


<b>Prüfbericht-Nr.:</b> <i>Test Report No.:</i>	<b>NN20EO6O 002</b>	<b>Auftrags-Nr.:</b> <i>Order No.:</i>	168306066	Seite 1 von 12 <i>Page 1 of 12</i>	
<b>Kunden-Referenz-Nr.:</b> <i>Client Reference No.:</i>	N/A	<b>Auftragsdatum:</b> <i>Order date:</i>	Feb. 01, 2021		
<b>Auftraggeber:</b> <i>Client:</i>	<b>TPV Electronics (Fujian) Co., Ltd.</b> Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian, P.R. China				
<b>Prüfgegenstand:</b> <i>Test item:</i>	LCD Monitor				
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type No.:</i>	QM-43* (can be 0-9, A-Z, a-z, -, \, /, + or blank, For marketing purpose, without technical difference.) (Trademark: AG neovo)				
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	TÜV Rheinland LVD CoC approval				
<b>Prüfgrundlage:</b> <i>Test specification:</i>	EN 62368-1:2014+A11:2017				
<b>Wareneingangsdatum:</b> <i>Date of receipt:</i>	Feb. 01, 2021				
<b>Prüfmuster-Nr.:</b> <i>Test sample No.:</i>	A002078135-001				
<b>Prüfzeitraum:</b> <i>Testing period:</i>	Feb. 01, 2021				
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	1601 R&D Room, 1602-1604, 17-18F, Building 7 Site C, Vanke Cloud City Phase I, Xingke First Street, Xili Street, Xili Community, Nanshan District, Shenzhen 518052, P.R. China				
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.				
<b>Prüfergebnis*:</b> <i>Test result*:</i>	Pass				
<b>geprüft von:</b> <i>tested by:</i>	Anderson Wang	<b>genehmigt von:</b> <i>authorized by:</i>	Steven Lin		
<b>Datum:</b> <i>Date:</i>	Feb. 04, 2021	<b>Ausstellungsdatum:</b> <i>Issue Date:</i>	Feb. 04, 2021		
<b>Stellung / Position:</b>	Senior Project Manager	<b>Stellung / Position:</b>	Technical Reviewer		
<b>Sonstiges/ Other:</b>	<ul style="list-style-type: none"> <li>Details see following pages.</li> </ul>				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>				
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend 3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = ausreichend N/A = nicht anwendbar 4 = sufficient N/A = not applicable	5 = mangelhaft N/T = nicht getestet 5 = poor N/T = not tested
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p><i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>					

<b>TEST REPORT</b> <b>IEC 62368-1</b> <b>Audio/video, information and communication technology equipment</b> <b>Part 1: Safety requirements</b>	
<b>Report Number</b> .....	<b>See cover page</b>
<b>Date of issue</b> .....	<b>See cover page</b>
<b>Total number of pages</b> .....	<b>See cover page</b>
<b>Applicant's name</b> .....	<b>TPV Electronics (Fujian) Co., Ltd.</b>
<b>Address</b> .....	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian, P.R. China
<b>Test specification:</b>	
<b>Standard</b> .....	EN 62368-1:2014+A11:2017
<b>Test procedure</b> .....	TÜV Rheinland LVD CoC approval
<b>Non-standard test method</b> .....	N/A
<b>Test Report Form No.</b> .....	IEC62368_1B
<b>Test Report Form(s) Originator</b> .....	UL(US)
<b>Master TRF</b> .....	2014-03
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<b>General disclaimer:</b>	
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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test Item description .....	LCD Monitor	
Trade Mark .....	AG neovo	
Manufacturer .....	Associated Industries China Inc. 5F-1, No. 3-1, Park Street, Nangang District, Taipei, 11503 Taiwan	
Model/Type reference .....	QM-43* (can be 0-9, A-Z, a-z, -, \, /, + or blank, For marketing purpose, without technical difference.)	
Ratings .....	I/P: 100-240V~, 50-60Hz, 2.5A	
Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address .....	1601 R&D Room, 1602-1604, 17-18F, Building 7 Site C, Vanke Cloud City Phase I, Xingke First Street, Xili Street, Xili Community, Nanshan District, Shenzhen 518052, P.R. China	
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address .....		
Tested by (name + signature) .....	See cover page	
Approved by (name + signature) .....	See cover page	
Testing procedure: TMP/CTF Stage 1		
Testing location/ address .....		
Tested by (name + signature) .....		
Approved by (name + signature) .....		
Testing procedure: WMT/CTF Stage 2		
Testing location/ address .....		
Tested by (name + signature) .....		
Witnessed by (name + signature) .....		
Approved by (name + signature) .....		
Testing procedure: SMT/CTF Stage 3 or 4		
Testing location/ address .....		
Tested by (name + signature) .....		
Approved by (name + signature) .....		
Supervised by (name + signature) .....		

<b>List of Attachments (including a total number of pages in each attachment):</b> - N/A	
<b>Summary of testing:</b>	
<b>Tests performed (name of test and test clause):</b> N/A	<b>Testing location:</b> N/A

<b>Summary of compliance with National Differences:</b> <b>List of countries addressed:</b> <u>Summary of compliance with National Differences to IEC 62368-1:2014 (Second Edition) and EN 62368-1:2014+ A11: 2017 (for explanation of codes see below):</u> EU Group Differences, EU Special National Conditions, DE, DK, FI, IT, NO, SE Explanation of used codes: DE=Germany, DK=Denmark, FI=Finland, IT=Italy, NO=Norway, SE=Sweden  <b>The product fulfils the requirements of <u>EN 62368-1:2014+ A11:2017</u></b>  See Original report NN20EO6O 001 for the details.
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<b>Copy of marking plate</b> See Original report NN20EO6O 001 for the details.
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<b>TEST ITEM PARTICULARS:</b>	
Classification of use by.....:	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input checked="" type="checkbox"/> Children likely to be present
Supply Connection .....	<input checked="" type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input type="checkbox"/> External Circuit - not Mains connected - <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance .....	<input checked="" type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + ___ %/ - ___ % <input type="checkbox"/> None
Supply Connection – Type .....	<input checked="" type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input checked="" type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input type="checkbox"/> other: _____
Considered current rating of protective device as part of building or equipment installation.....:	<u>20</u> A; Installation location: <input checked="" type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility.....:	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input checked="" type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input type="checkbox"/> rack-mounting <input checked="" type="checkbox"/> wall-mounted
Over voltage category (OVC) .....	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other: _____
Class of equipment .....	<input type="checkbox"/> Class I <input checked="" type="checkbox"/> Class II <input type="checkbox"/> Class III
Access location .....	<input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A
Pollution degree (PD) .....	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maximum operating ambient:	<u>45</u> °C
IP protection class .....	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP___
Power Systems .....	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - <u>230</u> V L-L (For Norway only)
Altitude during operation (m) .....	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> <u>5000</u> m
Altitude of test laboratory (m) .....	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> _____ m
Mass of equipment (kg) .....	<input checked="" type="checkbox"/> EUT with base stand: 12.5kg, base stand: 4kg.
<b>POSSIBLE TEST CASE VERDICTS:</b>	
- 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)

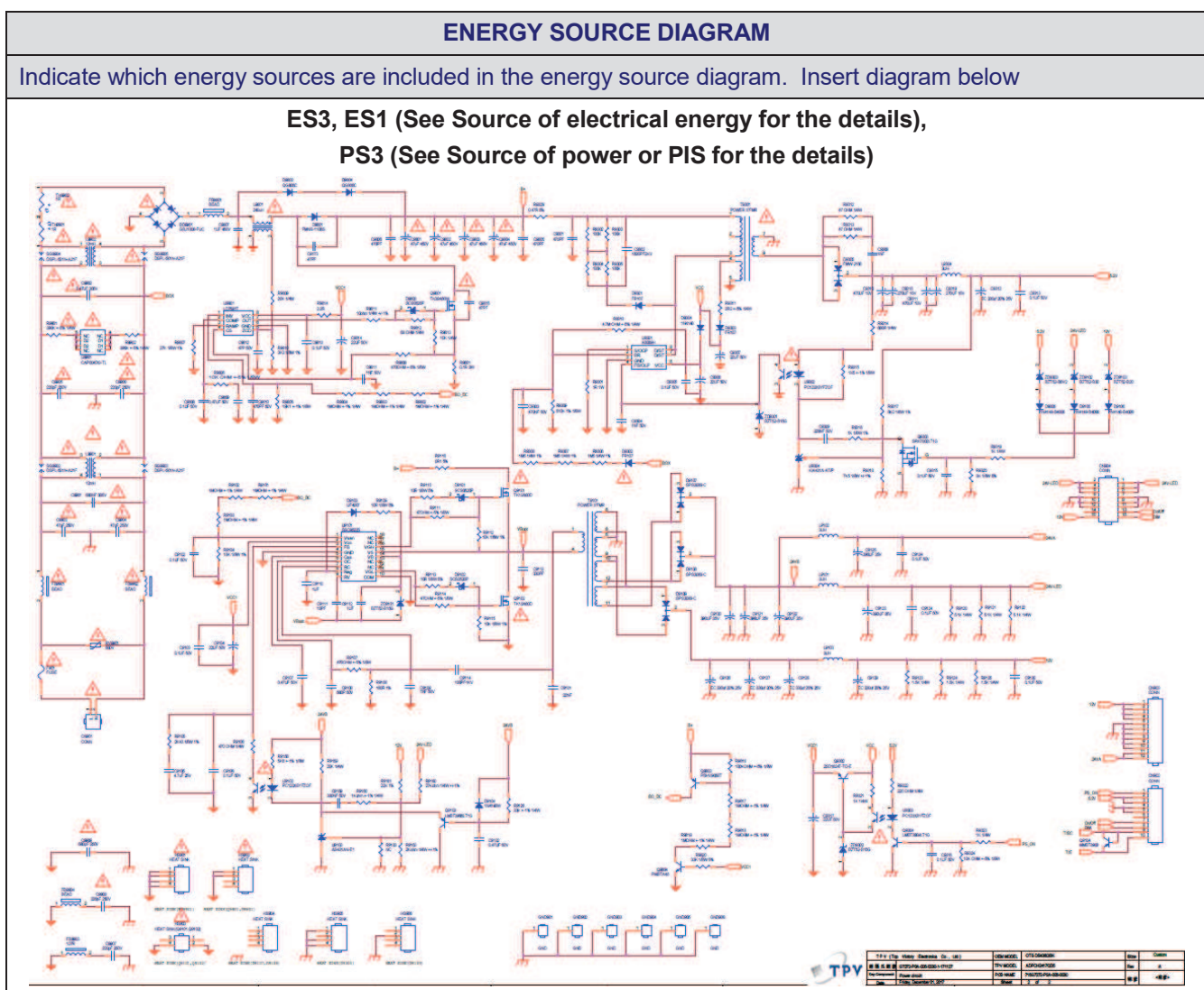
- test object not yet conducted .....	N/T
<b>TESTING:</b>	
Date of receipt of test item .....	Feb. 01, 2021
Date (s) of performance of tests .....	N/A
<b>GENERAL REMARKS:</b>	
<p>"(See Enclosure #)" refers to additional information appended to the report.  "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC60068-2-21:</b>	
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 .....	<input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>Not applicable</b>
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>Name and address of factory (ies).....:</b>	
1 TPV Display Technology (Wuhan) Co., Ltd Unique No.11 Zhuankou Development District of Economic Technological Development Zone , 430056 Wuhan City, P. R. China 2 TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road Fuqing City, Fujian, P.R.China 3 L&T Display Technology (Fujian) Ltd Optoelectronic Park, Rongqiao Economic and Technological Development Zone Fuqing, 350301 Fujian, P.R. China 4 TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone Fuqing City, Fujian, P.R.China 5 TPV Display Technology (Beihai) Co.,Ltd. China Electronic Beihai Industry Park, Northeast of the Crossing between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R.China 6 TPV Display Technology (China) Co., Ltd No.106 Jinghai 3 Rd., BDA, 100176 Beijing, P. R. China 7 Trend Smart CE Mexico S de RL de CV Avenida Sor Juana Ines de la Cruz de 19602 Nueva Tijuana, 22435 Tijuana Baja California, MEXICO 8 TPV Technology(Qingdao) Co.,Ltd. NO.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandong, P. R. China 9 Envision Indústria de Produtos Eletrônicos Ltda. Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM Brasil 10 Pro Concept Manufacturer Co., Ltd. 88/1 Moo 12, Soi Phetkasem 120, Phetkasem Road, Omnoi, Krathumbaen, Samutsakhon 74130, Thailand 11 TPV Technology (Thailand) Co., Ltd. No.267 Mu7, Tha Tum Sub- District, Si Maha Pho District,Prachin Buri Province, Thailand	

12	TPV Electronics (Fujian) Co., Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, 350301, Fujian, P. R. China	
13	GeneTouch Corp. No. 9 Neixi Rd., Luzhu Dist., Taoyuan City, 33852 Taiwan	
<b>GENERAL PRODUCT INFORMATION:</b>		
<b>Product Description –</b>		
Description of change(s):		
1. Add new alternative LCD panel TPP430** (TPV).		
For the above described change(s) the following was considered to be necessary:		
<b>Change</b>	<b>Testing</b>	<b>Comments</b>
1	N/A	Due to the specified power consumption of new panel <b>TPP430** (TPV)</b> is not higher than original panel TPT430** (TPV), no further test required. See bold information in Table 4.1.2 for the details.
<b>Model Differences – N/A</b>		
<b>Additional application considerations –</b>		
<ul style="list-style-type: none"> <li>The equipment can be only mounted on the wall the user's manual specified the relevant information for installation instruction.</li> <li>The equipment contains with D-sub connector, therefore the IEC Guide 112 for multimedia equipment has been considered.</li> <li>The equipment has been evaluated according to the specified by the manufacturer maximum operating altitude of 5000m (correction factor for clearances according to IEC 60664:1992+A1:2000+A2:2002 of 1.48 is considered).</li> <li>AC Inlet to Primary connector wire use style 1617.</li> </ul>		

<b>ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:</b>	
<p>(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.)            (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.)</p>	
<p><b>Electrically-caused injury (Clause 5):</b>            (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification)            Example: +5 V dc input</p>	
	ES1
<b>Source of electrical energy</b>	<b>Corresponding classification (ES)</b>
L/N pin of appliance inlet	ES3
Primary circuit	ES3
5.2V, 12V, 24VA and 24V-LED outputs of SPS	ES1
Output of LED driver board for LED backlight	ES1
<p><b>Electrically-caused fire (Clause 6):</b>            (Note: List sub-assembly or circuit designation and corresponding energy source classification)            Example: Battery pack (maximum 85 watts):</p>	
	PS2
<b>Source of power or PIS</b>	<b>Corresponding classification (PS)</b>
All circuits of power board	PS3
All circuits of LED driver board, Key control board, T-con board and speakers	PS3
All circuits of main board except for data ports	PS3
All data ports of main board	PS2
<p><b>Injury caused by hazardous substances (Clause 7)</b>            (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)            Example: Liquid in filled component</p>	
	Glycol
<b>Source of hazardous substances</b>	<b>Corresponding chemical</b>
N/A	N/A
<p><b>Mechanically-caused injury (Clause 8)</b>            (Note: List moving part(s), fan, special installations, etc. &amp; corresponding MS classification based on Table 35.)            Example: Wall mount unit</p>	
	MS2
<b>Source of kinetic/mechanical energy</b>	<b>Corresponding classification (MS)</b>
Sharp edges and corners	MS1
Equipment mass	MS2
Wall mount	MS3
<p><b>Thermal burn injury (Clause 9)</b>            (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)            Example: Hand-held scanner – thermoplastic enclosure</p>	
	TS1
<b>Source of thermal energy</b>	<b>Corresponding classification (TS)</b>
Accessible parts	TS1



ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
<b>Radiation (Clause 10)</b> (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	Corresponding classification (RS)
Indicating lights	RS1
LED backlight of LCD panel	RS1



OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	ES3: L/N pin of appliance inlet	--	--	Bleeder Resistor, Discharge IC
Ordinary	ES3: Primary circuit	Air gap	Enclosure	Transformers,

				Photo Couplers, Y1 capacitor
Ordinary	ES1: 5.2V, 12V, 24VA and 24V-LED outputs of SPS	N/A	N/A	N/A
Ordinary	ES1: Output of LED driver board for LED backlight	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Combustible materials inside power board, main board, LED driver board, Key control board, T-con board, speakers and LCD panel	PS3	Comply with Clause 6.3	See 6.4.3 and 6.4.7 (Min.V-1 class material)	--
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	MS3: Wall mount	--	--	Compliance with test 8.7.2
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	TS1: Accessible parts	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	RS1: Indicating lights	N/A	N/A	N/A
Ordinary	RS1: LED backlight of LCD panel	N/A	N/A	N/A
Supplementary Information: (1) See attached energy source diagram for additional details.				

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1</sup>	
LCD Panel	TPV	TPT430** (* can be 0-9, A-Z or blank for marketing purpose only)	42.5 inch TFT LCD with LED backlight, (power consumption: 86.5W; LED array voltage: 36V)	--	Tested with appliance	
Alt.)	TPV	TPP430** (* can be 0-9, A-Z or blank for marketing purpose only)	42.5 inch TFT LCD with LED backlight, (power consumption: 86.5W; LED array voltage: 36V)	--	Tested with appliance	

