty cycles		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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) ..... :		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals ..... :		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	No safety relevant controls and indicators.	N/A
1.7.8.1	Identification, location and marking ..... :		N/A
1.7.8.2	Colours ..... :		N/A
1.7.8.3	Symbols according to IEC 60417.....:		N/A
1.7.8.4	Markings using figures .....:		N/A
1.7.9	Isolation of multiple power sources .....:		N/A
1.7.10	Thermostats and other regulating devices .....:		N/A
1.7.11	Durability	The marking plate has no curling and is not able to be removed easily.	P
1.7.12	Removable parts	The required marking is not placed on removable parts.	P
1.7.13	Replaceable batteries .....:	Warning text provided in user's manual.	P
	Language(s) .....:	English. Versions in other languages will be provided when national certificate approval.	—
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	The unit is supplied by external power adapter or car charger or battery pack that provided SELV. Only SELV inside the unit, no electrical shock or energy hazards.	P
2.1.1.1	Access to energized parts		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Test by inspection ..... :		N/A
	Test with test finger (Figure 2A) ..... :		N/A
	Test with test pin (Figure 2B) ..... :		N/A
	Test with test probe (Figure 2C) ..... :		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards ..... :	No energy hazards. See appended table 2.1.1.5.	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		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 .. :		N/A
	b) Internal battery connected to the d.c. mains supply ..... :		N/A
2.1.1.9	Audio amplifiers ..... :	Complied with 2.1.1.1.	P
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	The equipment is supplied by external power adapter or car charger or battery pack that provides only SELV and no generating hazardous voltage.	P
2.2.2	Voltages under normal conditions (V) ..... :		N/A
2.2.3	Voltages under fault conditions (V) ..... :		N/A
2.2.4	Connection of SELV circuits to other circuits ..... :	See 2.2.1.	P
2.3	**TNV circuits**		N/A
2.3.1	Limits		N/A
	Type of TNV circuits..... :		—
2.3.2	Separation from other circuits and from accessible parts		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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**		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz) ..... :		—
	Measured current (mA) ..... :		—
	Measured voltage (V) ..... :		—
	Measured circuit capacitance (nF or µF) ..... :		—
2.4.3	Connection of limited current circuits to other circuits		N/A
2.5	**Limited power sources**		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition	Output of battery pack is limited by regulating network.	P
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA) ..... :	See appended table.	—
	Current rating of overcurrent protective device (A) .:		—
	Use of integrated circuit (IC) current limiters		—
2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing		N/A
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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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)..... :		N/A
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) ..... :		—
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**		N/A
2.7.1	Basic requirements		N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices ..... :		N/A
2.7.5	Protection by several devices		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.6	Warning to service personnel ..... :		N/A
2.8	**Safety interlocks**		N/A
2.8.1	General principles		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		N/A
2.8.8	Mechanical actuators		N/A
2.9	**Electrical insulation**		P
2.9.1	Properties of insulating materials	Only SELV circuits inside the unit.	P
2.9.2	Humidity conditioning		N/A
	Relative humidity (%), temperature (℃) .... :		—
2.9.3	Grade of insulation	Functional insulation.	P
2.9.4	Separation from hazardous voltages		N/A
	Method(s) used ..... :		—
2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General	Only SELV circuits inside the unit. (See also sub clause 5.3.4)	P
2.10.1.1	Frequency ..... :		N/A
2.10.1.2	Pollution degrees ..... :	2	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4.	P
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

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
2.10.3.4	Clearances in secondary circuits		N/A
2.10.3.5	Clearances in circuits having starting pulses		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 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
2.10.4	Creepage distances		N/A
2.10.4.1	General		N/A
2.10.4.2	Material group and comparative tracking index		N/A
	CTI tests..... :		—
2.10.4.3	Minimum creepage distances		N/A
2.10.5	**Solid insulation**		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.5.	Cemented joints		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		—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test		—
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, supplementary, 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		—
	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
	- Supplementary, reinforced insulation ..... :		N/A
2.10.6	**Construction of printed boards**		N/A
2.10.6.1	Uncoated printed boards		N/A
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) ..... :		N/A
2.10.7	**Component external terminations**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		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	All internal wires are UL recognized wiring which is PVC insulated, rated VW-1, minimum 80℃. Internal wiring gauge is suitable for current intended to be carried.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks which could damage the insulation.	P
3.1.3	Securing of internal wiring	The wires are secured by solder pins, quick connector or glue so that a loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	P
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

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.10	Sleeving on wiring		N/A
3.2	**Connection to a mains supply**		N/A
3.2.1	Means of connection		N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) ..... :		—
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type ..... :		—
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		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		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) ..... :		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
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		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	See below.	P
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits of SELV circuit through the connectors.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	Data ports are supplied by limited power source.	P
4	**PHYSICAL REQUIREMENTS**		P
4.1	Stability		N/A
	Angle of 10°		N/A
	Test force (N) ..... :		N/A
4.2	**Mechanical strength**		P
4.2.1	General	No hazardous voltages present in the unit or other hazards foreseeable.	P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm) ..... :		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified ..... :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ..... :		N/A
4.3	**Design and construction**		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	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	Mismatch of connectors were prevented by incompatible form or location.	P
4.3.6	Direct plug-in equipment		N/A
	Torque ..... :		—
	Compliance with the relevant mains plug standard ..... :		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	See below.	P
	- Overcharging of a rechargeable battery	See appended table.	P
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery	Reverse charging is prevented by its construction.	N/A
	- Excessive discharging rate for any battery	See appended table.	P
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases	No dangerous concentration, vaporization, leakage, spillage or corrosion likely.	P
4.3.11	Containers for liquids or gases		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.12	Flammable liquids ..... :		N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General	See below.	P
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	See below.	P
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class ..... :		—
4.3.13.5.2	Light emitting diodes (LEDs)	Only indicating LEDs provided.	P
4.3.13.6	Other types ..... :		N/A

4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas ..... :		N/A
	Household and home/office document/media shredders		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Use of symbol or warning ……:		N/A
4.5	**Thermal requirements**		P
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	(See appended table 4.5)	P
	Normal load condition per Annex L ..... :	(See 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 ..... :		N/A
4.6	**Openings in enclosures**		P
4.6.1	Top and side openings		N/A
	Dimensions (mm) ..... :		—
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottomm, dimensions (mm) .. :		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	See below.	P
4.6.4.1	Constructional design measures	See below.	P
	Dimensions (mm) ..... :	See appended table 4.6.1, 4.6.2.	—
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) ..... :		N/A
4.7	**Resistance to fire**		P
4.7.1	Reducing the risk of ignition and spread of flame	See below.	P
	Method 1, selection and application of components wiring and materials	Use of materials with the required flammability classes.	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	Components inside the battery pack require a fire enclosure:	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.2.2	Parts not requiring a fire enclosure	Components outside the battery pack do not require a fire enclosure: ▪ Components in secondary circuits supplied by limited power source and mounted on V-1 material.	P
4.7.3	Materials		P
4.7.3.1	General	See appended table 1.5.1 for PCB.	P
4.7.3.2	Materials for fire enclosures	The battery pack covered by plastic tube rated VW-1	P
4.7.3.3	Materials for components and other parts outside fire enclosures	See table 1.5.1.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2, HF-2 or better.	P
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**		N/A
5.1.1	General		N/A
5.1.2	Configuration of equipment under test (EUT)		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		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Supply voltage (V) .....:		—
	Measured touch current (mA) .....:		—
	Max. allowed touch current (mA) .....:		—
	Measured protective conductor current (mA) .....:		—
	Max. allowed protective conductor current (mA) ...:		—

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Clause	Requirement + Test	Result - Remark	Verdict
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**		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A
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		N/A
5.3.3	Transformers		N/A
5.3.4	Functional insulation .....:	Functional insulation complied with the requirements c). (see appended table 5.3)	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE .....:	No hazards for component fault of audio circuit.	P
5.3.7	Simulation of faults	(see appended table 5.3)	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below.	P
5.3.9.1	During the tests	No fire propagated beyond the equipment and no molten metal emitted.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.9.2	After the tests		N/A
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		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		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		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		N/A
7.4.3	Impulse test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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 (℃) .. .. :		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

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		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		N/A
B.9	Test for three-phase motors		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)**		N/A
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated values ..... :		—
	Method of protection ..... :		—
C.1	Overload test		N/A
C.2	Insulation		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

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	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		N/A
L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		P
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	See summary of testing.	P
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) ..... :		—

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

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			—
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

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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

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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])
Power Adapter	Leader Electronics Inc. (TomTom)	4UUC6, IU06-1051120-WP	I/P: 100-240V; 50/60Hz; 0.23A, Class II, 50℃ O/P: 5.15Vdc, 1.2A, LPS	IEC 60950-1: 2005	CB (by TUV/Rh)
Alt.	TomTom International BV.	4UUC6B	I/P: 100-240V; 50-60Hz; 0.3A, Class II, 55℃ O/P: 5Vdc, 1.2A, LPS	IEC 60950-1: 2005	CB (by TUV/Rh)
Car charger (CLA)	Supa Technology Co., Ltd. (TOMTOM)	4UUC3Z	I/P: 12/24Vdc, 1.0 A, Class III, 50℃ O/P: 5.0Vdc, 1.2 A. Comply with LPS	IEC 60950-1: 2005	CB by TUV Rh
Alt.	TomTom International BV.	4UUC3Z	I/P: 12/24Vdc, 1.0 A, Class III, 50℃ O/P: 5.0Vdc, 1.2 A. Comply with LPS	IEC 60950-1: 2005	CB by TUV Rh
Alt.	TomTom International BV.	4UUC9	I/P: 12/24Vdc, 4.2A Max. Class III, 50℃ O/P: 5.0Vdc, 1.2A; 5Vdc, 2.1A (Fast charge); 12/24Vdc, 2.0A. Comply with LPS	IEC 60950-1: 2005	CB by TUV Rh
Alt.	TomTom International BV.	4UUC14	I/P: 12/24Vdc, 1.5A, Class III, 55℃ O/P: 5Vdc, 2.1A. Comply with LPS	IEC 60950-1: 2005+A1	CB by TUV Sud
LCD Panel	Samsung	LMS500HF15	5.0” TFT LCD	--	--
Alt.	Various	Various	5.0” TFT LCD	--	--
Speaker	Various	Various	Max 4.0Ω, max 3.0 W	--	--

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Enclosure Material	Various	Various	HB 0.85mm min thickness	UL 94	UL
PCB	HannStar Board Corp	MV-6	V-0 , 130 ℃	UL 796	UL
Alt.	Various	Various	V-0 , 130 ℃	UL 796	UL
Battery pack	Formosa Electronic Industries Inc	VF6D	3.7Vdc, 920mAh, 3.404Wh	IEC 62133	CB by TUV Rh
- Tubing	Yun Lin Plastic (Shenzhen) Co Ltd	YL-XX, where XX is any suffix number 1 through 33, all colors	VW-1, designation on the outside of the spool.	UL 224	UL
Battery pack (Alternate)	Formosa Electronic Industries Inc	VFAD	3.7Vdc, 1100mAh, 4.07Wh	IEC 62133	CB by TUV Rh
- Tubing	Yun Lin Plastic (Shenzhen) Co Ltd	YL-XX, where XX is any suffix number 1 through 33, all colors	VW-1, designation on the outside of the spool.	UL 224	UL
For NAV4 Active Dock Type 4UUB2					
Dock	TOMTOM	4UUB2	I/P:5Vdc, 1A O/P:5Vdc, 1A	--	--
- Enclosure	Various	Various	HB 0.85mm min thickness	UL 94	UL
- PCB	Various	Various	V-0 , 130 ℃	UL 796	UL
For Urpinu2 Dock Type 4UCB3					
Dock	TOMTOM	4UCB3 4KZ0	I/P:5Vdc, 1A O/P:5Vdc, 1A	--	--
- Enclosure	Various	Various	HB 0.85mm min thickness	UL 94	UL
- PCB	Various	Various	V-0 , 130 ℃	UL 796	UL
For Eiger Dock Type 4UCB3					
Dock	TOMTOM	4UCB3	I/P:5Vdc, 1A O/P:5Vdc, 1A	--	--
- Enclosure	Various	Various	HB 0.85mm min thickness	UL 94	UL
- PCB	Various	Various	V-0 , 130 ℃	UL 796	UL

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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 (Vdc)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Test with power adapter: Leader, type 4UUC6 and battery pack: Formosa, type VF6D						
5	0.48	1.2	2.40	--	--	Maximum normal load.
5	0.46	1.2	2.30	--	--	System off with empty pack charging mode.
Test with power adapter: TomTom, type 4UUC6B and battery pack: Formosa, type VF6D						
5	0.48	1.2	2.40	--	--	Maximum normal load.
5	0.46	1.2	2.30	--	--	System off with empty pack charging mode.
Test with power adapter: Leader, type 4UUC6; battery pack: Formosa, type VF6D and NAV4 Active Dock Type 4UUB2						
5	0.76	1.2	3.80	--	--	Maximum normal load.
5	0.47	1.2	2.35	--	--	System off with empty pack charging mode.
Test with power adapter: Leader, type 4UUC6; battery pack: Formosa, type VF6D and Urpinu2 Dock Type 4UCB3						

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5	0.74	1.2	3.70	--	--	Maximum normal load.
5	0.47	1.2	2.35	--	--	System off with empty pack charging mode.
Test with power adapter: Leader, type 4UUC6; battery pack: Formosa, type VF6D and Eiger Dock Type 4UCB3						
5	0.76	1.2	3.80	--	--	Maximum normal load.
5	0.47	1.2	2.35	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC3Z and battery pack: Formosa, type VF6D						
5	0.48	1.2	5.76	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger: Supa, type 4UUC3Z and battery pack: Formosa, type VF6D						
5	0.47	1.2	5.64	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC9 and battery pack: Formosa, type VF6D						
5	0.47	1.2	5.64	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC14 and battery pack: Formosa, type VF6D						
5	0.48	1.2	5.76	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC3Z, battery pack: Formosa, type VF6D and NAV4 Active Dock Type 4UUB2						
5	0.80	1.2	9.60	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger: Supa, type 4UUC3Z, battery pack: Formosa, type VF6D and NAV4 Active Dock Type 4UUB2						
5	0.71	1.2	8.52	--	--	Maximum normal load.
5	0.47	1.2	5.64	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC9, battery pack: Formosa, type VF6D and NAV4 Active Dock Type 4UUB2						
5	0.82	1.2	9.84	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.

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Test with car charger: TomTom, type 4UUC14, battery pack: Formosa, type VF6D and NAV4 Active Dock Type 4UUB2						
5	0.80	1.2	9.60	--	--	Maximum normal load.
5	0.47	1.2	5.64	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC3Z, battery pack: Formosa, type VF6D and Urpinu2 Dock Type 4UCB3						
5	0.82	1.2	9.84	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger: Supa, type 4UUC3Z, battery pack: Formosa, type VF6D and Urpinu2 Dock Type 4UCB3						
5	0.72	1.2	8.64	--	--	Maximum normal load.
5	0.47	1.2	5.64	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC9, battery pack: Formosa, type VF6D and Urpinu2 Dock Type 4UCB3						
5	0.83	1.2	9.96	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC14, battery pack: Formosa, type VF6D and Urpinu2 Dock Type 4UCB3						
5	0.80	1.2	9.60	--	--	Maximum normal load.
5	0.47	1.2	5.64	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC3Z, battery pack: Formosa, type VF6D and Eiger Dock Type 4UCB3						
5	0.86	1.2	10.32	--	--	Maximum normal load.
5	0.47	1.2	5.64	--	--	System off with empty pack charging mode.
Test with car charger: Supa, type 4UUC3Z, battery pack: Formosa, type VF6D and Eiger Dock Type 4UCB3						
5	0.69	1.2	8.28	--	--	Maximum normal load.
5	0.47	1.2	5.64	--	--	System off with empty pack charging mode.
Test with car charger: TomTom, type 4UUC9, battery pack: Formosa, type VF6D and Eiger Dock Type 4UCB3						
5	0.86	1.2	10.32	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.

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Test with car charger: TomTom, type 4UUC14, battery pack: Formosa, type VF6D and Eiger Dock Type 4UCB3						
5	0.82	1.2	9.84	--	--	Maximum normal load.
5	0.47	1.2	5.64	--	--	System off with empty pack charging mode.
Test with power adapter: Leader, type 4UUC6 and battery pack: Formosa, type VFAD						
5	0.71	1.2	3.55	--	--	Maximum normal load.
5	0.42	1.2	2.10	--	--	System off with empty pack charging mode.
Test with power adapter: TomTom, type 4UUC6B and battery pack: Formosa, type VFAD						
5	0.71	1.2	3.55	--	--	Maximum normal load.
5	0.42	1.2	2.10	--	--	System off with empty pack charging mode.
Test with power adapter: Leader, type 4UUC6, battery pack: Formosa, type VFAD and NAV4 Active Dock Type 4UUB2						
5	0.70	1.2	3.50	--	--	Maximum normal load.
5	0.45	1.2	2.25	--	--	System off with empty pack charging mode.
Test with power adapter: Leader, type 4UUC6, battery pack: Formosa, type VFAD and Urpinu2 Dock Type 4UCB3						
5	0.69	1.2	3.45	--	--	Maximum normal load.
5	0.44	1.2	2.20	--	--	System off with empty pack charging mode.
Test with power adapter: Leader, type 4UUC6, battery pack: Formosa, type VFAD and Eiger Dock Type 4UCB3						
5	0.70	1.2	3.50	--	--	Maximum normal load.
5	0.45	1.2	2.25	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC3Z and battery pack: Formosa, type VFAD						
5	0.47	1.2	5.64	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: Supa, type 4UUC3Z and battery pack: Formosa, type VFAD						
5	0.47	1.2	5.64	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC9 and battery pack: Formosa, type VFAD						
5	0.47	1.2	5.64	--	--	Maximum normal load.

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5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC14 and battery pack: Formosa, type VFAD						
5	0.47	1.2	5.64	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC3Z, battery pack: Formosa, type VFAD, and NAV4 Active Dock Type 4UUB2						
5	0.81	1.2	9.72	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: Supa, type 4UUC3Z, battery pack: Formosa, type VFAD, and NAV4 Active Dock Type 4UUB2						
5	0.65	1.2	7.80	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC9, battery pack: Formosa, type VFAD, and NAV4 Active Dock Type 4UUB2						
5	0.78	1.2	9.36	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC14, battery pack: Formosa, type VFAD, and NAV4 Active Dock Type 4UUB2						
5	0.76	1.2	9.12	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC3Z, battery pack: Formosa, type VFAD, and Urpinu2 Dock Type 4UCB3						
5	0.80	1.2	9.60	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: Supa, type 4UUC3Z, battery pack: Formosa, type VFAD, and Urpinu2 Dock Type 4UCB3						
5	0.65	1.2	7.80	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC9, battery pack: Formosa, type VFAD, and Urpinu2 Dock Type 4UCB3						
5	0.80	1.2	9.60	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack

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						charging mode.
Test with car charger adapter: TomTom, type 4UUC14, battery pack: Formosa, type VFAD, and Urpinu2 Dock Type 4UCB3						
5	0.75	1.2	9.00	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC3Z, battery pack: Formosa, type VFAD, and Eiger Dock Type 4UCB3						
5	0.83	1.2	9.96	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: Supa, type 4UUC3Z, battery pack: Formosa, type VFAD, and Eiger Dock Type 4UCB3						
5	0.66	1.2	7.92	--	--	Maximum normal load.
5	0.46	1.2	5.52	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC9, battery pack: Formosa, type VFAD, and Eiger Dock Type 4UCB3						
5	0.82	1.2	9.84	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Test with car charger adapter: TomTom, type 4UUC14, battery pack: Formosa, type VFAD, and Eiger Dock Type 4UCB3						
5	0.78	1.2	9.36	--	--	Maximum normal load.
5	0.45	1.2	5.40	--	--	System off with empty pack charging mode.
Supplementary information:						

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

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
Test for battery pack: Formosa, type VF6D				
3.7	--	4.25	4.28	13.8
Test for battery pack: Formosa, type VFAD				
3.7	--	4.25	4.29	14.6
supplementary information:				

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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	N/A

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	

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	P

Circuit output tested:

Note: Measured Uoc (V) with all load circuits disconnected:

Components	Sample No.	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
Test for battery pack: Formosa, type VF6D at normal condition						
According to Table 2B (normal condition)						
Battery (+ to -)	1	4.25	4.28	8	13.8	100
According to Table 2B (single fault condition: Q1 pin 1-3 short)						
Battery (+ to -)	1	4.24	5.99	8	17.4	100
Test for battery pack: Formosa, type VFAD						
According to Table 2B (normal condition)						
Battery (+ to -)	1	4.24	4.29	8	14.6	100
According to Table 2B (single fault condition: Q1 pin 1-3 short)						
Battery (+ to -)	1	4.25	6.56	8	17.9	100

supplementary information:

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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	P
The tests of 4.3.8 are applicable only when appropriate battery data is not available		P
Is it possible to install the battery in a reverse polarity position?	No.	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.
Unit with battery pack: Formosa, type VF6D									

IEC 60950-1									
Clause	Requirement + Test					Result - Remark			Verdict
Max. current during normal condition	--	--	--	220mA	920mA	1)	920mA	--	--
Max. current during fault condition: R287 short	--	--	--	220mA	920mA	1)	920mA	--	--
Unit with battery pack: Formosa, type VFAD									
Max. current during normal condition	--	--	--	220mA	1000mA	1)	1000mA	--	--
Max. current during fault condition: R287 short	--	--	--	220mA	1000mA	1)	1000mA	--	--
Test for battery pack: Formosa, type VF6D									
Max. current during normal condition	--	--	--	2)	920mA	2)	920mA	--	--
Max. current during fault condition	--	--	--	2)	920mA	2)	920mA	--	--
Test for battery pack: Formosa, type VFAD									
Max. current during normal condition	--	--	--	2)	1000mA	2)	1000mA	--	--
Max. current during fault condition	--	--	--	2)	1000mA	2)	1000mA	--	--

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Test results:		Verdict
- Chemical leaks	No.	P
- Explosion of the battery	No.	P
- Emission of flame or expulsion of molten metal	No.	P
- Electric strength tests of equipment after completion of tests		N/A

Supplementary information:

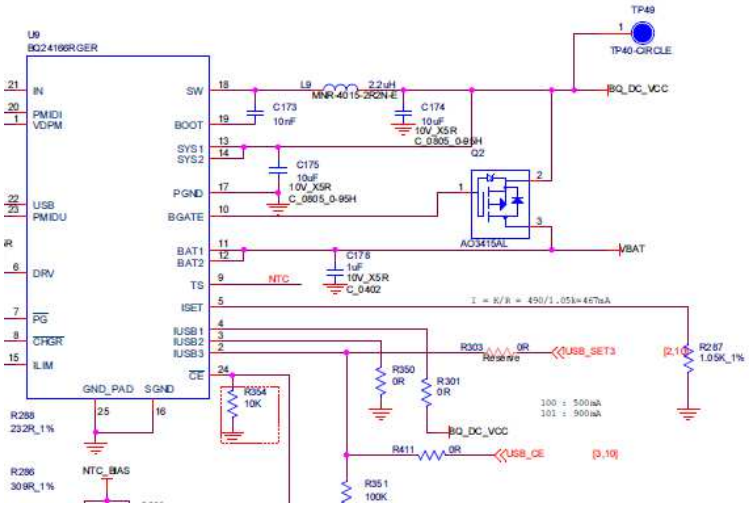
1) Evaluated in battery pack itself.

2) See table 5.3.

4.3.8	TABLE: Batteries	P

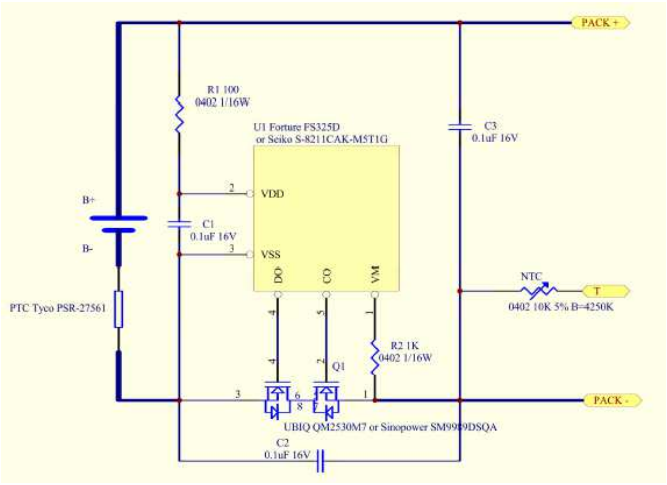
Battery category..... : Lithium Ion
Manufacturer ..... : See table 1.5.1
Type / model..... : See table 1.5.1
Voltage ..... : See table 1.5.1
Capacity..... : See table 1.5.1
Tested and Certified by (incl. Ref. No.) ..... : See table 1.5.1
Circuit protection diagram:

For unit main board:

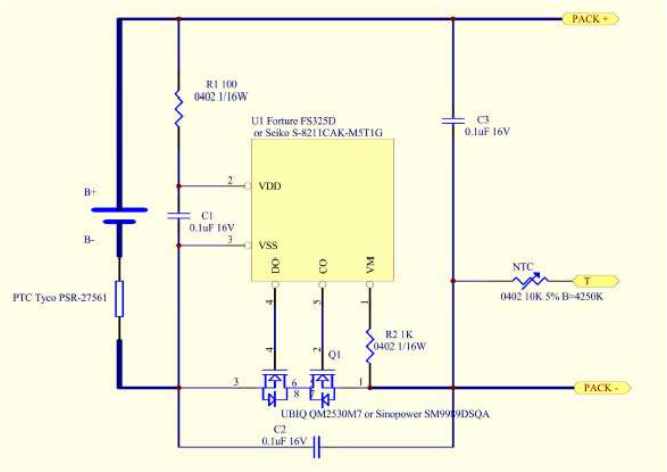


IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

For battery pack: Formosa, type VF6D



For battery pack: Formosa, type VFAD



MARKINGS AND INSTRUCTIONS (1.7.13)	
Location of replaceable battery	Battery pack.
Language(s) ……..:	English
Close to the battery ……..:	Provided in operating and servicing instructions.
In the servicing instructions ……..:	Only use the battery for a system for which it is specified. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage or other hazard.
In the operating instructions ……..:	Only use the battery for a system for which it is specified. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage or other hazard.

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements		P
	Supply voltage (V) .....:	A) 5Vdc B) Supply by battery pack C) 4.25Vdc (Charge mode) D) Discharge mode	—
	Ambient T_{min} (°C) .....:	--	—
	Ambient T_{max} (°C) .....:	See below.	—

Maximum measured temperature T of part/at::	T (°C)		Allowed T_{max} (°C)
For unit			
Supply voltage	A)	B)	--
Battery pack	52.2	52.9	--
Plastic enclosure inside near U2	49.7	49.3	--
Plastic enclosure outside near U2	45.7	46.6	95
PCB near U2	56.6	56.1	130
PCB near U4	52.3	51.7	130
Tma (Tamb)	35 (24.1)	35 (24.0)	--
For battery pack: Formosa, type VF6D			
Supply voltage	C)	D)	--
Input Wire	46.5	64.1	--
U1 body	46.5	64.1	105
PCB near U1	46.5	64.1	105
Cell Body	48.5	70.1	--
Tma (Tamb)	45.0 (22.5)	60.0 (21.9)	--
For battery pack: Formosa, type VFAD			
Supply voltage	C)	D)	--
Input Wire	46.0	61.6	--
U1 body	46.0	61.6	105
PCB near U1	46.0	61.6	105
Cell Body	48.0	69.6	--
Tma (Tamb)	45.0 (23.0)	60.0 (22.4)	--

Supplementary information:

1) The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.
2) The maximum ambient temperature specified by manufacturer (Tma) for system is 35℃; for battery pack is 45℃ (charge) and 60℃ (discharge).
3) All values for T(℃) are re-calculated from Tamb respectively.

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Temperature T of winding:	t_1 (℃)	R_1 (Ω)	t_2 (℃)	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				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
Supplementary information: See table 1.5.1.					

5.1	TABLE: touch current measurement			N/A
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
supplementary information:				

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
Basic/supplementary:				
Reinforced:				
Supplementary information:				

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	**TABLE: Fault condition tests**		P
	Ambient temperature (°C) .....:	See below.	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	--	—

Component No.	Fault	Supply voltage (Vdc)	Test time	Fuse #	Fuse current (A)	Observation
Test for battery pack: Formosa, type VF6D						
Battery (+ to -) (Over-charge)	--	4.505	7hrs 17mins	--	--	Charge current: 920mA. No damaged, no hazards. Max. temp. at cell bode= 26.0°C, ambient= 23.8°C.
Q1 pin 1-3 (Over-charge)	Shorted	4.25	7hrs 17mins	--	--	Charge current: 920mA. No damaged, no hazards. Max. temp. at cell bode= 26.0°C, ambient= 23.8°C.
Q1 pin 1-3 (Rapid discharge)	Shorted	--	2hrs 28mins	--	--	Discharge current: 920mA. No damaged, no hazards. Max. temp. at cell bode= 41.0°C, ambient= 23.5°C.
Q1 pin 1-3 (Reverse charge)	Shorted	4.25	7hrs 17mins	--	--	Measured charge current from 18A to 0A. No damaged, no hazards. Max. temp. at cell bode= 32.0°C, ambient= 23.8°C.
Battery (+ to -) (Rapid discharge)	Shorted	--	24hrs 2mins	--	--	Protection device (U1) operated, unit shut down immediately, no hazards. Max. temp. at cell bode= 23.5°C, ambient= 23.3°C.
Test for battery pack: Formosa, type VFAD						
Battery (+ to -) (Over-charge)	--	4.505	7hrs 49mins	--	--	Charge current: 1000mA. No damaged, no hazards. Max. temp. at cell bode= 24.2°C, ambient= 24.2°C.
Q1 pin 1-3 (Over-charge)	Shorted	4.25	7hrs 49mins	--	--	Charge current: 1000mA. No damaged, no hazards. Max. temp. at cell bode= 24.3°C, ambient= 24.2°C.
Q1 pin 1-3 (Rapid discharge)	Shorted	--	2hrs 28mins	--	--	Discharge current: 1000mA. No damaged, no hazards. Max. temp. at cell bode= 34.0°C, ambient= 23.5°C.

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Q1 pin 1-3 (Reverse charge)	Shorted	4.25	7hrs 49mins	--	--	Measured charge current from 19A to 0A. No damaged, no hazards. Max. temp. at cell bode= 29.8°C, ambient= 24.2°C.
Battery (+ to -) (Rapid discharge)	Shorted	--	24hrs 2mins	--	--	Protection device (U1) operated, unit shut down immediately, no hazards. Max. temp. at cell bode= 23.6°C, ambient= 23.3°C.
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)N/A

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		

IEC 60950-1/Am1			
Clause	Requirement + Test	Result - Remark	Verdict

List of test equipment used:

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date

No listing of test equipment used necessary for chosen test procedure.

Clause	Requirement + Test	Result - Remark	Verdict

2.1.1.7	TABLE: Discharge test				N/A
Condition	τ calculated (s)	τ measured (s)	t u→ 0V (s)	Comments	
Supplementary information:					

2.4.2	TABLE: Limited current circuit measurement					N/A
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments	
Supplementary information:						

2.6.3.4	TABLE: Resistance of earthing measurement		N/A
Location	Resistance measured (mΩ)	Comments	
Supplementary information:			

4.6.1, 4.6.2	Table: Enclosure opening measurements		P
Location	Size (mm)	Comments	
Bottom side	Ø 1.1	Numerous circle openings which are blocked by internal battery pack and speaker.	
Other sides	--	No openings.	
Supplementary information:			

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010/A12:2011
Attachment Form No.....:	EU_GD_IEC60950_1C_II
Attachment Originator .....:	SGS Fimko Ltd
Master Attachment.....:	Date 2011-08

EN 60950-1:2006/A11:2009/A1:2010/A12:2011 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)		
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions	P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note; 6.2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2	P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note; 6.1.2.1 Note 2 6.2.2.1 Note 2; EE.3 Note	P

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		N/A
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC		N/A
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: is designed to allow the user to listen to recorded or broadcast sound or video; and primarily uses headphones or earphones that can be worn in or on or around the ears; and allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: while the personal music player is connected to an external amplifier; or while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.	Not a personal music player.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with Its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed “programme simulation noise” described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: the symbol of Figure 1 with a minimum height of 5 mm; and the following wording, or similar: "To prevent possible hearing damage, do not listen at high volume levels for long periods."  **Figure 1 – Warning label (IEC 60417-6044)** Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.		N/A
	Zx.4.3 Wireless listening devices In wireless mode: with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		N/A
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;		N/A
	c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	This subclause has been declared 'void'.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 | 0,75 [a] | Over 6 up to and including 10| (0,75) [b] 1,0 | Over 10 up to and including 16| (1,0) [c] 1,5 | In the conditions applicable to Table 3B delete the words "in some countries" in condition [a]. In NOTE 1, applicable to Table 3B, delete the second sentence.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 | 1,5 to 2,5 | 1,5 to 4 | Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.		N/A
Bibliography	Additional EN standards.		—

ZA	**NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**	—

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1	In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.8	In **Norway**, due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: “Apparaten skall anslutas till jordat uttag” In **Norway** and **Sweden**, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).”		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”		
1.7.5	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	In the **United Kingdom**, to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 1		N/A
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A
3.2.1.1	In the **United Kingdom**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In **Ireland**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm^2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the **United Kingdom**, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm^2 to 1,5 mm^2 nominal cross-sectional area.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 ℃. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
4.3.6	In **Ireland**, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A
5.1.7.1	In **Finland**, **Norway** and **Sweden** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	In **Finland**, **Norway** and **Sweden**, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		N/A
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A
7.3	In **Norway**, for installation conditions see EN 60728-11:2005.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
CANADA NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....:	CAN/CSA-C22.2 NO. 60950-1A-07
Attachment Form No.....:	CA_ND_IEC60950_1C
Attachment Originator .....:	TÜV SÜD Product Service GmbH
Master Attachment.....:	Date (2012-08)

	Special national conditions		P
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2.		P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		N/A
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.		N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	A voltage rating is not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC are marked with the voltage rating and “Class 2” or equivalent.		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable.		N/A
2.6.3.3	Modify first column on Table 2D to “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.		N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
3.2.5	Power supply cords are no longer than 4.5 m in length.		N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 percent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	Revise first column of Table 3E to “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No battery systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		N/A
4.3.13.5	Equipment with lasers meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.		N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less.		N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.		N/A
	Other National Differences		P
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements.	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply.		N/A
	This maximum operating voltage includes consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.		N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles complies with special loading tests.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded.		N/A
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
FINLAND NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010
Attachment Form No.....:	FI_ND_IEC60950_1C
Attachment Originator .....:	SGS Fimko Ltd
Master Attachment.....:	Date (2010-04)

	National Differences		P
General	See also Group Differences (EN 60950-1:2006/A11/A1)		P
1.5.7.1	In **Finland** resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	In **Finland,** the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In **Finland**,CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	In **Finland,** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	In **Finland,** there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In **Finland,** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In **Finland,** add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14:2005 which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14:2005; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		
6.1.2.2	In **Finland,** the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In **Finland,** for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
GERMANY NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: VDE 0805-1:2011-01

Annex ZC, 1.7.2.1	According to GPSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.		N/A

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
ISRAEL NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: SI 60950 Part 1

1.1.1	Replace the the text of Note 3 as follows: The requirements of Israel Standard SI 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment.		P
1.6	The clause is applicable with the following addition:		P
1.6.1	Add following note: In Israel, this clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.		P
1.7	The clause is applicable with the following additions: Subclause 1.7.201 shall be added at the beginning of the clause as follows:		N/A
1.7.201	Marking in the Hebrew language The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition to the marking required by clause 1.7.1, the following details shall be marked in the Hebrew language. The details shall be marked on the apparatus or on its package, or on a label properly attached to the apparatus or on the package, by bonding or sewing, in a manner that the label cannot be easily removed. 1. Name of the apparatus and it commercial designation; 2. Manufacturer's name and address. If the apparatus is imported, the importer's name and address; 3. Manufacturer's registered trademark, if any; 4. Name of the model and serial number, if any; 5. Country of manufacture.		N/A
1.7.2.1	The following shall be added to the clause: All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A
2	The clause is applicable with the following additions:		N/A

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.4	The following shall be added at the beginning of the clause: In Israel, according to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991, seven means of protection against electrocution are permitted, as follows: 1) TN-S - Network system earthing; TN-C-S - Network system earthing; 2) TT - Network system earthing; 3) IT - Network Insulation Terre; 4) Isolated transformer; 5) Safety extra low voltage (SELV or ELV); 6) Residual current circuit breaker (30 mA = IΔ); 7) Reinforced insulation; Double insulation (class II)		N/A
2.201	Prevention of electromagnetic interference - Prior to carrying out the tests in accordance with the clauses of this Standard, the compliance of the apparatus with the relevant requirements specified in the appropriate part of the Standard series, SI 961, shall be checked. The apparatus shall meet the requirements in the appropriate part of the Standard series, SI 961. - If there are components in the apparatus for the prevention of electromagnetic interference, these components shall not reduce the safety level of the apparatus as required by this Standard.		N/A
3	The clause is applicable with the following additions:		N/A
3.2.1.1	Connection to an a.c. mains supply After the note, the following note shall be added: Note: In Israel, the feed plug shall comply with the requirements of Israel Standard SI 32 Part 1.1.		N/A
3.2.1.2	Connection to a d.c. mains supply At the end of the first paragraph, the following note shall be added: Note: At the time of issue of this Standard, there is no Israel Standard for connection accessories to d.c.		N/A
Annex P	Normative references (List of relevant Israel Standards that have been inserted in place of some of the International Standards)		P

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
KOREA NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: K 60950-1

1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC The apparatus shall comply with the relevant CISPR standards.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
U.S.A. NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....:	UL 60950-1-07
Attachment Form No. .....:	US_ND_IEC60950_1C
Attachment Originator.....:	TÜV SÜD Product Service GmbH
Master Attachment.....:	Date (2012-08)

	Special national conditions		P
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2.		P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		N/A
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.		N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	A voltage rating is not to be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC are marked with the voltage rating and “Class 2” or equivalent.		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable.		N/A
2.6.3.3	Modify first column on Table 2D to “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.		N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 per cent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
3.2.5	Power supply cords are no longer than 4.5 m in length.		N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 per cent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	Revise first column of Table 3E to “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No battery systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		N/A
4.3.13.5	Equipment with lasers meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.		N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less.		N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation complies with U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
	Other National Differences		P
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements.	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply.		N/A
	This maximum operating voltage includes consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.		N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles complies with special loading tests.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests.		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded.		N/A
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements.		N/A