



Ref. Certif. No.

DE 3 - ITAV2534

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

CB TEST CERTIFICATE

Product	Audio/Video, Information and Communication technology equipment 2300 Ecosystem
Name and address of the applicant	InVue Security Products Inc 9201 Baybrook Ln Charlotte NC 28277 USA
Name and address of the manufacturer	InVue Security Products Inc 9201 Baybrook Ln, Charlotte NC 28277, USA
Name and address of the factory	Dongguan Longmax Industries Ltd. No. 3, Middle Market Road, Bai Shi Gang, 523559 Chang Ping Town, Dongguan City, PEOPLE'S REPUBLIC OF CHINA Key Joy Cable (Shenzhen) Ltd. 22, Xiacun Community second industrial area, Guangming new area, Gongming sun-district, 518106 Shenzhen City, PEOPLE'S REPUBLIC OF CHINA
Ratings and principal characteristics	see page 2
Trademark / Brand (if any)	InVue
Model/type Ref.	P02RTCR, P01ALRM, P03STEM, P05BRLT, P04SNSR, PO9DCMP, DAH501, DAH501R, DAH502, DAH502R, DAT60X
Additional information (if necessary)	Certificate DE 3 – ITAV2523 issued 2026-07-14 is replaced by this version due to non-technical changes.
A sample of the product was tested and found to be in conformity with as shown in the Test Report Ref. No. which forms part of this certificate	IEC 62368-1:2018 72193348-101

Page 1 of 2

This CB Test Certificate is issued by the National Certification Body

CB 108236 0060 Rev. 02

Date, 2026-07-22

(Raymond Papa)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany



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

Parameters:

Rated Input Voltage: 24 VDC
N/A (P09DCMP)
Rated Input Current: 2.08 A
N/A (P09DCMP)
Protection Class: III
Ambient Temperature: 40°C

Model	Shape	Region	Frequency (ies)
DAH501	Oval	Rest of World (non-China)	127 kHz & 360 kHz
DAH501R	Rectangular	Rest of World (non-China)	127 kHz & 360 kHz
DAH502	Oval	China only	127 kHz
DAH502R	Rectangular	China only	127 kHz

Model Differences

Phone System 2300-H		Tablet System 2300-T		Watch System 2300-W		Digital Companion/ Sign Riser
Component	Model Name (SKU)	Component	Model Name (SKU)	Component	Model Name (SKU)	Model Name (SKU)
Power supply	PS566	Power supply	PS566	power supply	PS566	P09DCMP (DAT900)
Retractor	P02RTCR (DAR300)	Retractor	P02RTCR (DAR300)	Retractor	P02RTCR (DAR300)	
Alarm Module	P01ALRM (DAA400, DAA401)	Alarm Module	P01ALRM (DAA400, DAA401)	Alarm Module	P01ALRM (DAA400, DAA401)	
Long Stem	P03STEM (DAD150)	Long Stem	P03STEM (DAD150)	Watch Stem	P03STEM (DAD100)	
Phone Bracket Puck	DAH501 DAH502 DAH501R DAH502R	Tablet Bracket Puck	DAT60X	Watch Sensor Bracelet	P05BRLT (DAW700)	
Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	
Phone Brackets	DAH5XX	Tablet Brackets	DAT6XX	Watch Brackets	DAW7XX	

Note - X indicates various sized mechanical differences which do not affect electrical design or testing

- **DAH501 and DAH501R** are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for all global countries EXCEPT China.
- **DAH502 and DAH502R** are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for ONLY China.

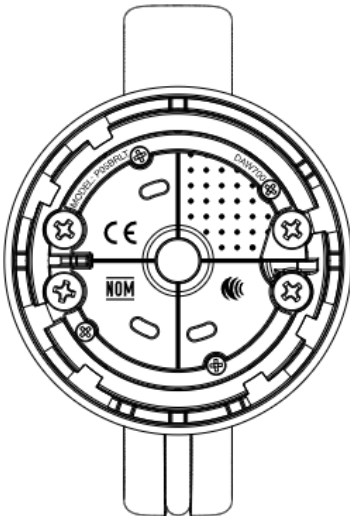
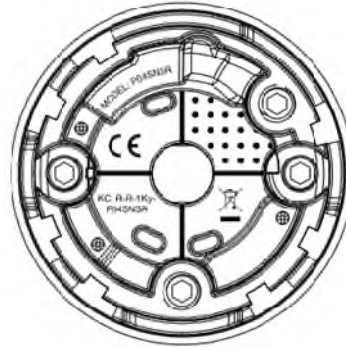
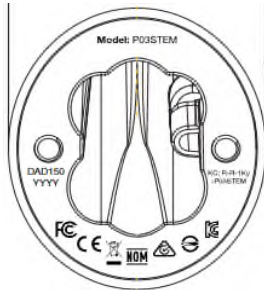
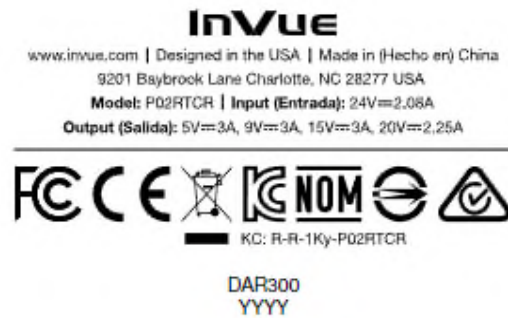
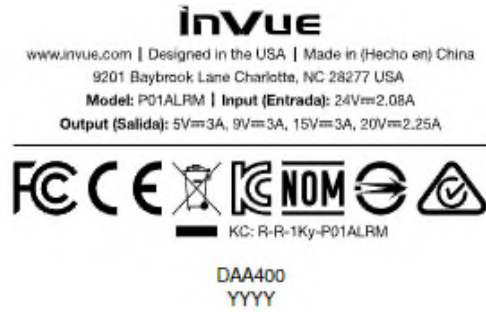
	Test Report issued under the responsibility of: NCB TÜV SÜD Product Service GmbH Ridlerstrasse 65, D-80339 München Germany	
TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements		
Report Number.: 72193348-101 Date of issue: 2026-07-15 Total number of pages: 8		
Name of Testing Laboratory preparing the Report: TÜV SÜD America 5945 Cabot Parkway, Suite 100, Alpharetta, GA 30005, USA		
Applicant's name: InVue Security Products Inc. Address: 9201 Baybrook Lane, Charlotte, NC 28277 USA		
Test specification: Standard: IEC 62368-1:2018 Test procedure: CB Scheme Non-standard test method: N/A		
TRF template used: IECEE OD-2020-F1:2021, Ed.1.4 Test Report Form No.: IEC62368_1E Test Report Form(s) Originator: UL(US) Master TRF: Dated 2022-04-14		
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General disclaimer: 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	2300 Ecosystem	
Trade Mark(s)	INVUE.	
Manufacturer	InVue Security Products Inc. 9201 Baybrook Lane, Charlotte, NC 28277 USA	
Model/Type reference	P02RTCR, P01ALRM, P03STEM, P05BRLT, P04SNSR, P09DCMP, DAH501, DAH501R, DAH502, DAH502R, DAT60X (See General product information for model differences)	
Ratings	24Vdc, 2.08A P09DCMP: N/A	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ CB Testing Laboratory:	TÜV SÜD America Inc.	
Testing location/ address	5945 Cabot Parkway, Suite 100, Alpharetta, GA 30005, USA	
Tested by (name, function, signature)	Roshini Chandran, Project Handler	
Approved by (name, function, signature) ..	Jesse Chisholm, Reviewer	
Testing procedure: CTF Stage 1:		
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) ..		
Testing procedure: CTF Stage 2:		
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) ..		
Testing procedure: CTF Stage 3:		
Testing procedure: CTF Stage 4:		
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) ..		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): None	
Summary of testing: 2300 was connected to 24Vdc source and continuously stressed one at the time by supplying 3.3 Ω resistor at 5Vdc, 3 Ω resistor at 9Vdc, 5 Ω resistor at 15Vdc, and 8 Ω 20Vdc charging battery. The equipment was then stressed by continuously setting off the alarm that has power supplied by the internal battery pack. When battery goes off, the EUT stops supplying the load.	
Tests performed (name of test and test clause): All required for this investigation.	Testing location: TÜV SÜD America Inc. 5945 Cabot Parkway, Suite 100 Alpharetta, GA 30005 USA
Summary of compliance with National Differences (List of countries addressed): See report 72193348-100 dated 2026-06-26.	
☒ The product fulfils the requirements of IEC 62368-1:2018	
Use of uncertainty of measurement for decisions on conformity (decision rule) : ☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method"). ☐ Other:... (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)	
Information on uncertainty of measurement: The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE. IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer. Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.	

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.



Test item particulars:			
Product group	☒ end product	☐ built-in component	
Classification of use by	☒ Ordinary person	☐ Children likely present	
	☐ Instructed person		
	☐ Skilled person		
Supply connection.....	☐ AC mains	☐ DC mains	
	☒ not mains connected:		
	☒ ES1	☐ ES2	☐ ES3
Supply tolerance	☐ +10%/-10%		
	☐ +20%/-15%		
	☐ + %/ - %		
	☒ None		
Supply connection – type	☐ pluggable equipment type A -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☐ direct plug-in		
	☐ pluggable equipment type B -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☐ permanent connection		
	☐ mating connector		
	☒ other: Connected to a separately approved PSU.		
Considered current rating of protective device.....	☐ A;		
	Location:	☐ building	☐ equipment
	☒ N/A		
Equipment mobility	☐ movable	☐ hand-held	☐ transportable
	☐ direct plug-in	☒ stationary	☐ for building-in
	☐ wall/ceiling-mounted	☐ SRME/rack-mounted	
	☐ other:		
Overvoltage category (OVC)	☒ OVC I	☐ OVC II	☐ OVC III
	☐ OVC IV	☐ other:	
Class of equipment	☐ Class I	☐ Class II	☒ Class III
	☐ Not classified	☐	
Special installation location	☒ N/A	☐ restricted access area	
	☐ outdoor location		
Pollution degree (PD)	☐ PD 1	☒ PD 2	☐ PD 3
Manufacturer's specified T_{ma}.....	40 °C	☐ Outdoor: minimum	°C
IP protection class	☒ IPX0	☐ IP__	
Power systems	☐ TN	☐ TT	☐ IT - V _{L-L}
	☒ not AC mains		
Altitude during operation (m)	☒ 2000 m or less	☐	m
Altitude of test laboratory (m)	☒ 2000 m or less	☐	m
Mass of equipment (kg)	1.5Kg		

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 : 2024-01-05 (Original) 2026-05-15 (Modification 1) 2026-07-15 (Amendment 1) Date (s) of performance of tests : 2024-01-31 through 2024-02-08 (Original) 2026-06-04 through 2026-06-19 (Modification 1) 2026-07-15 No testing (Amendment 1)	
General remarks: "(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 4.2.5 of IEC60335-2-29:	
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 Declaration provided.
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) :	Models: P02RTCR, P04SNSR, P05BRLT, DAH501, DAH501R, DAH502, and DAH502R Dongguan Longmax Industries Ltd., No. 3, Middle Market Road, Bai Shi Gang, Chang Ping Town, Dongguan City, Guangdong Province, P.R. China. Models: P09DCMP, P01ALRM, P03STEM, and DAT60X Key Joy Cable (Shenzhen) Limited 22, Xiacun Community second industrial area, Gongming sun-district, Guangming new area, Shenzhen City, Guangdong Province, China 518106
General product information and other remarks: The 2300 series is used by a retailer to display, protect, and charge phones, Tablet, or watch. For the Wireless charging is accomplished with the Apple MFi Fast Watch Charger module, C962. If an unauthorized individual were to remove the product, such as those attempting to steal it, an alarm would sound to alert retail staff. The product includes an LED to indicate status, a piezo to indicate an alarm, and an interface for the InVue proprietary OneKEY system. The OneKEY is used by authorized personnel to silence alarms or disarm the product.	

Model Differences –

Phone System 2300-H		Tablet System 2300-T		Watch System 2300-W		Digital Companion/ Sign Riser
Component	Model Name (SKU)	Component	Model Name (SKU)	Component	Model Name (SKU)	Model Name (SKU)
Power supply	PS566	Power supply	PS566	power supply	PS566	P09DCMP (DAT900)
Retractor	P02RTCR (DAR300)	Retractor	P02RTCR (DAR300)	Retractor	P02RTCR (DAR300)	
Alarm Module	P01ALRM (DAA400, DAA401)	Alarm Module	P01ALRM (DAA400, DAA401)	Alarm Module	P01ALRM (DAA400, DAA401)	
Long Stem	P03STEM (DAD150)	Long Stem	P03STEM (DAD150)	Watch Stem	P03STEM (DAD100)	
Phone Bracket Puck	DAH501 DAH502 DAH501R DAH502R	Tablet Bracket Puck	DAT60X	Watch Sensor Bracelet	P05BRLT (DAW700)	
Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	
Phone Brackets	DAH5XX	Tablet Brackets	DAT6XX	Watch Brackets	DAW7XX	
Note - X indicates various sized mechanical differences which do not affect electrical design or testing						

Model	Shape	Region	Frequency (ies)
DAH501	Oval	Rest of World (non-China)	127 kHz & 360 kHz
DAH501R	Rectangular	Rest of World (non-China)	127 kHz & 360 kHz
DAH502	Oval	China only	127 kHz
DAH502R	Rectangular	China only	127 kHz

DAH501 and DAH501R are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for all global countries EXCEPT China. DAH502 and DAH502R are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for ONLY China.

General product information and other remarks (Continuation):

History:

Amendment 1. Test Report 72193348-100 dated 2026-06-29 was amended to 72193348-101 dated 2026-07-15. This amendment includes the following changes:

Updated of factory address:

From :

Dongguan Longmax Industries Ltd.,
Building 1, No. 5 Li Wei Road, Chang Ping Town, Dongguan City, Guangdong Province, P.R.
China.

To:

Dongguan Longmax Industries Ltd.,
No. 3, Middle Market Road, Bai Shi Gang, Chang Ping Town, Dongguan City, Guangdong
Province, P.R. China.

No testing required.

This report must be added to report 72193348-100 dated 2026-06-26 in order to be considered valid.

Modification 1: The report no. 72193348-000 dated 2024-02-14 was modified to report no. 72193348-100 on 2026-06-29 to include the following changes:

- Replace phone bracket puck DAH500 with phone bracket pucks DAH501, DAH502, DAH501R, DAH502R with Qi2 wireless charging capability
- Add model DAA401 to Alarm Module P01ALRM, which has no impact to safety
- Change the factory site for models DAH501, DAH501R, DAH502, and DAH502R to the Longmax manufacturing site (#038257)
- Update the address for the Longmax manufacturing site (#038257)
- Update the China National Differences to the latest revision
- Correct critical component list

Initial Release: Test Report 72193348-100 dated 2026-06-29.

END OF TEST REPORT



Ref. Certif. No.

DE 3 - ITAV2523

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

CB TEST CERTIFICATE

Product	Audio/Video, Information and Communication technology equipment 2300 Ecosystem
Name and address of the applicant	InVue Security Products Inc 9201 Baybrook Ln Charlotte NC 28277 USA
Name and address of the manufacturer	InVue Security Products Inc 9201 Baybrook Ln, Charlotte NC 28277, USA
Name and address of the factory	Dongguan Longmax Industries Ltd Building 1, 5 Li Wei Road, Guangdong, 523036 Changping Town, Dongguan City, PEOPLE'S REPUBLIC OF CHINA Key Joy Cable (Shenzhen) Ltd. 22, Xiacun Community second industrial area, Guangming new area, Gongming sun-district, 518106 Shenzhen City, PEOPLE'S REPUBLIC OF CHINA
Ratings and principal characteristics	see page 2
Trademark / Brand (if any)	InVue
Model/type Ref.	P02RTCR, P01ALRM, P03STEM, P05BRLT, P04SNSR, P09DCMP, DAH501, DAH501R, DAH502, DAH502R, DAT60X
Additional information (if necessary)	Certificate DE 3 – ITAV1984 issued 2024-07-10 is replaced by this version due to technical changes.
A sample of the product was tested and found to be in conformity with	IEC 62368-1:2018
as shown in the Test Report Ref. No. which forms part of this certificate	72193348-100

Page 1 of 2

This CB Test Certificate is issued by the National Certification Body

CB 108236 0060 Rev. 01

Date, 2026-07-14

(Raymond Papa)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany



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

Parameters:

Rated Input Voltage: 24 VDC
N/A (P09DCMP)
Rated Input Current: 2.08 A
N/A (P09DCMP)
Protection Class: III
Ambient Temperature: 40°C

Model	Shape	Region	Frequency (ies)
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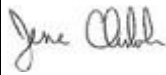
Model Differences

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Phone Bracket Puck	DAH501 DAH502 DAH501R DAH502R	Tablet Bracket Puck	DAT60X	Watch Sensor Bracelet	P05BRLT (DAW700)	
Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	
Phone Brackets	DAH5XX	Tablet Brackets	DAT6XX	Watch Brackets	DAW7XX	

Note - X indicates various sized mechanical differences which do not affect electrical design or testing

- **DAH501 and DAH501R** are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for all global countries EXCEPT China.
- **DAH502 and DAH502R** are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for ONLY China.

	Test Report issued under the responsibility of: NCB TÜV SÜD Product Service GmbH Ridlerstrasse 65, D-80339 München Germany	
TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements		
Report Number.: 72193348-100 Date of issue: 2026-06-29 Total number of pages: 57		
Name of Testing Laboratory preparing the Report: TÜV SÜD America 5945 Cabot Parkway, Suite 100, Alpharetta, GA 30005, USA		
Applicant's name: InVue Security Products Inc. Address: 9201 Baybrook Lane, Charlotte, NC 28277 USA		
Test specification: Standard: IEC 62368-1:2018 Test procedure: CB Scheme Non-standard test method: N/A		
TRF template used: IECEE OD-2020-F1:2021, Ed.1.4 Test Report Form No.: IEC62368_1E Test Report Form(s) Originator: UL(US) Master TRF: Dated 2022-04-14		
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General disclaimer: 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	2300 Ecosystem	
Trade Mark(s)	inVue.	
Manufacturer.....	InVue Security Products Inc. 9201 Baybrook Lane, Charlotte, NC 28277 USA	
Model/Type reference	P02RTCR, P01ALRM, P03STEM, P05BRLT, P04SNSR, P09DCMP, DAH501, DAH501R, DAH502, DAH502R , DAT60X (See General product information for model differences)	
Ratings	24Vdc, 2.08A P09DCMP: N/A	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ CB Testing Laboratory:	TÜV SÜD America Inc.	
Testing location/ address	5945 Cabot Parkway, Suite 100, Alpharetta, GA 30005, USA	
Tested by (name, function, signature)	Roshini Chandran, Project Holder	
Approved by (name, function, signature) ..	Jesse Chisholm, Reviewer	
Testing procedure: CTF Stage 1:		
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) ..		
Testing procedure: CTF Stage 2:		
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Testing procedure: CTF Stage 3:		
Testing procedure: CTF Stage 4:		
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): Attachment No 1: US & CA NATIONAL DIFFERENCES (9 Pages) Attachment No 2: SAUDI ARABIA NATIONAL DIFFERENCES (1 Page) Attachment No 3: CHINA NATIONAL DIFFERENCES (5 Pages) Attachment No 4: JAPAN NATIONAL DIFFERENCES (5 Pages) Attachment No 5: SINGAPORE NATIONAL DIFFERENCES (3 Pages) Attachment No 6: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (24 Pages) Attachment No 7: REPUBLIC OF KOREA NATIONAL DIFFERENCES (1 Page) Attachment No 8: Photos (12 Pages)	
Summary of testing: 2300 was connected to 24Vdc source and continuously stressed one at the time by supplying 3.3 Ω resistor at 5Vdc, 3 Ω resistor at 9Vdc, 5 Ω resistor at 15Vdc, and 8 Ω 20Vdc charging battery. The equipment was then stressed by continuously setting off the alarm that has power supplied by the internal battery pack. When battery goes off, the EUT stops supplying the load.	
Tests performed (name of test and test clause): All required for this investigation.	Testing location: TÜV SÜD America Inc. 5945 Cabot Parkway, Suite 100 Alpharetta, GA 30005 USA
Summary of compliance with National Differences (List of countries addressed): See attachments 1, 2, 3, 4, 5, 6, and 7.	
☒ The product fulfils the requirements of IEC 62368-1:2018	
Use of uncertainty of measurement for decisions on conformity (decision rule) : ☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method"). ☐ Other:... (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)	
Information on uncertainty of measurement: The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE. IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer. Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.	

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.

inVue

www.invue.com | Designed in the USA | Made in (Hecho en) China

9201 Baybrook Lane Charlotte, NC 28277 USA

Model: P01ALRM | **Input (Entrada):** 24V=2.08A**Output (Salida):** 5V=3A, 9V=3A, 15V=3A, 20V=2.25A

KC: R-R-1Ky-P01ALRM

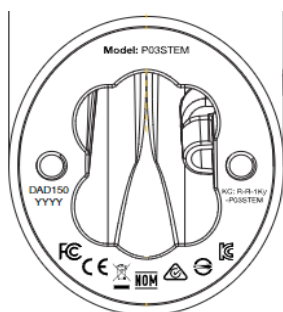
DAA400
YYYY**inVue**

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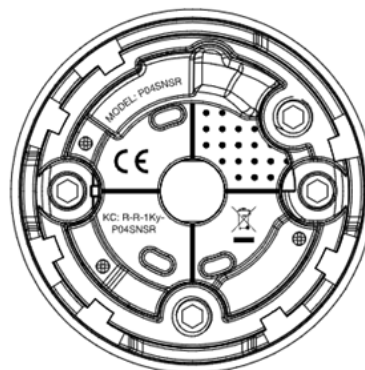
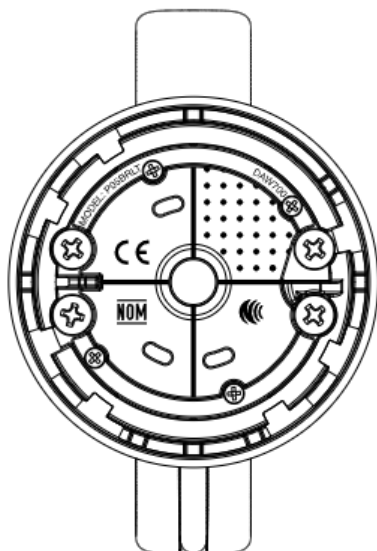
9201 Baybrook Lane Charlotte, NC 28277 USA

Model: P02RTCR | **Input (Entrada):** 24V=2.08A**Output (Salida):** 5V=3A, 9V=3A, 15V=3A, 20V=2.25A

KC: R-R-1Ky-P02RTCR

DAR300
YYYY

KC: R-R-1Ky-P03STEM



KC: R-R-1Ky-P04SNR

Test item particulars:			
Product group	☒ end product	☐ built-in component	
Classification of use by	☒ Ordinary person	☐ Children likely present	
	☐ Instructed person		
	☐ Skilled person		
Supply connection	☐ AC mains	☐ DC mains	
	☒ not mains connected:		
	☒ ES1	☐ ES2	☐ ES3
Supply tolerance	☐ +10%/-10%		
	☐ +20%/-15%		
	☐ + %/ - %		
	☒ None		
Supply connection – type	☐ pluggable equipment type A -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☐ direct plug-in		
	☐ pluggable equipment type B -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☐ permanent connection		
	☐ mating connector ☒ other: Connected to a separately approved PSU.		
Considered current rating of protective device	☐ A;		
	Location:	☐ building	☐ equipment
	☒ N/A		
Equipment mobility	☐ movable	☐ hand-held	☐ transportable
	☐ direct plug-in	☒ stationary	☐ for building-in
	☐ wall/ceiling-mounted	☐ SRME/rack-mounted	
	☐ other:		
Overvoltage category (OVC)	☒ OVC I	☐ OVC II	☐ OVC III
	☐ OVC IV	☐ other:	
Class of equipment	☐ Class I	☐ Class II	☒ Class III
	☐ Not classified	☐	
Special installation location	☒ N/A	☐ restricted access area	
	☐ outdoor location	☐	
Pollution degree (PD)	☐ PD 1	☒ PD 2	☐ PD 3
Manufacturer's specified T_{ma}	40 °C	☐ Outdoor: minimum	°C
IP protection class	☒ IPX0	☐ IP__	
Power systems	☐ TN	☐ TT	☐ IT - V _{L-L}
	☒ not AC mains		
Altitude during operation (m)	☒ 2000 m or less	☐	m
Altitude of test laboratory (m)	☒ 2000 m or less	☐	m
Mass of equipment (kg)	1.5Kg		

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: 2024-01-05 (Original) 2026-05-15 (Modification 1) Date (s) of performance of tests: 2024-01-31 through 2024-02-08 (Original) 2026-06-04 through 2026-06-19 (Modification 1)	
General remarks: "(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 4.2.5 of IEC60335-1:	
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 Declaration provided.
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) : Models: P02RTCR, P04SNSR, P05BRLT, DAH501, DAH501R, DAH502, and DAH502R Dongguan Longmax Industries Ltd. Building 1, No. 5 Li Wei Road, Chang Ping Town, Dongguan City, Guangdong Province, China Models: PO9DCMP, P01ALRM, P03STEM, and DAT60X Key Joy Cable (Shenzhen) Limited 22, Xiacun Community second industrial area, Gongming sub-district, Guangming new area, Shenzhen City, Guangdong Province, China 518106	
General product information and other remarks: The 2300 series is used by a retailer to display, protect, and charge phones, Tablet, or watch. For the Wireless charging is accomplished with the Apple MFi Fast Watch Charger module, C962. If an unauthorized individual were to remove the product, such as those attempting to steal it, an alarm would sound to alert retail staff. The product includes an LED to indicate status, a piezo to indicate an alarm, and an interface for the InVue proprietary OneKEY system. The OneKEY is used by authorized personnel to silence alarms or disarm the product. Model Differences –	

Phone System 2300-H		Tablet System 2300-T		Watch System 2300-W		Digital Companion/ Sign Riser
Component	Model Name (SKU)	Component	Model Name (SKU)	Component	Model Name (SKU)	Model Name (SKU)
Power supply	PS566	Power supply	PS566	power supply	PS566	P09DCMP (DAT900)
Retractor	P02RTCR (DAR300)	Retractor	P02RTCR (DAR300)	Retractor	P02RTCR (DAR300)	
Alarm Module	P01ALRM (DAA400, DAA401)	Alarm Module	P01ALRM (DAA400, DAA401)	Alarm Module	P01ALRM (DAA400, DAA401)	
Long Stem	P03STEM (DAD150)	Long Stem	P03STEM (DAD150)	Watch Stem	P03STEM (DAD100)	
Phone Bracket Puck	DAH501 DAH502 DAH501R DAH502R	Tablet Bracket Puck	DAT60X	Watch Sensor Bracelet	P05BRLT (DAW700)	
Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	Sensor Puck	P04SNSR (DAS200)	
Phone Brackets	DAH5XX	Tablet Brackets	DAT6XX	Watch Brackets	DAW7XX	
Note - X indicates various sized mechanical differences which do not affect electrical design or testing						

Model	Shape	Region	Frequency (ies)
DAH501	Oval	Rest of World (non-China)	127 kHz & 360 kHz
DAH501R	Rectangular	Rest of World (non-China)	127 kHz & 360 kHz
DAH502	Oval	China only	127 kHz
DAH502R	Rectangular	China only	127 kHz

DAH501 and DAH501R are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for all global countries EXCEPT China. DAH502 and DAH502R are electrically identical, with difference being the shape (oval vs. rectangular), and employs Qi2 module for ONLY China.

Modification 1: The report no. 72193348-000 dated 2024-02-14 was modified to report no. 72193348-100 on 2026-06-29 to include the following changes:

- Replace phone bracket puck DAH500 with phone bracket pucks DAH501, DAH502, DAH501R, DAH502R with Qi2 wireless charging capability
- Add model DAA401 to Alarm Module P01ALRM, which has no impact to safety
- Change the factory site for models DAH501, DAH501R, DAH502, and DAH502R to the Longmax manufacturing site (#038257)
- Update the China National Differences to the latest revision
- Correct critical component list

Limited testing was conducted. Changes to this report are in bold text. This report was issued in its entirety.

OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	Possible Hazard			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
ES1: output power supply	Ordinary	N/A	N/A	N/A
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1 st S	2 nd S
PS2	All part in polymeric enclosure	N/A	N/A	UL 94-V0 enclosure.
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
None.	N/A	N/A	N/A	N/A
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1	Ordinary	N/A	N/A	N/A
9	Thermal burn			
Class and Energy Source (e.g. TS1: Keyboard caps)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
TS1: external parts did not exceed 84°C.	Ordinary.	N/A	N/A	N/A
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
RS1: No hazardous radiation	Ordinary	N/A	N/A	N/A
Supplementary Information:				
“B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard				

ENERGY SOURCE DIAGRAM

Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

☐ ES ☐ PS ☐ MS ☐ TS ☐ RS

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	Certified components are used in accordance with their ratings, certifications, and they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of 62368-1 and the relevant component standard. Components, for which no relevant standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of 62368-1.	P
4.1.2	Use of components	See above	P
4.1.3	Equipment design and construction	No parts of equipment can cause injury or property damage.	P
4.1.4	Specified ambient temperature for outdoor use (°C) :	Indoor use.	N/A
4.1.5	Constructions and components not specifically covered		N/A
4.1.8	Liquids and liquid filled components (LFC)	(See G.15) Not used.	N/A
4.1.15	Markings and instructions	(See Annex F)	P
4.4.3	Safeguard robustness	Not provided or required.	N/A
4.4.3.1	General		N/A
4.4.3.2	Steady force tests	(See Clause T.3, T.4, T.5)	N/A
4.4.3.3	Drop tests	ES1	N/A
4.4.3.4	Impact tests		N/A
4.4.3.5	Internal accessible safeguard tests	ES1 circuit.	N/A
4.4.3.6	Glass impact tests	(See Clause T.9, Annex U)	N/A
4.4.3.7	Glass fixation tests	None.	N/A
	Glass impact test (1J)		N/A
	Push/pull test (10 N)		N/A
4.4.3.8	Thermoplastic material tests	test required by T.8	P
4.4.3.9	Air comprising a safeguard		N/A
4.4.3.10	Accessibility, glass, safeguard effectiveness		N/A
4.4.4	Displacement of a safeguard by an insulating liquid		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.4.5	Safety interlocks	(See Annex K) Not provided or required.	N/A
4.5	Explosion		N/A
4.5.1	General	(See Annex M for batteries)	—
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	P
	No harm by explosion during single fault conditions	(See Clause B.4)	N/A
4.6	Fixing of conductors	ES1 circuit.	N/A
	Fix conductors not to defeat a safeguard		N/A
	Compliance is checked by test..... :	(See Clause T.2)	N/A
4.7	Equipment for direct insertion into mains socket-outlets		N/A
4.7.2	Mains plug part complies with relevant standard .. :	Not direct connection to mains.	N/A
4.7.3	Torque (Nm) :	See above.	N/A
4.8	Equipment containing coin/button cell batteries		N/A
4.8.1	General		N/A
4.8.2	Instructional safeguard :	Provided.	N/A
4.8.3	Battery compartment door/cover construction	Tool used to open cover.	N/A
	Open torque test		N/A
4.8.4.2	Stress relief test		N/A
4.8.4.3	Battery replacement test		N/A
4.8.4.4	Drop test		N/A
4.8.4.5	Impact test		N/A
4.8.4.6	Crush test		N/A
4.8.5	Compliance		N/A
	30N force test with test probe		N/A
	20N force test with test hook		N/A
4.9	Likelihood of fire or shock due to entry of conductive object		N/A
4.10	Component requirements		N/A
4.10.1	Disconnect Device	(See Annex L) ES1 circuit.	N/A
4.10.2	Switches and relays	(See Annex G) None.	N/A
5	ELECTRICALLY-CAUSED INJURY		P
5.2	Classification and limits of electrical energy sources		P
5.2.2	ES1, ES2 and ES3 limits	ES1 circuit.	P
5.2.2.2	Steady-state voltage and current limits :	(See appended table 5.2)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.3	Capacitance limits	(See appended table 5.2)	N/A
5.2.2.4	Single pulse limits	(See appended table 5.2)	N/A
5.2.2.5	Limits for repetitive pulses	(See appended table 5.2)	N/A
5.2.2.6	Ringing signals	(See Annex H), No ringing signals	N/A
5.2.2.7	Audio signals	(See Clause E.1) No audio signals	N/A
5.3	Protection against electrical energy sources		N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N/A
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits	ES1 derived from separately approved PSU output.	N/A
5.3.1 b)	Skilled persons not unintentional contact ES3 bare conductors		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards		N/A
	Accessibility to outdoor equipment bare parts		N/A
5.3.2.2	Contact requirements		N/A
	Test with test probe from Annex V		—
5.3.2.2 a)	Air gap – electric strength test potential (V)	(See appended table 5.4.9)	N/A
5.3.2.2 b)	Air gap – distance (mm)	—	N/A
5.3.2.3	Compliance		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		N/A
5.4.1.2	Properties of insulating material	ES1 circuit.	N/A
5.4.1.3	Material is non-hygroscopic		N/A
5.4.1.4	Maximum operating temperature for insulating materials	(See appended table)	N/A
5.4.1.5	Pollution degrees	—	N/A
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling test		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage	(See appended table 5.4.1.8)	N/A
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.10.2	Vicat test.....:	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure test	(See appended table 5.4.1.10.3)	N/A
5.4.2	Clearances	ES1 circuit.	N/A
5.4.2.1	General requirements		N/A
	Clearances in circuits connected to AC Mains, Alternative method	(See Annex X)	N/A
5.4.2.2	Procedure 1 for determining clearance		N/A
	Temporary overvoltage	—	—
5.4.2.3	Procedure 2 for determining clearance		N/A
5.4.2.3.2.2	a.c. mains transient voltage	Not connected to mains, ES1 circuit.	—
5.4.2.3.2.3	d.c. mains transient voltage	Not connected to mains, ES1 circuit.	—
5.4.2.3.2.4	External circuit transient voltage.....:	—	—
5.4.2.3.2.5	Transient voltage determined by measurement	—	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	(See appended table 5.4.2) ES1 Circuit.	N/A
5.4.2.5	Multiplication factors for clearances and test voltages	—	N/A
5.4.2.6	Clearance measurement	(See appended table 5.4.2)	N/A
5.4.3	Creepage distances	ES1 circuit.	N/A
5.4.3.1	General		N/A
5.4.3.3	Material group	—	—
5.4.3.4	Creepage distances measurement	(See appended table 5.4.3)	N/A
5.4.4	Solid insulation		N/A
5.4.4.1	General requirements		N/A
5.4.4.2	Minimum distance through insulation	(See appended table 5.4.4.2)	N/A
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Insulating compound forming cemented joints		N/A
5.4.4.6	Thin sheet material		N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs)	—	N/A
5.4.4.6.3	Non-separable thin sheet material		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Number of layers (pcs)	—	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material	(See appended table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz, E_P , K_R , d , V_{PW} (V)	(See appended Table 5.4.4.9)	N/A
	Alternative by electric strength test, tested voltage (V), K_R	(See appended Tables 5.4.4.9 and 5.4.9)	N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
5.4.5.3	Insulation resistance (M Ω)	ES1 circuit.	N/A
	Electric strength test	(See appended table 5.4.9)	N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		N/A
	Relative humidity (%), temperature (°C), duration (h)	—	—
5.4.9	Electric strength test	ES1 circuit.	N/A
5.4.9.1	Test procedure for type test of solid insulation	(See appended table 5.4.9)	N/A
5.4.9.2	Test procedure for routine test		N/A
5.4.10	Safeguards against transient voltages from external circuits		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test	(See appended table 5.4.9)	N/A
5.4.10.3	Verification for insulation breakdown for impulse test	—	N/A
5.4.11	Separation between external circuits and earth		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	SPDs bridge separation between external circuit and earth		N/A
	Rated operating voltage U_{op} (V)..... :	—	—
	Nominal voltage U_{peak} (V)..... :	—	—
	Max increase due to variation ΔU_{sp} :	—	—
	Max increase due to ageing ΔU_{sa} :	—	—
5.4.11.3	Test method and compliance :	(See appended table 5.4.9)	N/A
5.4.12	Insulating liquid		N/A
5.4.12.1	General requirements		N/A
5.4.12.2	Electric strength of an insulating liquid :	(See appended table 5.4.9)	N/A
5.4.12.3	Compatibility of an insulating liquid :	(See appended table 5.4.9)	N/A
5.4.12.4	Container for insulating liquid :	—	N/A
5.5	Components as safeguards		N/A
5.5.1	General		N/A
5.5.2	Capacitors and RC units		N/A
5.5.2.1	General requirement		N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector :	(See appended table 5.5.2.2)	N/A
5.5.3	Transformers		N/A
5.5.4	Optocouplers	(See sub-clause 5.4 or Clause G.12)	N/A
5.5.5	Relays	(See sub-clause 5.4)	N/A
5.5.6	Resistors	(See Clause G.10)	N/A
5.5.7	SPDs	(See Clause G.8)	N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable :	—	N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment		N/A
	RCD rated residual operating current (mA) :	—	—
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6	Protective conductor	ES1 circuit.	N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm ²) :	—	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Protective earthing conductor serving as a reinforced safeguard		N/A
	Protective earthing conductor serving as a double safeguard		N/A
5.6.4	Requirements for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm ²). : —	—	—
5.6.4.2	Protective current rating (A) : —	—	N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Terminal size for connecting protective earthing conductors (mm) : —	—	N/A
	Terminal size for connecting protective bonding conductors (mm) : —	—	N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective bonding system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method : (See appended table 5.6.6)		N/A
5.6.6.3	Resistance (Ω) or voltage drop : (See appended table 5.6.6)		N/A
5.6.7	Reliable connection of a protective earthing conductor		N/A
5.6.8	Functional earthing		N/A
	Conductor size (mm ²) : —	—	N/A
	Class II with functional earthing marking : —	—	N/A
	Appliance inlet cl & cr (mm) : —	—	N/A
5.7	Prospective touch voltage, touch current and protective conductor current		N/A
5.7.2	Measuring devices and networks		N/A
5.7.2.1	Measurement of touch current	ES1 circuit.	N/A
5.7.2.2	Measurement of voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
5.7.4	Unearthed accessible parts : (See appended table 5.7.4)		N/A
5.7.5	Earthed accessible conductive parts : (See appended table 5.7.5)		N/A
5.7.6	Requirements when touch current exceeds ES2 limits		N/A
	Protective conductor current (mA) : —	—	N/A
	Instructional Safeguard : —	—	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.7	Prospective touch voltage and touch current associated with external circuits		N/A
5.7.7.1	Touch current from coaxial cables		N/A
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment connected to earthed external circuits, current (mA)	—	N/A
	b) Equipment connected to unearthed external circuits, current (mA)	—	N/A
5.8	Backfeed safeguard in battery backed up supplies		N/A
	Mains terminal ES	(See appended table 5.8)	N/A
	Air gap (mm).....	None.	N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of PS and PIS		P
6.2.2	Power source circuit classifications	(See appended table 6.2.2) PS1 and PS2 supplied from Separately approved PSU	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS	(See appended table 6.2.3.1)	N/A
6.2.3.2	Resistive PIS	(See appended table 6.2.3.2)	N/A
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials	(See appended table B.1.5 and B.3) ES1/PS2 circuit.	N/A
	Combustible materials outside fire enclosure	—	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard method		P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits	PS2	N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	UL 94-V0 enclosure, and UL 94-V0 PWB for PS2 circuit.	P
6.4.3.1	Supplementary safeguards		N/A
6.4.3.2	Single Fault Conditions	(See appended table B.4)	N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits	PS2.	N/A
6.4.5	Control of fire spread in PS2 circuits	UL 94-V0 enclosure, and UL 94-V0 PWB for PS2 circuit.	P
6.4.5.2	Supplementary safeguards		N/A
6.4.6	Control of fire spread in PS3 circuits	PS2 circuits.	N/A
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		N/A
6.4.8.2	Fire enclosure and fire barrier material properties		N/A
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		N/A
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.3.1	Fire enclosure and fire barrier openings	No openings.	N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top openings and properties		N/A
	Openings dimensions (mm)..... :	—	N/A
6.4.8.3.4	Bottom openings and properties		N/A
	Openings dimensions (mm)..... :	—	N/A
	Flammability tests for the bottom of a fire enclosure	(See Clause S.3)	N/A
	Instructional Safeguard..... :	—	N/A
6.4.8.3.5	Side openings and properties		N/A
	Openings dimensions (mm)..... :	—	N/A
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c)..... :	—	N/A
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating..... :	—	N/A
6.4.9	Flammability of insulating liquid..... :	—	N/A
6.5	Internal and external wiring		N/A
6.5.1	General requirements		N/A
6.5.2	Requirements for interconnection to building wiring..... :	—	N/A
6.5.3	Internal wiring size (mm ²) for socket-outlets..... :	—	N/A
6.6	Safeguards against fire due to the connection to additional equipment		N/A

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards or personal protective equipment (PPE)		N/A
	Personal safeguards and instructions..... :	—	—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)..... :	—	—
7.6	Batteries and their protection circuits		P

8	MECHANICALLY-CAUSED INJURY		P
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.4.1	Safeguards	No parts with sharp edges or corners.	P
	Instructional Safeguard.....:	—	N/A
8.4.2	Sharp edges or corners		P
8.5	Safeguards against moving parts		N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts	No moving parts.	N/A
	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	Moving MS3 parts only accessible to skilled person		N/A
8.5.2	Instructional safeguard.....:	—	N/A
8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A
8.5.4.2	Equipment containing work cells with MS3 parts	None.	N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Access protection override		N/A
8.5.4.2.2.1	Override system		N/A
8.5.4.2.2.2	Visual indicator		N/A
8.5.4.2.3	Emergency stop system	None.	N/A
	Maximum stopping distance from the point of activation (m).....:	—	N/A
	Space between end point and nearest fixed mechanical part (mm)	—	N/A
8.5.4.2.4	Endurance requirements		N/A
	Mechanical system subjected to 100 000 cycles of operation		N/A
	- Mechanical function check and visual inspection		N/A
	- Cable assembly	—	N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A
8.5.4.3.1	Equipment safeguards		N/A
8.5.4.3.2	Instructional safeguards against moving parts	—	N/A
8.5.4.3.3	Disconnection from the supply		N/A
8.5.4.3.4	Cut type and test force (N).....:	—	N/A
8.5.4.3.5	Compliance		N/A
8.5.5	High pressure lamps	None.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Explosion test.....:	—	N/A
8.5.5.3	Glass particles dimensions (mm)	—	N/A
8.6	Stability of equipment		N/A
8.6.1	General	Stationary equipment.	N/A
	Instructional safeguard.....:	—	N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test	—	N/A
8.6.2.3	Downward force test		N/A
8.6.3	Relocation stability		N/A
	Wheels diameter (mm)	—	—
	Tilt test		N/A
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test.....:	—	N/A
8.7	Equipment mounted to wall, ceiling or other structure		N/A
8.7.1	Mount means type	Not such equipment.	N/A
8.7.2	Test methods		N/A
	Test 1, additional downwards force (N).....:	—	N/A
	Test 2, number of attachment points and test force (N).....:	—	N/A
	Test 3 Nominal diameter (mm) and applied torque (Nm).....:	—	N/A
8.8	Handles strength		N/A
8.8.1	General	MS1 equipment mass.	N/A
8.8.2	Handle strength test		N/A
	Number of handles.....:	—	—
	Force applied (N)	—	—
8.9	Wheels or casters attachment requirements		N/A
8.9.2	Pull test		N/A
8.10	Carts, stands and similar carriers		N/A
8.10.1	General	None.	N/A
8.10.2	Marking and instructions.....:	—	N/A
8.10.3	Cart, stand or carrier loading test		N/A
	Loading force applied (N)	—	N/A
8.10.4	Cart, stand or carrier impact test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.10.5	Mechanical stability		N/A
	Force applied (N):	—	—
8.10.6	Thermoplastic temperature stability		N/A
8.11	Mounting means for slide-rail mounted equipment (SRME)		N/A
8.11.1	General	Not such equipment.	N/A
8.11.2	Requirements for slide rails		N/A
	Instructional Safeguard:	—	N/A
8.11.3	Mechanical strength test		N/A
8.11.3.1	Downward force test, force (N) applied:	—	N/A
8.11.3.2	Lateral push force test		N/A
8.11.3.3	Integrity of slide rail end stops		N/A
8.11.4	Compliance		N/A
8.12	Telescoping or rod antennas		N/A
	Button/ball diameter (mm):	—	—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications		P
9.3	Touch temperature limits		P
9.3.1	Touch temperatures of accessible parts:	(See appended table)	P
9.3.2	Test method and compliance	TS1: external temperature did not exceed 84°C.	P
9.4	Safeguards against thermal energy sources		N/A
9.5	Requirements for safeguards		N/A
9.5.1	Equipment safeguard		N/A
9.5.2	Instructional safeguard.....:	—	N/A
9.6	Requirements for wireless power transmitters		P
9.6.1	General		P
9.6.2	Specification of the foreign objects		P
9.6.3	Test method and compliance:	(See appended table 9.6)	P

10	RADIATION		N/A
10.2	Radiation energy source classification		N/A
10.2.1	General classification	No hazardous radiation.	N/A
	Lasers:	—	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Lamps and lamp systems	—	—
	Image projectors	—	—
	X-Ray	—	—
	Personal music player	—	—
10.3	Safeguards against laser radiation		N/A
	The standard(s) equipment containing laser(s) comply	—	N/A
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)		N/A
10.4.1	General requirements		N/A
	Instructional safeguard provided for accessible radiation level needs to exceed		N/A
	Risk group marking and location	—	N/A
	Information for safe operation and installation		N/A
10.4.2	Requirements for enclosures		N/A
	UV radiation exposure	(See Annex C)	N/A
10.4.3	Instructional safeguard	—	N/A
10.5	Safeguards against X-radiation		N/A
10.5.1	Requirements		N/A
	Instructional safeguard for skilled persons	—	—
10.5.3	Maximum radiation (pA/kg)	(See appended tables B.3 & B.4)	—
10.6	Safeguards against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output $L_{Aeq,T}$, dB(A)	—	N/A
	Unweighted RMS output voltage (mV)	—	N/A
	Digital output signal (dBFS)	—	N/A
10.6.3	Requirements for dose-based systems		N/A
10.6.3.1	General requirements		N/A
10.6.3.2	Dose-based warning and automatic decrease		N/A
10.6.3.3	Exposure-based warning and requirements		N/A
	30 s integrated exposure level (MEL30)	—	N/A
	Warning for MEL ≥ 100 dB(A)	—	N/A
10.6.4	Measurement methods		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.6.5	Protection of persons		N/A
	Instructional safeguards	—	N/A
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	Listening device input voltage (mV).....	—	N/A
10.6.6.2	Corded listening devices with digital input		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A)	—	N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A)	—	N/A

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.1	General		P
B.1.5	Temperature measurement conditions	(See appended table B.1.5)	P
B.2	Normal operating conditions		P
B.2.1	General requirements	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers	(See Annex E) No audio Amplifier.	N/A
B.2.3	Supply voltage and tolerances	Supplied by separately approved PSU.	N/A
B.2.5	Input test	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		N/A
B.3.1	General	No abnormal operation identified.	N/A
B.3.2	Covering of ventilation openings	No openings within the enclosure.	N/A
	Instructional safeguard	—	N/A
B.3.3	DC mains polarity test	Not connected to D.C mains.	N/A
B.3.4	Setting of voltage selector		N/A
B.3.5	Maximum load at output terminals		N/A
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	(See appended table B.3)	N/A
B.4	Simulated single fault conditions		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.1	General		N/A
B.4.2	Temperature controlling device		N/A
B.4.3	Blocked motor test	No motor used.	N/A
B.4.4	Functional insulation		N/A
B.4.4.1	Short circuit of clearances for functional insulation		N/A
B.4.4.2	Short circuit of creepage distances for functional insulation		N/A
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnection of passive components		N/A
B.4.7	Continuous operation of components		N/A
B.4.8	Compliance during and after single fault conditions :	(See appended table B.4)	N/A
B.4.9	Battery charging and discharging under single fault conditions	(See Annex M)	N/A
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements	No such radiation.	N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus..... :	—	N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure test		N/A
C.2.4	Xenon-arc light-exposure test		N/A
D	TEST GENERATORS		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Electrical energy source classification for audio signals		N/A
	Maximum non-clipped output power (W)..... :	No audio signals.	—
	Rated load impedance (Ω) :	—	—
	Open-circuit output voltage (V)..... :	—	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional safeguard	See Clause F.5	—
E.2	Audio amplifier normal operating conditions		N/A
	Audio signal source type	—	—
	Audio output power (W)	—	—
	Audio output voltage (V)	—	—
	Rated load impedance (Ω)	—	—
	Requirements for temperature measurement	(See Table B.1.5)	N/A
E.3	Audio amplifier abnormal operating conditions	(See Table B.3, B.4)	N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General		P
	Language	English version provided.	—
F.2	Letter symbols and graphical symbols		N/A
F.2.1	Letter symbols according to IEC60027-1		N/A
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific		N/A
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification	Refer to name plate.	P
F.3.2.2	Model identification	Refer to name plate.	P
F.3.3	Equipment rating markings	Not connected to mains.	P
F.3.3.1	Equipment with direct connection to mains		N/A
F.3.3.2	Equipment without direct connection to mains	Considered.	P
F.3.3.3	Nature of the supply voltage	Not connected to mains.	N/A
F.3.3.4	Rated voltage	Not connected to mains.	N/A
F.3.3.5	Rated frequency	Not connected to mains.	N/A
F.3.3.6	Rated current or rated power	Not connected to mains.	N/A
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings	—	N/A
F.3.5.2	Switch position identification marking	None.	N/A
F.3.5.3	Replacement fuse identification and rating markings	—	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional safeguards for neutral fuse	—	N/A
F.3.5.4	Replacement battery identification marking	No replacement of battery pack.	N/A
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		N/A
F.3.6.1	Class I equipment	ES1 circuit.	N/A
F.3.6.1.1	Protective earthing conductor terminal	—	N/A
F.3.6.1.2	Protective bonding conductor terminals	—	N/A
F.3.6.2	Equipment class marking	—	N/A
F.3.6.3	Functional earthing terminal marking	—	N/A
F.3.7	Equipment IP rating marking	IPX0	N/A
F.3.8	External power supply output marking	—	N/A
F.3.9	Durability, legibility and permanence of marking		N/A
F.3.10	Test for permanence of markings		N/A
F.4	Instructions		P
	a) Information prior to installation and initial use		P
	b) Equipment for use in locations where children not likely to be present	No coin cell battery.	N/A
	c) Instructions for installation and interconnection		P
	d) Equipment intended for use only in restricted access area		N/A
	e) Equipment intended to be fastened in place		P
	f) Instructions for audio equipment terminals		N/A
	g) Protective earthing used as a safeguard	ES1 circuit.	N/A
	h) Protective conductor current exceeding ES2 limits		N/A
	i) Graphic symbols used on equipment		N/A
	j) Permanently connected equipment not provided with all-pole mains switch		N/A
	k) Replaceable components or modules providing safeguard function		N/A
	l) Equipment containing insulating liquid	None.	N/A
	m) Installation instructions for outdoor equipment		N/A
F.5	Instructional safeguards		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G	COMPONENTS		N/A
G.1	Switches		N/A
G.1.1	General		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.1.3	Test method and compliance		N/A
G.2	Relays		N/A
G.2.1	Requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supplying power to other equipment		N/A
G.2.4	Test method and compliance		N/A
G.3	Protective devices		N/A
G.3.1	Thermal cut-offs		N/A
	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Test method and compliance		N/A
G.3.2	Thermal links		N/A
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics		N/A
	b) Thermal links tested as part of the equipment		N/A
G.3.2.2	Test method and compliance		N/A
G.3.3	PTC thermistors		N/A
G.3.4	Overcurrent protection devices		N/A
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions..... :	(See appended table B.4)	N/A
G.4	Connectors		N/A
G.4.1	Spacings		N/A
G.4.2	Mains connector configuration :	—	N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	Wound components		N/A
G.5.1	Wire insulation in wound components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.1.2	Protection against mechanical stress		N/A
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Test time (days per cycle)	—	—
	Test temperature (°C).....	—	—
G.5.2.3	Wound components supplied from the mains		N/A
G.5.2.4	No insulation breakdown		N/A
G.5.3	Transformers		N/A
G.5.3.1	Compliance method.....	—	N/A
	Position	—	N/A
	Method of protection.....	—	N/A
G.5.3.2	Insulation		N/A
	Protection from displacement of windings.....	—	—
G.5.3.3	Transformer overload tests		N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding temperatures		N/A
G.5.3.3.3	Winding temperatures - alternative test method		N/A
G.5.3.4	Transformers using FIW		N/A
G.5.3.4.1	General		N/A
	FIW wire nominal diameter	—	—
G.5.3.4.2	Transformers with basic insulation only		N/A
G.5.3.4.3	Transformers with double insulation or reinforced insulation.....	—	N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core		N/A
G.5.3.4.5	Thermal cycling test and compliance		N/A
G.5.3.4.6	Partial discharge test		N/A
G.5.3.4.7	Routine test		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
G.5.4.2	Motor overload test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4.2	Locked-rotor overload test		N/A
	Test duration (days)	—	—

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.5	Running overload test for DC motors		N/A
G.5.4.5.2	Tested in the unit		N/A
G.5.4.5.3	Alternative method		N/A
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature :	—	N/A
G.5.4.6.3	Alternative method		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage :	—	—
G.6	Wire Insulation		N/A
G.6.1	General		N/A
G.6.2	Enamelled winding wire insulation		N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type..... :	ES1 circuit.	—
G.7.2	Cross sectional area (mm ² or AWG) :	—	N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)..... :	—	N/A
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm) :	—	N/A
G.7.3.2.4	Strain relief and cord anchorage material		N/A
G.7.4	Cord Entry		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Test method and compliance		N/A
	Overall diameter or minor overall dimension, <i>D</i> (mm) :	—	—
	Radius of curvature after test (mm)..... :	—	—
G.7.6	Supply wiring space		N/A
G.7.6.1	General requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements		N/A
G.7.6.2.2	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguards against fire		N/A
G.8.2.1	General		N/A
G.8.2.2	Varistor overload test		N/A
G.8.2.3	Temporary overvoltage test		N/A
G.9	Integrated circuit (IC) current limiters		N/A
G.9.1	Requirements	None.	N/A
	IC limiter output current (max. 5A) :	—	—
	Manufacturers' defined drift :	—	—
G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
G.10	Resistors		N/A
G.10.1	General		N/A
G.10.2	Conditioning		N/A
G.10.3	Resistor test		N/A
G.10.4	Voltage surge test		N/A
G.10.5	Impulse test		N/A
G.10.6	Overload test		N/A
G.11	Capacitors and RC units		N/A
G.11.1	General requirements		N/A
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5 with specifics		N/A
	Type test voltage $V_{ini,a}$:	—	—
	Routine test voltage, $V_{ini,b}$:	—	—
G.13	Printed boards		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards	Uses UL94-V0 PWB.	P
G.13.3	Coated printed boards	Not relied upon for safety.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.13.4	Insulation between conductors on the same inner surface		N/A
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation :	—	N/A
	Number of insulation layers (pcs) :	—	—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements :	(See Clause G.13)	N/A
G.15	Pressurized liquid filled components		N/A
G.15.1	Requirements		N/A
G.15.2	Test methods and compliance		N/A
G.15.2.1	Hydrostatic pressure test		N/A
G.15.2.2	Creep resistance test		N/A
G.15.2.3	Tubing and fittings compatibility test		N/A
G.15.2.4	Vibration test		N/A
G.15.2.5	Thermal cycling test		N/A
G.15.2.6	Force test		N/A
G.15.3	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
G.16.1	Condition for fault tested is not required		N/A
	ICX with associated circuitry Accepted in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		N/A
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test..... :	—	—
	Mains voltage that impulses to be superimposed on :	—	—
	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test :	—	—
G.16.3	Capacitor discharge test..... :	—	N/A
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
H.3.1	Ringling signal	No ringing signals.	N/A
H.3.1.1	Frequency (Hz) :	—	—
H.3.1.2	Voltage (V) :	—	—
H.3.1.3	Cadence; time (s) and voltage (V) :	—	—
H.3.1.4	Single fault current (mA): :	—	—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V) :	—	N/A
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N/A
J.1	General		N/A
	Winding wire insulation :	ES1 circuit.	—
	Solid round winding wire, diameter (mm) :	—	N/A
	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm ²) :	—	N/A
J.2/J.3	Tests and Manufacturing	(See separate test report)	—
K	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
	Instructional safeguard :	None.	N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
K.5.1	Under single fault condition		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance :	—	N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements		N/A
	In circuit connected to mains, separation distance for contact gaps (mm) :	—	N/A
	In circuit isolated from mains, separation distance for contact gaps (mm) :	—	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test before and after the test of K.7.2	(See appended table 5.4.9)	N/A
K.7.2	Overload test, Current (A)	—	N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		N/A
L.1	General requirements	ES1 equipment not connected to mains.	N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single-phase equipment		N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
	Instructional safeguard	—	N/A
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		P
M.1	General requirements		P
M.2	Safety of batteries and their cells		P
M.2.1	Batteries and their cells comply with relevant IEC standards	Separately approved battery pack with its protection. (PS1)	P
M.3	Protection circuits for batteries provided within the equipment	Not provided within equipment.	N/A
M.3.1	Requirements		N/A
M.3.2	Test method		N/A
	Overcharging of a rechargeable battery		N/A
	Excessive discharging		N/A
	Unintentional charging of a non-rechargeable battery		N/A
	Reverse charging of a rechargeable battery		N/A
M.3.3	Compliance	(See appended table M.3)	N/A
M.4	Additional safeguards for equipment containing a portable secondary lithium battery		N/A
M.4.1	General	Not a portable equipment.	N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.2	Compliance..... :	(See appended table M.4.2)	N/A
M.4.3	Fire enclosure..... :	—	N/A
M.4.4	Drop test of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation and procedure for the drop test		N/A
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%): :	—	N/A
M.4.4.4	Check of the charge/discharge function		N/A
M.4.4.5	Charge / discharge cycle test		N/A
M.4.4.6	Compliance		N/A
M.5	Risk of burn due to short-circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Test method and compliance		N/A
M.6	Safeguards against short-circuits		N/A
M.6.1	External and internal faults		N/A
M.6.2	Compliance		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
	Calculated hydrogen generation rate :	Lithium battery pack used.	N/A
M.7.2	Test method and compliance		N/A
	Minimum air flow rate, Q (m ³ /h)..... :	—	N/A
M.7.3	Ventilation tests		N/A
M.7.3.1	General		N/A
M.7.3.2	Ventilation test – alternative 1		N/A
	Hydrogen gas concentration (%)..... :	—	N/A
M.7.3.3	Ventilation test – alternative 2		N/A
	Obtained hydrogen generation rate..... :	—	N/A
M.7.3.4	Ventilation test – alternative 3		N/A
	Hydrogen gas concentration (%)..... :	—	N/A
M.7.4	Marking..... :	—	N/A
M.8	Protection against internal ignition from external spark sources of batteries with aqueous electrolyte		N/A
M.8.1	General		N/A
M.8.2	Test method		N/A
M.8.2.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s)	Lithium battery pack used.	—
M.8.2.3	Correction factors	—	—
M.8.2.4	Calculation of distance d (mm)	—	—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse		N/A
	Instructional safeguard	—	N/A
N	ELECTROCHEMICAL POTENTIALS		N/A
	Material(s) used	ES1 circuit.	—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		N/A
	Value of X (mm).....	ES1 circuit.	—
P	SAFEGUARDS AGAINST CONDUCTIVE OBJECTS		N/A
P.1	General		N/A
P.2	Safeguards against entry or consequences of entry of a foreign object		N/A
P.2.1	General	ES1 Circuit and no openings in enclosure.	N/A
P.2.2	Safeguards against entry of a foreign object		N/A
	Location and Dimensions (mm)	—	—
P.2.3	Safeguards against the consequences of entry of a foreign object		N/A
P.2.3.1	Safeguard requirements		N/A
	The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment		N/A
	Transportable equipment with metalized plastic parts.....	—	N/A
P.2.3.2	Consequence of entry test.....	—	N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance		N/A
P.4	Metallized coatings and adhesives securing parts		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditioning, T _c (°C)	—	—
	Duration (weeks)	—	—
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		N/A
Q.1	Limited power sources	Not connected to building wires.	N/A
Q.1.1	Requirements		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output		N/A
	d) Overcurrent protective device limited output		N/A
	e) IC current limiter complying with G.9		N/A
Q.1.2	Test method and compliance	(See appended table Q.1)	N/A
	Current rating of overcurrent protective device (A)	—	N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)	—	N/A
	Current limiting method	—	—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General		N/A
R.2	Test setup		N/A
	Overcurrent protective device for test	—	—
R.3	Test method		N/A
	Cord/cable used for test	—	—
R.4	Compliance		N/A
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material	ES1 circuit.	—
	Wall thickness (mm)	—	—
	Conditioning (°C)	—	—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material	—	—
	Wall thickness (mm)	—	—
	Conditioning (°C)	—	—
S.3	Flammability test for the bottom of a fire enclosure		N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance		N/A
	Mounting of samples	—	—
	Wall thickness (mm)	—	—
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady state power exceeding 4 000 W		N/A
	Samples, material	—	—
	Wall thickness (mm)	—	—
	Conditioning (°C)	—	—
T	MECHANICAL STRENGTH TESTS		P
T.1	General		P
T.2	Steady force test, 10 N	(See appended table T.2)	N/A
T.3	Steady force test, 30 N	(See appended table T.3)	N/A
T.4	Steady force test, 100 N	(See appended table T.4)	N/A
T.5	Steady force test, 250 N	(See appended table T.5)	N/A
T.6	Enclosure impact test	(See appended table T.6)	N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test	(See appended table T.7)	N/A
T.8	Stress relief test.....	(See appended table T.8)	N/A
T.9	Glass Impact Test	(See appended table T.9)	N/A
T.10	Glass fragmentation test		N/A
	Number of particles counted.....	—	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)	—	N/A
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional safeguard :	—	N/A
U.2	Test method and compliance for non-intrinsically protected CRTs		N/A
U.3	Protective screen		N/A
V	DETERMINATION OF ACCESSIBLE PARTS		N/A
V.1	Accessible parts of equipment		N/A
V.1.1	General		N/A
V.1.2	Surfaces and openings tested with jointed test probes		N/A
V.1.3	Openings tested with straight unjointed test probes		N/A
V.1.4	Plugs, jacks, connectors tested with blunt probe		N/A
V.1.5	Slot openings tested with wedge probe		N/A
V.1.6	Terminals tested with rigid test wire		N/A
V.2	Accessible part criterion		N/A
X	ALTERNATIVE METHOD FOR DETERMINING CLEARANCES FOR INSULATION IN CIRCUITS CONNECTED TO AN AC MAINS NOT EXCEEDING 420 V PEAK (300 V RMS)		N/A
	Clearance : (See appended table X)		N/A
Y	CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES		N/A
Y.1	General	Indoor use.	N/A
Y.2	Resistance to UV radiation		N/A
Y.3	Resistance to corrosion		N/A
Y.3	Resistance to corrosion		N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by :	—	N/A
Y.3.2	Test apparatus		N/A
Y.3.3	Water – saturated sulphur dioxide atmosphere		N/A
Y.3.4	Test procedure :	—	N/A
Y.3.5	Compliance		N/A
Y.4	Gaskets		N/A
Y.4.1	General		N/A
Y.4.2	Gasket tests		N/A
Y.4.3	Tensile strength and elongation tests		N/A
	Alternative test methods :	—	N/A
Y.4.4	Compression test		N/A
Y.4.5	Oil resistance		N/A
Y.4.6	Securing means	(See Annex P.4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Y.5	Protection of equipment within an outdoor enclosure		N/A
Y.5.1	General		N/A
Y.5.2	Protection from moisture		N/A
	Relevant tests of IEC 60529 or Y.5.3 : —		N/A
Y.5.3	Water spray test		N/A
Y.5.4	Protection from plants and vermin		N/A
Y.5.5	Protection from excessive dust		N/A
Y.5.5.1	General		N/A
Y.5.5.2	IP5X equipment		N/A
Y.5.5.3	IP6X equipment		N/A
Y.6	Mechanical strength of enclosures		N/A
Y.6.1	General		N/A
Y.6.2;l	Impact test : (See Table T.6)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Classification of electrical energy sources						P
Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters				ES Class
			U (V)	I (mA)	Type ¹⁾	Additional Info ²⁾	
20Vdc	Output power supply						ES1
24Vdc	Output from power supply PS566						ES1
Supplementary information:							
1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.							
2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.							

5.4.1.8	TABLE: Working voltage measurement				N/A
Location		RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comments
Supplementary information:					
ES1 circuit.					

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics			N/A
Method.....:		ISO 306 / B50		—
Object/ Part No./Material	Manufacturer/trademark	Thickness (mm)	T softening (°C)	
Supplementary information:				
Separately approved Components and ES1 circuit.				

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics				N/A
Allowed impression diameter (mm).....:			≤ 2 mm		—
Object/Part No./Material	Manufacturer/trademark	Thickness (mm)	Test temperature (°C)	Impression diameter (mm)	
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict
ES1 circuit.			

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.2, 5.4.3	TABLE: Minimum Clearances/Creepage distance							N/A
Clearance (cl) and creepage distance (cr) at/of/between:	U_p (V)	U_{rms} (V)	Freq ¹⁾ (Hz)	Required cl (mm)	cl (mm)	E.S. ²⁾ (V)	Required cr (mm)	cr (mm)
Supplementary information:								
1) Only for frequency above 30 kHz								
2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied)								
ES1 circuit.								

5.4.4.2	TABLE: Minimum distance through insulation				N/A
Distance through insulation (DTI) at/of	Peak voltage (V)	Insulation	Required DTI (mm)	Measured DTI (mm)	
Supplementary information:.					
ES1 circuit					

5.4.4.9	TABLE: Solid insulation at frequencies >30 kHz						N/A
Insulation material	E_P	Frequency (kHz)	K_R	Thickness d (mm)	Insulation	V_{PW} (Vpk)	
Supplementary information:							
ES1 circuit.							

5.4.9	TABLE: Electric strength tests				N/A
Test voltage applied between:	Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)	Breakdown Yes / No		
Supplementary information:					
ES1 circuit.					

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Clause	Requirement + Test	Result - Remark	Verdict

5.5.2.2	TABLE: Stored discharge on capacitors					N/A
Location	Supply voltage (V)	Operating and fault condition ¹⁾	Switch position	Measured voltage (Vpk)	ES Class	
Supplementary information:						
X-capacitors installed for testing:						
[] bleeding resistor rating:						
[] ICX:						
1) Normal operating condition (e.g., normal operation, or open fuse), SC= short circuit, OC= open circuit ES1 circuit.						

5.6.6	TABLE: Resistance of protective conductors and terminations					N/A
Location	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)		
Supplementary information:						
ES1 circuit.						

5.7.4	TABLE: Unearthed accessible parts					N/A
Location	Operating and fault conditions	Supply Voltage (V)	Parameters			ES class
			Voltage (V _{rms} or V _{pk})	Current (A _{rms} or A _{pk})	Freq. (Hz)	
Supplementary information:						
Abbreviation: SC= short circuit; OC= open circuit						
ES1 circuit.						

5.7.5	TABLE: Earthed accessible conductive part				N/A
Supply voltage (V) :					—
Phase(s) :		[] Single Phase; [] Three Phase: [] Delta [] Wye			
Power Distribution System :		[] TN [] TT [] IT			
Location		Fault Condition No in IEC 60990 clause 6.2.2	Touch current (mA)	Comment	
Supplementary Information:					

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Clause	Requirement + Test	Result - Remark	Verdict

ES1 circuit.

5.8	TABLE: Backfeed safeguard in battery backed up supplies					N/A
Location	Supply voltage (V)	Operating and fault condition	Time (s)	Open-circuit voltage (V)	Touch current (A)	ES Class
Supplementary information:						
Abbreviation: SC= short circuit, OC= open circuit						
None						

6.2.2	TABLE: Power source circuit classifications					N/A
Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power ¹⁾ (W)	Time (S)	PS class
Supplementary information:						
Abbreviation: SC= short circuit; OC= open circuit						
1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3.						
PS2 considered.						

6.2.3.1	TABLE: Determination of Arcing PIS				N/A
Location	Open circuit voltage after 3 s (Vpk)	Measured r.m.s current (A)	Calculated value	Arcing PIS? Yes / No	
Supplementary information:					

6.2.3.2	TABLE: Determination of resistive PIS			N/A
Location		Operating and fault condition	Dissipate power (W)	Arcing PIS? Yes / No
Supplementary information:				
Abbreviation: SC= short circuit; OC= open circuit				

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Clause	Requirement + Test	Result - Remark	Verdict

8.5.5	TABLE: High pressure lamp				N/A
Lamp manufacturer	Lamp type	Explosion method	Longest axis of glass particle (mm)	Particle found beyond 1 m Yes / No	
Supplementary information:					
Not used.					

9.6	TABLE: Temperature measurements for wireless power transmitters							P
Supply voltage (V)..... :				20Vdc				—
Max. transmit power of transmitter (W)..... :				100				—
Foreign objects	w/o receiver and direct contact		with receiver and direct contact		with receiver and at distance of 2 mm		with receiver and at distance of 5 mm	
	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)
Steel Disc	21.7	21.0	33.4	21.8	33.0	21.8	31.0	21.8
Aluminum Ring	22.0	21.0	36.4	21.8	34.0	21.8	32.0	21.8
Aluminum Foil	24.0	21.4	38.0	21.8	36.0	21.8	33.0	21.8
Supplementary information:								

9.6	TABLE: Temperature measurements for wireless power transmitters							P
Supply voltage (V)..... :				24VDC				—
Max. transmit power of transmitter (W)..... :				15W				—
Foreign objects	w/o receiver and direct contact		with receiver and direct contact		with receiver and at distance of 2 mm		with receiver and at distance of 5 mm	
	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)
Steel Disc	25.7	25.1	47.6	24.4	51.9	24.8	54.5	24.1
Aluminum Ring	22.5	24.6	49.1	24.6	57.0	24.3	54.1	24.7
Aluminum Foil	22.8	24.2	45.4	24.6	42.9	24.8	51.0	24.3
Supplementary information:								
Transmitter was supplied power, then foreign object was added (Part A). Sensor button was left pressed down for each cycle. iPhone Air was used as the receiver. Tested on puck DAH501, as it was considered the worst case for power consumption.								

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Clause	Requirement + Test	Result - Remark	Verdict

9.6	TABLE: Temperature measurements for wireless power transmitters							P
Supply voltage (V)..... :				24VDC				—
Max. transmit power of transmitter (W)..... :				15W				—
Foreign objects	w/o receiver and direct contact		with receiver and direct contact		with receiver and at distance of 2 mm		with receiver and at distance of 5 mm	
	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)
Steel Disc	22.6	23.1	36.9	22.6	60.5	23.2	53.4	22.6
Aluminum Ring	22.4	22.6	39.9	22.5	54.1	23.0	52.7	22.5
Aluminum Foil	23.9	22.4	41.3	23.1	47.4	23.5	59.9	23.1
Supplementary information:								
Foreign object was added first, then the transmitter was supplied power (Part B). Sensor button was left pressed down for each cycle. iPhone Air was used as the receiver. Tested on puck DAH501, as it was considered the worst case for power consumption.								

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements-							P
Supply voltage (V)..... :				5.0Vdc(1)		3Vdc(Battery)		—
Ambient temperature during test T_{amb} (°C) :				23.2		23.5		—
Maximum measured temperature T of part/at:				T (°C)				Allowed T_{max} (°C)
Ambient				23.2	40.0	23.5	40.0	—
T1 DAA400				43.9	60.7	43.4	59.9	85
C17_DAA400				49.2	66.0	49.1	65.6	85
L2_DAA400				69.5	86.3	70.7	87.2	105
PCB NearC63_DAA400				42.8	59.6	42.4	58.9	85
Enclosure surface inside under battery				41.4	58.2	41.0	57.5	77
PCB under battery				50.5	67.3	50.4	66.9	77
Enclosure outside				32.3	49.1	31.5	48.0	105
Stand surface				32.1	48.9	30.7	47.2	70
Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class	
Supplementary information:								
Refer to summary of testing for MNL.								

IEC 62368-1							
Clause	Requirement + Test				Result - Remark		Verdict
5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements-						P
	Supply voltage (V)..... :		15Vdc		20Vdc		—
	Ambient temperature during test T_{amb} (°C) :		22.7		22.0		—
	Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
	Ambient		22.7	40.0	22.0	40.0	—
	T1 DAA400		42.8	60.1	36.9	54.9	85
	C17_DAA400		48.4	65.7	40.8	58.8	85
	L2_DAA400		67.0	84.3	52.2	70.2	105
	PCB NearC63_DAA400		41.8	59.1	36.5	54.5	85
	Enclosure surface inside under battery		40.2	57.5	35.3	53.3	77
	PCB under battery		49.6	66.9	42.2	60.2	77
	Enclosure outside		31.1	48.4	28.2	46.2	105
	Stand surface		29.2	46.5	28.0	46.0	70
	Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)
Supplementary information:							

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

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements								P
	Supply voltage (V)..... :				20Vdc		20Vdc (3)		—
	Ambient temperature during test T_{amb} (°C) :				25.6		26.2		—
	Maximum measured temperature T of part/at:				T (°C)				Allowed T_{max} (°C)
	Ambient				22.0	40.0	—	—	—
	T1 DAA400				36.9	54.9	—	—	85
	C17_DAA400				40.8	58.8	—	—	85
	L2_DAA400				52.2	70.2	—	—	105
	PCB NearC63_DAA400				36.5	54.5	—	—	85
	Enclosure surface inside under battery				35.3	53.3	—	—	77
	PCB under battery				42.2	60.2	—	—	77
	Enclosure outside				28.2	46.2	—	—	105
	Outside Wireless Stand				28.0	46.0	—	—	70
	Temperature T of winding:		t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
Supplementary information:									
Refer to summary of testing for MNL.									

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

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements							P
Supply voltage (V)..... :				24Vdc		—		—
Ambient temperature during test T_{amb} (°C) :				22.7		—		—
Maximum measured temperature T of part/at:				T (°C)				Allowed T_{max} (°C)
1) Ambient				22.7	40.0	—	—	—
2) On PCB near capacitors				52.5	69.8	—	—	130
3) Inductor (4R7)				58.7	76.0	—	—	130
4) PCB near Black Wire				51.6	68.9	—	—	130
5) PCB near coil				50.7	68.0	—	—	130
6) Metal stand				36.0	53.3	—	—	70
7) White base				24.7	42.0	—	—	94
Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class	
Supplementary information:								
Temperatures recorded while provided phone (iPhone Air) was charging. Locations on PCB JX-1. Tested on puck DAH501, considered the worst-case model.								

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

B.2.5		TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
5Vdc	—	2.78	—	—	—	—	—	—	
9 Vdc	—	2.87	—	—	—	—	—	—	
15Vdc	—	2.92	—	—	—	—	—	—	
20Vdc	—	2.45	—	—	—	—	—	—	
Supplementary information:									
Not connected to mains, measurement for reference only. Measurement taken at a load with a supply of 20Vdc from external power supply.									

B.3, B.4		TABLE: Abnormal operating and fault condition tests					N/A
Ambient temperature T _{amb} (°C)..... :							—
Power source for EUT: Manufacturer, model/type, outputrating .. :							—
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation	
Supplementary information:							
No abnormal operation identified.							

M.3	TABLE: Protection circuits for batteries provided within the equipment						N/A
Is it possible to install the battery in a reverse polarity position? :						—	
Equipment Specification	Charging						
	Voltage (V)			Current (A)			
Manufacturer/type	Battery specification						
	Non-rechargeable batteries		Rechargeable batteries				
	Discharging current (A)	Unintentional charging current (A)	Charging		Discharging current (A)	Reverse charging current (A)	
			Voltage (V)	Current (A)			
Note: The tests of M.3.2 are applicable only when above appropriate data is not available.							
Specified battery temperature (°C) :							
Component No.	Fault condition	Charge/ discharge mode	Test time	Temp. (°C)	Current (A)	Voltage (V)	Observation

IEC 62368-1							
Clause	Requirement + Test				Result - Remark		Verdict
Supplementary information:							
Abbreviation: SC= short circuit; OC= open circuit NL= no chemical leakage; NS= no spillage of liquid; NE= no explosion; NF= no emission of flame or expulsion of molten metal.							
Appropriate battery pack data provided, certified battery pack							

M.4.2	TABLE: Charging safeguards for equipment containing a secondary lithium battery					N/A
Maximum specified charging voltage (V)						—
Maximum specified charging current (A)						—
Highest specified charging temperature (°C)						
Lowest specified charging temperature (°C)						
Battery manufacturer/type	Operating and fault condition	Measurement			Observation	
		Charging voltage (V)	Charging current (A)	Temp. (°C)		
Supplementary information:						
Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest specified charging temperature						
Certified battery pack used.						

Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)						N/A
Output Circuit	Condition	U _{oc} (V)	Time (s)	I _{sc} (A)		S (VA)	
				Meas.	Limit	Meas.	Limit
Supplementary Information:							

T.2, T.3, T.4, T.5	TABLE: Steady force test						P
Location/Part	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	
Enclosure	Polymeric/CHIMEI/PA-747)	1.5mm	--	250	5s	No hazards.	
Supplementary information:							

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

Tested in report no. 72171859-200

T.6, T.9	TABLE: Impact test				P
Location/Part	Material	Thickne ss (mm)	Height (mm)	Observation	
Enclosure	Polymeric/CHIMEI/PA-747)	1.5mm	1300	No cracks or deformation or accessible to battery.	
Supplementary information:					
Tested in report no. 72171859-200					

T.7	TABLE: Drop test				N/A
Location/Part	Material	Thickness (mm)	Height (mm)	Observation	
Supplementary information:					

T.8	TABLE: Stress relief test				P
Location/Part	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Enclosure	Polymeric/CHIMEI/PA-747)	1.5mm	70	7	No deformation or accessible to battery.
Supplementary information:					
Tested in report no. 72171859-200					

X	TABLE: Alternative method for determining minimum clearances distances			N/A
Clearance distanced between:	Peak of working voltage (V)	Required cl (mm)	Measured cl (mm)	
Supplementary information:				

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

4.1.2	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Enclosure material (DAA400, DAA401 , and DAR300)	CHIMEI	PA-747	HB75, 85°C, 1.5 min,	UL 746C:2018 CSA-C22.2 No. 0.17:2000 IEC 60695-11-10	cURus (E56070)	
Battery used in (DAA400, DAA401)	DONGGUN ZWSBATTERY	452533	3.7V, 330mAh, 1221Wh	IEC 62133:2012	TUVRH (JPTUV- 106894)	
PCB All	JIANGMEN BENLIDA PRINTED CIRCUIT CO.,LTD	BLD-4	UL 94-V0, 130°C.	CAN/CSA-C22.2 No. 0.17(R2018), UL 796:2016	cURus (E203640)	
-Alternate PCB All	Interchangeable	Interchangeable	UL 94-V0, min 105°C	CAN/CSA-C22.2 No. 0.17(R2018), UL 796:2016	cURus--	
PCB (DAH501, DAH501R, DAH502, DAH502R)	JU XIN ELECTRIC TECH (MEIZHOU) CO LTD	JX-1	UL 94V-0, 130°C max	UL 796, CAN/CSA-C22.2 No. 0.17	cURus (E255943)	
Power supply (PS566)	HELMS-MAN INDUSTRIAL CO LTD	SNB2402080P1	Input:100- 240Vac, 50/60Hz,1.5A Output:24.0Vdc, 2.08, 49.92WA	UL 62368-1, CAN/CSA-C22.2 No. 62368-1, IEC 62368- 1:2018	cULus (E206654), UL (CB: DK- 141332-UL)	
Retractor	Interchangeable	DAR300	Connected to Alarm module and provides power through Stem to phone, tablet, or wireless charger	IEC 62368- 1:2018	Accepted in equipment	

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alarm Module	Interchangeable	DAA400, DAA401	Connected to Alarm module and provides power through Stem to phone, tablet, or wireless charger	IEC 62368-1:2018	Accepted in equipment
Long Stem	Interchangeable	DAD150	Monted on plate used as wireway from DAR300 to the to phone, tablet.	IEC 62368-1:2018	Accepted in equipment
Watch Stem	Interchangeable	DAD100	Monted on plate used as wireway from DAR300 to the to phone, tablet.	IEC 62368-1:2018	Accepted in equipment
Phone bracket Puck	Interchangeable	DAH501, DAH501R, DAH502, DAH502R	Used as phone support	IEC 62368-1:2018	Accepted in equipment
Phone Bracket	Interchangeable	DAH5XX	Used as phone support.	IEC 62368-1:2018	Accepted in equipment
Tablet Brackets	Interchangeable	DAT6XX	Used as tablet support.	IEC 62368-1:2018	Accepted in equipment
Watch Bracket	Interchangeable	DAW7XX	Used as watch support.	IEC 62368-1:2018	Accepted in equipment
Sensor Puck	Interchangeable	DAS200	Used as alarm if the equipment removed	IEC 62368-1:2018	Accepted in equipment
Tablet Bracket Puck	Interchangeable	DAT60X	Used as alarm if the equipment removed	IEC 62368-1:2018	Accepted in equipment
Watch Sensor Bracelet	Interchangeable	DAW700	Used as alarm if the equipment removed	IEC 62368-1:2018	Accepted in equipment
Supplementary information:					
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Customer's Testing Facility according to CTF stage 1 or CTF stage 2 procedure has been used.

Note: This page may be removed when CTF stage 1 or CTF stage 2 are not used. See also clause 4.8 in OD 2020 for more details.

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date
Not a CTF					

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62368-1 U.S.A. AND CANADA NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment – Part 1: Safety requirements)			
Differences according to: CSA/UL 62368-1:2019			
TRF template used:: IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No.: US_CA_ND_IEC62368_1E			
Attachment Originator: UL(US)			
Master Attachment: Dated 2022-03-04			
Copyright © 2022 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
IEC 62368-1 - US and Canadian National Differences Special National Conditions based on Regulations and Other National Differences			
1 (1DV.1) (1.3)	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 1, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.	ES1 circuit.	N/A
1 (1DV.2.1)	This standard includes additional requirements for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities. See Annex DVB.	See above.	N/A
1 (1DV.2.2)	This standard includes additional requirements for equipment intended for mounting under cabinets. See Annex DVC.	Not such equipment.	N/A
1 (1DV.2.3)	IEC 62368-3 clause 5 for DC power transfer at ES1 or ES2 voltage levels is considered informative. IEC 62368-3 clause 6 for remote power feeding telecommunication (RFT) circuits is considered normative (see ITU K.50). Alternatively, equipment with RFT circuits are given in either UL 2391 or CSA/UL 60950-21. RFT-C circuits are not permitted unless the RFT-C circuit complies with RFT-V limits ($\leq 200V$ per conductor to earth).	None.	N/A

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
1 (1DV.3)	For protection against direct lightning strikes, reference is made to NFPA 780 and CAN/CSA-B72 for additional requirements.	ES1 circuit.	N/A
1 (DV.5)	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.		N/A
4.1 (4.1.17)	For lengths exceeding 3.05 m, external interconnecting cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.	ES1 circuit.	N/A
	For lengths 3.05 m or less, external interconnecting cable assemblies that are not types specified in the NEC generally are required to have special construction features and identification markings.		N/A
4.6 (4.6.2)	Wire-wrap terminals have special construction and performance requirements.		N/A
4.8 (4.8.3, 4.8.4.5, 4.8.5)	Coin / button cell batteries have modified special construction and performance requirements.	None.	N/A
5.4.2.3.2 (5.4.2.3.2.1)	Surge Arrestors and Transient Voltage Surge Suppressors installed external to the equipment are required to comply with the appropriate NEC and CEC requirements.	ES1 circuit.	N/A
5.5.9	Receptacles, rated 125-V, single phase, 15- or 20-A accessible to either ordinary, instructed, or skilled persons are required to be provided with GFCI Protection for Personnel if the equipment containing the receptacles is installed outdoors. The protection devices are required to comply with UL 943, and CAN/CSA C22.2 No.144.		N/A
5.6.3	Protective earthing conductors comply with the minimum conductor sizes in Table G.7, except as required by Table G.7ADV.1 for cord connected equipment, or Annex DVH for permanently connected equipment.	ES1 circuit.	N/A
5.7.8 (5.7.8.1)	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	None.	N/A
6.5.1	PS3 wiring outside a fire enclosure is required to comply with single fault testing in B.4, or be current limited per one of the permitted methods.	Max PS2 circuit.	N/A

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex F (F.3.3.9)	Output terminals provided for supply of other equipment, except mains supply, are required to be marked with a maximum rating or reference to equipment permitted to be connected.		N/A
Annex F (F.3.7)	Outdoor Enclosures are required to be classified and marked in accordance with UL 50 or 50E, or CAN/CSA C22.2 No. 94.1 or 94.2.	Indoor equipment.	N/A
Annex G (G.7)	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
	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.		N/A
	Power supply cords for outdoor equipment are required to be suitable outdoor use type as required by Section 400.4 of the NEC and Rule 4-012 of the CEC, i.e., marked "W."		N/A
Annex H.2	Continuous ringing signals under normal operating conditions up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	None.	N/A
Annex H.4	For circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.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
Annex Q (Q.3)	Equipment with paired conductor and/or coax communications cables/wiring connected to building wiring are required to have special voltage, current, power and marking requirements.		N/A

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (1)	Equipment that is designed such that it may be powered from a separate electrical service, is required to meet applicable requirements for service equipment for control and protection of services and their installation and complies with Article 230 of the National Electrical Code (NEC), NFPA 70 and Section 6 of the Canadian Electrical Code, Part I, CSA C22.1.		N/A
	Equipment intended for use in spaces used for environmental air (plenums) are subjected to special flammability requirements for heat and visible smoke release.		N/A
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
	Consumer products designed or intended primarily for children 12 years of age or younger are subject to additional requirements in accordance with U.S. and Canadian Regulations.		N/A
	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
	Storage batteries and battery management equipment, other than associated with lead-acid batteries, and including battery backup systems that are not an integral part of stationary AV and ICT equipment, such as provided in separate cabinets, are required to be certified (listed) to the appropriate standard(s) for such storage batteries and equipment.	None.	N/A
Annex DVA (5.6)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	ES1	N/A
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	None.	N/A

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (6.4.8)	For ITE 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) are required to have a flame spread rating of 50 or less. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a minimum flammability classification of V-1.		N/A
Annex DVA (10.3)	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	None.	N/A
Annex DVA (10.5)	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (F.3.3.4)	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. Additional considerations apply for voltage ratings that exceed the attachment cap rating or that are lower than the "Normal Operating Condition" in Table 2 of CAN/CSA C22.2 No. 235."		N/A
Annex DVA (F.3.3.6)	Equipment identified for ITE (computer) room installation is required to be marked with the rated current.		N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position, where mounted in an enclosure, vertically mounted disconnect switches and circuit breakers with vertical operating means extending outside the enclosure are required to indicate in a location visible when accessing the external operating means whether the switch or circuit breaker is in the open (off) or closed (on) position.		N/A
Annex DVA (G.3.4)	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required 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

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.	None.	N/A
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles is required to comply with NEC 250.146(D) and CEC 10-400 and 10-612.		N/A
Annex DVA (G.4.3)	Interconnection of units by conductors supplied by a limited power source, or a Class 2 circuit defined in the NEC/CEC may have field wiring connections other than specified in DVH.3, such as wire-wrap and crimp-on types, if the limited power source and Class 2 circuits are separated from all other circuits by barriers, routing or fixing.		N/A
Annex DVA (G.5.3)	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
Annex DVA (G.7)	Flexible cords used outdoors are required to have the suffix "W" marked on the flexible cord.		N/A
Annex DVA (M)	For ITE room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the ITE room remote power-off circuit.		N/A
Annex DVA (Q)	If applicable per NEC 725.121(C), some limited power sources supplied from AV/ICT equipment are required to have a label indicating the maximum voltage and rated current output for per conductor for each connection point. Where multiple connection points have the same rating, a single label is permitted to be used.		N/A
	Wiring terminals intended to supply Class 2 outputs in accordance with the NEC or CEC Part 1 are required to be marked with the voltage rating and "Class 2" or equivalent. The marking is located adjacent to the terminals and visible during wiring.		N/A

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
	Applicable parts of Chapter 8 of the NEC, and Rules 54 and 60 of the CEC, may be applicable to ITE installed outdoors with connections to communication systems.		N/A
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.		N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.		N/A
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. These equipment and components include: appliance couplers, attachment plugs, battery backup systems, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, modular data centres, power supply cords, some power distribution equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.		N/A
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.	ES1 circuit.	N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are required to be in accordance with the NEC/CEC.		N/A
Annex DVH (DVH.2.1)	For safe and reliable connection to a mains, permanently connected equipment is to be provided.		N/A
Annex DVH (DVH.2.2)	Additional considerations for D.C. mains.		N/A

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVH (DVH.3.2.1)	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified.		N/A
Annex DVH (DVH.3.2.3)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
Annex DVH (DVH.3.2.4)	All associated mains supply terminals are located in proximity to each other and to the main protective earthing terminal, if any.		N/A
Annex DVH (DVH.3.2.5)	Terminals are located, guarded or insulated so that, should a strand of a conductor escape when the conductor is fitted, there is no likelihood of accidental contact between such a strand and accessible conductive parts or unearthed conductive parts separated from accessible conductive parts by supplementary insulation only.		N/A
Annex DVH (DVH.3.3)	When field connection to an external circuit is via wires (example, free conductors), the wires are not smaller than 18 AWG (0.82 mm ²) and the free length of the wire inside an outlet box or wiring compartment is 150 mm or more.		N/A
Annex DVH (DVH.3.4)	Size of protective earthing conductors and terminals	(See sub-clause 5.6.5)	N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
Annex DVH (DVH.4.1)	Wire bending space		N/A
Annex DVH (DVH.4.2)	Volume of wiring compartment		N/A
Annex DVH (DVH.4.3)	Separation of circuits		N/A
Annex DVH (DVH.5)	Equipment markings and instructional safeguards		N/A
Annex DVH (DVH.5.1)	Identification of protective earthing terminal		N/A
Annex DVH (DVH.5.2)	Identification of terminal for earthed conductor (neutral)		N/A
Annex DVH (DVH.5.3)	Identification of terminals for aluminium conductors		N/A
Annex DVH (DVH.5.4)	Wire temperature ratings		N/A

IEC62368_1E ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DVH (DVH 5.5)	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, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
Annex DVI (6.7)	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses.		N/A
Annex DVJ (10.6.1)	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A

IEC62368_1E ATTACHMENT 2			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62368-1:2018 SAUDI ARABIA NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment Part 1: Safety requirements)			
Differences according to : National standard SASO-IEC 62368-1:2020			
TRF template used: : IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No. : SA_ND_IEC62368_1E			
Attachment Originator : SASO			
Master Attachment..... : 2022-12-22			
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	National Differences		--
	Plugs used for pluggable equipment comply with standard SASO-2203.	ES1 circuit.	N/A
--	Frequency (Hz)	Not connected to mains. DC system.	N/A
	60 Hz		N/A
--	Rated voltage (V)		N/A
	Single phase 230 V Three phase 400 V	ES1 circuit.	N/A

IEC62368_1E ATTACHMENT 3			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62368-1:2018 CHINA NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment -Part 1: Safety requirements)			
Differences according to : GB 4943.1-2022			
TRF template used: : IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No. : CN_ND_IEC62368_1E			
Attachment Originator : CQC			
Master Attachment : 2025-02-25			
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	National Differences		
4.1.2	Use of components Add a paragraph: A component used shall comply with related requirements corresponding altitude of the equipment.	Refer to main TRF	P
4.11	Add clause 4.11,as follows: Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except the device shall meet the all requirement of Fault conditions. If pluggable equipment type B or permanently connected equipment depends on protective devices outside the equipment for protection, this shall be stated in the installation instructions of the equipment, with requirements for short-circuit protection, over-current protection, or both if necessary.	ES1 circuit.	N/A
5.3.2.2	Contact requirements Amend the 2 nd paragraph of table 8 to be: For equipment intended to be used at altitude of 2000m to 5000m, the values in this table are multiplied by the multiplication factor corresponding altitude of 5000m.	ES1 circuit.	N/A

IEC62368_1E ATTACHMENT 3			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.5	Multiplication factors for altitudes higher than 2 000 m above sea level Amend the 1st paragraph to be: For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE in tables 10,11 and 14, and resistance test voltages required in table 15, shall meet the requirements of 5000 m above sea level, this is multiplied by the multiplication factor corresponding altitude of 5000m in table 16. For equipment to be used at equal or less than 2000 m above sea level, the minimum CLEARANCE in tables 10, 11 and 14, and resistance test voltages required in table 15, shall meet the requirements of 2000 m above sea level. This is multiplied by the multiplication factor corresponding altitude of 2000m in table 16. Delete note 2 of Clause 5.4.2.5.		N/A
5.4.5.1	General Delete the 2nd paragraph of Clause 5.4.5.1: This test does not apply to equipment where one antenna terminal on the equipment is connected to earth in accordance with 5.6.7. Add the following: The Insulation resistance between CATV antenna coaxial sockets and protective earth of apparatus shall comply with BASIC INSULATION. If it's possible that CLASS II apparatus with CATV antenna coaxial sockets connect with protective earth of another CLASS I apparatus by other terminals, the insulation resistance between them shall comply with BASIC INSULATION as well. If antenna cable separated from the protective earth before connection to the apparatus, there is no requirements of Insulation resistance between them but F.4 requirements shall be meet. Delete "NOTE" of Clause 5.4.5.1	ES1 circuit.	N/A

IEC62368_1E ATTACHMENT 3			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.8	Humidity conditioning Amend clause 5.4.8 as follows : The humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature (40 ± 2) °C and a relative humidity of $(93\pm 3)\%$. During this conditioning, the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of $(93\pm 3)\%$. The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C such that condensation does not occur. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered. Pre-processing conditions and requirements below 2000m can be used until additional data is available.	ES1	N/A
6.4.9 Y.4.3	Delete references to ASTM and NEMA.		N/A
6.5.1	General requirements Delete the text of the Note "Wire complying with UL 2556 VW-1 is considered to comply with these requirements".		N/A
F.1	Amend the second paragraph of annex F.1 to be: Unless symbols are used or otherwise specified, safety related equipment markings, instructions, and instructional safeguards shall be in normative Chinese.		N/A

IEC62368_1E ATTACHMENT 3			
Clause	Requirement + Test	Result - Remark	Verdict
F.2.2	After the first paragraph of annex F.2.2 ,add the following: For apparatus intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording or a symbol shown below shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."  For apparatus intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording or a symbol shown below shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."  If only symbol used, the explanation of the symbol shall be contained in the instruction manual. The statements above shall be given in a language acceptable to the regions where the apparatus is intended to be used.		N/A
F.3.3.4	After the last paragraph, Added: ...for single rated voltage, "220 V" or three-phase "380V" shall be marked only. For a rating voltage range, 220 V or three-phase 380V shall be covered. For multiple rated voltages, one of them shall be 220 V or three-phase 380V and which default setting from manufacture shall be 220 V or three-phase 380V as well.	ES1 circuit.	N/A
F.3.3.5	After the last paragraph, Added: Rated frequency shall be 50Hz or frequency range shall cover 50Hz.		N/A
F.4	Instructions Added: - For apparatus incorporating antenna coaxial sockets which is non-separated with CATV network, a warning wording or a similar shall be given in the instruction manual: "A CATV cable intended to be connected to apparatus shall be separated with the protective earth of the apparatus, otherwise fire hazard might be caused."	None	N/A
F.5	Instructional safeguards In table F.2 , change 230V to 220V, change 400Y/230V 3Ø to 380 Y/220 V 3Ø		N/A

IEC62368_1E ATTACHMENT 3			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Amend clause G.4.2 as follows : Plugs connected to the MAINS in apparatus shall comply with GB/T 1002,GB/T 1003,GB/T 2099.1 or GB/T11918 (All parts) series. Appliance coupler shall comply with GB/T 17465 (All parts) series or GB/T 11918 (All parts) series.		N/A
	Special national conditions (if any)		N/A
0.12	Add clause 0.12 Description of relevant information.	None.	N/A
1	GB 4943.1-2022 applies to equipment used at altitudes not exceeding 5000m above sea level, For apparatus intended to be used at altitude not exceeding 2000m, The requirements can be appropriately reduced, but warning instructions shall be provided.. Revise the sixth paragraph of 1 as: In addition to specified by the manufacturer, this document assumes a maximum altitude of 5000m		N/A
B.2.6.1	Amend T_{ma} as follows: T_{ma} is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: For equipment not to be operated at tropical climatic conditions, T_{ma} is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: For equipment to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration. temperature test conditions and temperature limits below 2000m can be used until additional data is available.		N/A
Annex Z (normative)	Added annex Z: Instructions of the new safety warning labels.		N/A
Annex AA (informative)	Added annex AA: Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighur.		N/A

IEC62368_1E ATTACHMENT 4			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62368-1:2018 JAPAN NATIONAL DIFFERENCES Audio/video, information and communication technology equipment – Part 1: Safety requirements			
Differences according to : J62368-1(2023)			
TRF template used: : IECEE OD-2020-F3:2022, Ed. 1.2			
Attachment Form No. : JP_ND_IEC62368_1E			
Attachment Originator : UL Solutions (JP)			
Master Attachment : Dated 2023-05-12			
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	National Differences		--
4.1.2	Where the component, or a characteristic of a component, is a safeguard or a part of a safeguard, components shall comply with the requirements of this document or, where specified in a requirements clause, with the safety aspects of the relevant JIS component standards or IEC component standards, or components shall have properties equivalent to or better than these.	Refer to main TRF	P
5.6.1	Mains socket-outlet and interconnection coupler shall comply with Clause G.4.2A if they are incorporated as part of the equipment.	ES1 circuit.	N/A
5.6.2.1	Connection for protective conductor of class 0I equipment provided with instructional safeguard in accordance with Clause F.3.6.1A is considered to make earlier and break later than supply connection. Mains plug having a lead wire for protective earthing connection of class 0I equipment shall comply with all of the following: – Not to be used for equipment having a rated voltage of 150 V or more – Clip is not used for the earthing connection of the lead wire. – The lead wire for earthing is at least 10 cm long If class 0I equipment provides an independent main protective earthing terminal and is intended to be installed by ordinary person, earthing wire shall be provided in the package of the equipment.	ES1 circuit.	N/A

IEC62368_1E ATTACHMENT 4			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.2.2	Internal earthing conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector need not be green-and-yellow.	ES1 circuit.	N/A
5.6.3	In case of class 0I equipment using power supply cord having two conductors (no earthing conductor), the conductor of protective earthing lead wire shall comply with either of the following: – use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having size and strength that are equivalent to or more than the above copper wire – single core cord or single core cab tire cable with 1.25 mm ² or more cross-sectional area		N/A
5.7.3	For class 0I equipment that is provided with mains socket-outlet in the configuration as specified in JIS C 8282 series, JIS C 8300 or JIS C 8303, or that is provided with mains appliance outlet as specified in JIS C 8283 series for the purpose of interconnection, the measurement is conducted on the system of the interconnected equipment having a single connection to the mains.		N/A
5.7.5	In case of class 0I equipment, touch current shall not exceed 1.41 mA peak or for sinusoidal wave, 1.0 mA r.m.s. when measured using the network specified in Figure 4 of IEC 60990:2016.		N/A
6.4.3.2	A fuse complying with JIS C 6575 series or a fuse having equivalent characteristics shall open within 1 s. A fuse having time/current characteristics other than those specified in IEC 60127 shall be tested with the characteristics taken into account. In case of Class A fuse of JIS C 6575, replace “2.1 times” by “1.35 times” and in case of Class B fuse of JIS C 6575, replace “2.1 times” by “1.6 times”.		N/A
8.5.4.3.1	Only three-phase stationary equipment rated more than AC 200 V can be considered as being for use in locations where children are not likely to be present, when complying with Clause F.4.	ES1 circuit.	N/A
8.5.4.3.2	For equipment installed where children may be present, an instructional safeguard shall be provided by easily understandable wording in accordance with Clause F.5, except that element 3 is optional.		N/A

IEC62368_1E ATTACHMENT 4			
Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.3.4	The media destruction device is tested according to Clause V.1.2 with applicable jointed test probes to the opening. And then the wedge probe per Figure V.4 shall not contact any moving part.		N/A
8.5.4.3.5	The wedge probe of Figure V.4 and applicable jointed test probes specified in Clause V.1.2 shall not contact any moving part. Instructional safeguard shall not be used instead of equipment safeguard for preventing access to hazardous moving parts.	ES1 circuit.	N/A
F.3.5.1	When the mains socket-outlet is configured in accordance with JIS C 8282 series, JIS C 8300 or JIS C 8303, the assigned current or power shall be marked. If the voltage of the socket-outlet is the same as the mains voltage, the voltage need not be marked. Instructional safeguard of Class 0I equipment shall be provided with an instructional safeguard in accordance with Clause F.5 when a mains socket-outlet as specified in JIS C 8282 series, JIS C 8300 or JIS C 8303 to which class I equipment can be connected is provided in accordance with Clause G.4.2A except for the cases where the socket-outlet is accessible only to skilled persons.		N/A
F.3.5.3	If the fuse is necessary for the safeguard function, the symbols indicating pre-arcing time-current characteristic shall be included.	None.	N/A
F.3.6.1A	Marking for class 0I equipment The requirements of Clauses F.3.6.1.1 and F.3.6.1.2 shall be applied to class 0I equipment. For class 0I equipment, a marking of instructions shall be provided regarding the earthing connection. In addition to the above, for class 0I equipment, an instruction to connect earthing before and disconnect earthing after the connection of supply conductors shall be marked on the visible place of the main body or shall be in the text of an accompanying document.		N/A
F.3.6.2	Symbols, IEC 60417-5172 (2003-02) or IEC 60417-6092 (2011-10), shall not be used for class I equipment or class 0I equipment.		N/A

IEC62368_1E ATTACHMENT 4			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.8A	Attention marking for aging deterioration of CRT television Year of manufacture, standard usage period by design according to JIS C 9921-5 and cautionary statement for possible risks of aging deterioration when used beyond the specified period shall be marked on CRT television except for industrial use CRT television.		N/A
F.4	For audio equipment with terminals classified as ES3 in accordance with Table E.1, and for other equipment with terminals marked in accordance with F.3.6.1 and F.3.6.1A, the instructions shall require that the external wiring connected to these terminals shall be installed by a skilled person, or shall be connected by means of ready-made leads or cords that are constructed in a way that would prevent contact with any ES3 circuit. For class 0I equipment provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided in the package of the equipment, if the protective earthing connection is made by instructed person or skilled person, the suitable installation instruction for the protective earthing connection shall be provided.	None.	N/A
G.3.2.1	The thermal link when tested as a separate component, shall comply with the requirements of JIS C 6691 or have properties equivalent to or better than that.		N/A
G.3.4	Except for devices covered by Clause G.3.5, overcurrent protective devices used as a safeguard shall comply with the applicable JIS or IEC standard in accordance with 4.1.2 or shall have equivalent or better properties. Such a protective device shall have adequate breaking (rupturing) capacity to interrupt the maximum fault current (including short-circuit current) that can flow.		N/A
G.4.1	This requirement does not apply to connectors covered in Clauses G.4.2 and G.4.2A.		N/A

IEC62368_1E ATTACHMENT 4			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Mains connectors, mains plugs and socket-outlets shall comply with JIS C 8283 series, JIS C 8285, IEC 60309 series, JIS C 8282 series, JIS C 8300, JIS C 8303, or have equivalent or better properties. A power supply cord set provided with appliance connector that can fit appliance inlet complying with JIS C 8283-1 shall comply with JIS C 8286. Construction shall prevent mechanical stress not to transmit to the soldering part of appliance inlet terminal. When an equipment is rated not more than 125 V and all of the following are met, Type C14 and C18 appliance inlet complying with JIS C 8283-3 can be considered as rated 15 A. – The temperature of appliance inlet does not exceed the value specified in JIS C 8283-1 under the most unfavourable normal operating condition as specified in Clause B.2.1. – "Use only designated cord set attached in this equipment" or equivalent text is described in the operating instruction. If the cord set is not provided in the package of the equipment, suitable information regarding to the cord set is described in the operating instruction.	ES1 circuit.	N/A
G.4.2A	Mains socket-outlet and interconnection coupler provided with the class II, class I and class 0I equipment respectively		N/A
G.7.1	A mains supply cord need not include the protective earthing conductor for class 0I equipment provided with independent protective earthing conductor.		N/A
G.7.2 Table G.7	Cross-sectional area of equipment rated up to and including 3 A shall be 0.75 mm ² .		N/A
G.7.6.1 Table G.9	The cross-sectional area of mains cords according to JIS C 3010 may comply with relevant Japanese wiring regulation. For cables other than those complying with JIS C 3662 series or JIS C 3663 series, the terminals shall be suitable for the size of the intended cables.		N/A

IEC62368_1E ATTACHMENT 5			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62368-1 SINGAPORE NATIONAL DIFFERENCES Audio/video, information and communication technology equipment - Part 1: Safety requirements			
Differences according to : Special National Conditions			
TRF template used: : IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No. : SG_ND_IEC62368_1E			
Attachment Originator : Intertek Testing Services (Singapore) Pte Ltd			
Master Attachment..... : 2022-07-08			
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	National Differences		--
	Not Applicable		--
Chapter 4.2	Special national conditions (if any) Controlled goods under the Consumer Protection (Safety Requirements) Registration Scheme (CPS) are required to be tested to additional requirements stipulated by the Consumer Product Safety Office (CPSO) of Enterprise Singapore in Chapter 7 of the CPS information booklet. The CPS information booklet is updated on an ongoing basis. At the point of testing, refer to the latest copy of the CPS information booklet for the minimum edition of standard to apply for testing of products under the CPS scheme and any new requirements. Link to CPS information booklet: https://www.consumerproductsafety.gov.sg/files/cps-info-booklet.pdf		N/A
<u>Clause</u> 1	All appliances must be tested to 230 VAC, 50 Hz.	ES1 circuit.	N/A
4	Appliance fitted with voltage selector shall be tested as follows: Connect appliance to 230 VAC mains with voltage selector switch to settings not suitable for operation at 230 VAC.		N/A

IEC62368_1E ATTACHMENT 5			
Clause	Requirement + Test	Result - Remark	Verdict
5	All appliances (with tropical test requirements in applicable Standards) shall comply with the tropical condition test as stated in the relevant IEC Standards.		N/A
7	All Class I appliances must be fitted with 3-pin mains plugs that are registered with the CPSO.	Class III device.	N/A
8	a) All Class II appliances must be fitted with 2-pin mains plug complying with EN 50075. b) Class II appliances that are fitted with 3-pin mains plugs must use plugs that are registered with the CPSO.	Class III device.	N/A
9	Detachable power cord set must be listed in the test report critical component list.		N/A
14	AC Adaptor incorporated with 13A socket-outlet to be tested to additional tests clauses 13, 17 and 18 of SS 145 Part 3: 2020.		N/A
15	Supplier who is supplying AC adaptors with detachable interchangeable plug pins must include with its products, written instructions to inform customer on the type of detachable interchangeable plug pins that are approved and suitable to use in Singapore. These instructions are to be submitted to the Conformity Assessment Body for verification when applying for Certificate of Conformity.		N/A
16	For AC Adaptors supplied together with Personal Mobility Devices: 1. Registered Supplier to declare the model of the AC adaptor that is to be used with/ bundled together with the PMDs; 2. Registered Supplier to provide valid IEC 60950-1 or IEC 62368-1 test reports for certification and registration of the declared AC adaptor under the CPS scheme; and 3. Registered Supplier to provide the UL 2272 test report as supporting document, showing that the listed AC adaptor in the UL 2272 test report is the model declared to be used with/ bundled together with the PMDs.		N/A
18	CD/ DVD ROMs (used in personal computers) to have test certificate showing that CD/DVD ROM drive has complied with IEC 60825- 1.		N/A

IEC62368_1E ATTACHMENT 5			
Clause	Requirement + Test	Result - Remark	Verdict
19	Modem card incorporated in the personal computer must be tested at set level (sub-clauses 5.1 & 6 of IEC 60950) or at component level.		N/A
20	Powerline Ethernet Adaptor incorporated with 13A socket-outlet, to be tested to additional test clauses 13, 17 & 18 of SS 145 Part 3: 2020.		N/A
	Other additional requirements which may be included in Chapter 7 of the information booklet in ongoing basis at the time of testing.		N/A

IEC62368_1E ATTACHMENT 6			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment - Part 1: Safety requirements)			
Differences according to : EN IEC 62368-1:2020+A11:2020			
Attachment Form No. : EU_GD_IEC62368_1E			
Attachment Originator : UL(Demko)			
Master Attachment : 2021-02-04			
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	CENELEC COMMON MODIFICATIONS (EN)		--
	Clause numbers in the cells that are shaded light grey are clause references in EN IEC 62368-1:2020+A11:2020. All other clause numbers in that column, except for those in the paragraph below, refers to IEC 62368-1:2018. Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2018 are prefixed "Z".		N/A
	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords		N/A
1	Modification to Clause 3 .		
3.3.19	Sound exposure <i>Replace 3.3.19 of IEC 62368-1 with the following definitions:</i>		N/A

IEC 62368-1 ATTACHMENT No.: 6			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.19.1	momentary exposure level, MEL metric for estimating 1 s sound exposure level from the HD 483-1 S2 test signal applied to both channels, based on EN 50332-1:2013, 4.2. Note 1 to entry: MEL is measured as A-weighted levels in dB. Note 2 to entry: See B.3 of EN 50332-3:2017 for additional information.	Not intended application.	N/A
3.3.19.3	sound exposure, E A-weighted sound pressure (p) squared and integrated over a stated period of time, T Note 1 to entry: The SI unit is Pa² s. $E = \int_0^T p(t)^2 dt$		N/A
3.3.19.4	sound exposure level, SEL logarithmic measure of sound exposure relative to a reference value, E_0, typically the 1 kHz threshold of hearing in humans. Note 1 to entry: SEL is measured as A-weighted levels in dB. $SEL = 10 \lg \left(\frac{E}{E_0} \right) \text{ dB}$ Note 2 to entry: See B.4 of EN 50332-3:2017 for additional information.		N/A
3.3.19.5	digital signal level relative to full scale, dBFS levels reported in dBFS are always r.m.s. Full scale level, 0 dBFS, is the level of a dc-free 997-Hz sine wave whose undithered positive peak value is positive digital full scale, leaving the code corresponding to negative digital full scale unused Note 1 to entry: It is invalid to use dBFS for non-r.m.s. levels. Because the definition of full scale is based on a sine wave, the level of signals with a crest factor lower than that of a sine wave may exceed 0 dBFS. In particular, square wave signals may reach +3,01 dBFS.		N/A
2	Modification to Clause 10		
10.6	Safeguards against acoustic energy sources Replace 10.6 of IEC 62368-1 with the following:		N/A

IEC 62368-1 ATTACHMENT No.: 6			
Clause	Requirement + Test	Result - Remark	Verdict
10.6.1.1	Introduction Safeguard requirements for protection against long-term exposure to excessive sound pressure levels from personal music players closely coupled to the ear are specified below. Requirements for earphones and headphones intended for use with personal music players are also covered. A personal music player is a portable equipment intended for use by an ordinary person, that: – is designed to allow the user to listen to audio or audiovisual content / material; and – uses a listening device, such as headphones or earphones that can be worn in or on or around the ears; and – has a player that can be body worn (of a size suitable to be carried in a clothing pocket) and is intended for the user to walk around with while in continuous use (for example, on a street, in a subway, at an airport, etc.). EXAMPLES Portable CD players, MP3 audio players, mobile phones with MP3 type features, PDAs or similar equipment. Personal music players shall comply with the requirements of either 10.6.2 or 10.6.3. NOTE 1 Protection against acoustic energy sources from telecom applications is referenced to ITU-T P.360. NOTE 2 It is the intention of the Committee to allow the alternative methods for now, but to only use the dose measurement method as given in 10.6.5 in future. Therefore, manufacturers are encouraged to implement 10.6.5 as soon as possible. Listening devices sold separately shall comply with the requirements of 10.6.6. These requirements are valid for music or video mode only. The requirements do not apply to: – 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. – hearing aid equipment and other devices for assistive listening; – the following type of analogue personal music players: • long distance radio receiver (for example, a multiband radio receiver or world band radio	No acoustic energy sources.	N/A

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	receiver, an AM radio receiver), and • cassette player/recorder; 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. – a player while connected to an external amplifier that does not allow the user to walk around while in use. For equipment that is clearly designed or intended primarily for use by children, the limits of the relevant toy standards may apply. The relevant requirements are given in EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		
10.6.1.2	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body mounted devices, attention is drawn to EN 50360 and EN 50566.	None.	N/A
10.6.2	Classification of devices without the capacity to estimate sound dose		N/A
10.6.2.1	General This standard is transitioning from short-term based (30 s) requirements to long-term based (40 hour) requirements. These clauses remain in effect only for devices that do not comply with sound dose estimation as stipulated in EN 50332-3. For classifying the acoustic output $L_{Aeq,T}$, measurements are based on the A-weighted equivalent sound pressure level over a 30 s period. 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, measurements may	Not applicable.	N/A

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	be done over the duration of the complete song. In this case, T becomes the duration of the song. NOTE Classical music, acoustic music and broadcast 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 content 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 does not exceed the required limit. For example, if the player is set with the programme simulation noise to 85 dB, but the average music level of the song is only 65 dB, 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 dB.		
10.6.2.2	RS1 limits (to be superseded, see 10.6.3.2) RS1 is a class 1 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 85 dB when playing the fixed “programme simulation noise” described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 27 mV (analogue interface) or -25 dBFS (digital interface) when playing the fixed “programme simulation noise” described in EN 50332-1. – The RS1 limits will be updated for all devices as per 10.6.3.2.		N/A
10.6.2.3	RS2 limits (to be superseded, see 10.6.3.3) RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or when the combination of player and listening device is known by other means such as setting or automatic 130 detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 100 dB(A) when playing the fixed “programme simulation noise” as described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	use, the unweighted r.m.s. output voltage shall be ≤ 150 mV (analogue interface) or -10 dBFS (digital interface) when playing the fixed "programme simulation noise" as described in EN 50332-1.		
10.6.2.4	RS3 limits RS3 is a class 3 acoustic energy source that exceeds RS2 limits.		N/A
10.6.3	Classification of devices (new)		N/A
10.6.3.1	General Previous limits (10.6.2) created abundant false negative and false positive PMP sound level warnings. New limits, compliant with The Commission Decision of 23 June 2009, are given below.		N/A
10.6.3.2	RS1 limits (new) RS1 is a class 1 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.		N/A
10.6.3.3	RS2 limits (new) RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the weekly sound exposure level, as described in EN 50332-3, shall		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	be $\leq$ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output level, integrated over one week, as described in EN50332-3, shall be $\leq$ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.		
10.6.4	Requirements for maximum sound exposure		N/A
10.6.4.1	Measurement methods All volume controls shall be turned to maximum during tests. Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable.		N/A
10.6.4.2	Protection of persons Except as given below, protection requirements for parts accessible to ordinary persons, instructed persons and skilled persons are given in 4.3. NOTE 1 Volume control is not considered a safeguard . Between RS2 and an ordinary person, the basic safeguard may be replaced by an instructional safeguard in accordance with Clause F.5, except that the instructional safeguard shall be placed on the equipment, or on the packaging, or in the instruction manual. Alternatively, the instructional safeguard may be given through the equipment display during use. The elements of the instructional safeguard shall be as follows: – element 1a: the symbol  IEC 60417-6044 (2011-01) – element 2: "High sound pressure" or equivalent wording – element 3: "Hearing damage risk" or equivalent		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	wording – element 4: “Do not listen at high volume levels for long periods.” or equivalent wording An equipment safeguard shall prevent exposure of an ordinary person to an RS2 source without intentional physical action from the ordinary person and shall automatically return to an output level not exceeding what is specified for an RS1 source when the power is switched off. The equipment shall provide a means to actively inform the user of the increased sound level when the equipment is operated with an output exceeding RS1. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an output exceeding RS1. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time. NOTE 2 Examples of means include visual or audible signals. Action from the user is always needed. NOTE 3 The 20 h listening time is the accumulative listening time, independent of how often and how long the personal music player has been switched off. A skilled person shall not be unintentionally exposed to RS3.		
10.6.5	Requirements for dose-based systems		N/A
10.6.5.1	General requirements Personal music players shall give the warnings as provided below when tested according to EN 50332-3, using the limits from this clause. The manufacturer may offer optional settings to allow the users to modify when and how they wish to receive the notifications and warnings to promote a better user experience without defeating the safeguards. This allows the users to be informed in a method that best meets their physical capabilities and device usage needs. If such optional settings are offered, an administrator (for example, parental restrictions, business/educational administrators, etc.) shall be able to lock any optional settings into a specific configuration.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The personal music player shall be supplied with easy to understand explanation to the user of the dose management system, the risks involved, and how to use the system safely. The user shall be made aware that other sources may significantly contribute to their sound exposure, for example work, transportation, concerts, clubs, cinema, car races, etc.		
10.6.5.2	Dose-based warning and requirements When a dose of 100 % <i>CSD</i> is reached, and at least at every 100 % further increase of <i>CSD</i>, the device shall warn the user and require an acknowledgement. In case the user does not acknowledge, the output level shall automatically decrease to compliance with class RS1. The warning shall at least clearly indicate that listening above 100 % <i>CSD</i> leads to the risk of hearing damage or loss.		N/A
10.6.5.3	Exposure-based requirements With only dose-based requirements, cause and effect could be far separated in time, defying the purpose of educating users about safe listening practice. In addition to dose-based requirements, a PMP shall therefore also put a limit to the short-term sound level a user can listen at. The exposure-based limiter (EL) shall automatically reduce the sound level not to exceed 100 dB(A) or 150 mV integrated over the past 180 s, based on methodology defined in EN 50332-3. The EL settling time (time from starting level reduction to reaching target output) shall be 10 s or faster. Test of EL functionality is conducted according to EN 50332-3, using the limits from this clause. For equipment provided as a package (player with its listening device), the level integrated over 180 s shall be 100 dB or lower. For equipment provided with a standardized connector, the unweighted level integrated over 180 s shall be no more than 150 mV for an analogue interface and no more than -10 dBFS for a digital interface. NOTE In case the source is known not to be music (or test signal), the EL may be disabled.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input With 94 dB L_{Aeq} acoustic pressure output of the listening device, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the input voltage of the listening device when playing the fixed "programme simulation noise" as described in EN 50332-1 shall be ≥ 75 mV. NOTE The values of 94 dB and 75 mV correspond with 85 dB and 27 mV or 100 dB and 150 mV.	Not a listening device.	N/A
10.6.6.2	Corded listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the $L_{Aeq,T}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS.	Not a listening device.	N/A
10.6.6.3	Cordless listening devices In cordless mode, – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the cordless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the receiving device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the above mentioned programme simulation noise, the $L_{Aeq,T}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS.	Not a listening device.	N/A
10.6.6.4	Measurement method		N/A

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Clause	Requirement + Test			Result - Remark		Verdict
	Measurements shall be made in accordance with EN 50332-2 as applicable.					
3	Modification to the whole document					
	Delete all the “country” notes in the reference document according to the following list:					N/A
	0.2.1	Note 1 and 2	1	Note 4 and 5	3.3.8.1	Note 2
	3.3.8.3	Note 1	4.1.15	Note	4.7.3	Note 1 and 2
	5.2.2.2	Note	5.4.2.3.2.2 Table 12	Note c	5.4.2.3.2.4	Note 1 and 3
	5.4.2.3.2.4 Table 13	Note 2	5.4.2.5	Note 2	5.4.5.1	Note
	5.4.10.2.1	Note	5.4.10.2.2	Note	5.4.10.2.3	Note
	5.5.2.1	Note	5.5.8	Note	5.6.4.2.1	Note 2 and 3 and 4
	5.6.8	Note 2	5.7.6	Note	5.7.7.1	Note 1 and Note 2
	8.5.4.2.3	Note	10.2.1 Table 39	Note 3 and 4 and 5	10.5.3	Note 2
	10.6.1	Note 3	F.3.3.6	Note 3	Y.4.1	Note
	Y.4.5	Note				
4	Modification to Clause 1					
1	Add the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.					N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5	Modification to 4.Z1		
4.Z1	Add the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains, 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 B.3.1 and B.4 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; 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
6	Modification to 5.4.2.3.2.4		
5.4.2.3.2.4	Add the following to the end of this subclause: The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.		N/A
7	Modification to 10.2.1		
10.2.1	Add the following to c) and d) in table 39: For additional requirements, see 10.5.1.		N/A

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8	Modification to 10.5.1		
10.5.1	Add the following after the first paragraph: For RS 1 compliance is checked by measurement under the following conditions: In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made. NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus. Moreover, the measurement shall be made under fault conditions causing an increase of the high voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made. For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		N/A
q	Modification to G.7.1		
G.7.1	Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		N/A

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10	Modification to Bibliography	
	Add the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.	N/A
11	ADDITION OF ANNEXES	
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.1.15	Denmark, Finland, Norway and Sweden To the end of the subclause the following is added: Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Denmark: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord." In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"	No socket-outlet	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	United Kingdom To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex	No socket-outlet.	N/A
5.2.2.2	Denmark After the 2nd paragraph add the following: A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	ES1 circuit.	N/A
5.4.11.1 and Annex G	Finland and Sweden To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: 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. If this insulation forms part of a semiconductor component (e.g. an optocoupler), 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 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength		N/A

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	during manufacturing, using a test voltage of 1,5 kV. 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 5.4.11; - 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.		
5.5.2.1	Norway After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).	ES1 circuit.	N/A
5.5.6	Finland, Norway and Sweden To the end of the subclause the following is added: Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.	None.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.1	Denmark Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	Ireland and United Kingdom After the indent for pluggable equipment type A, the following is added: – the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.	ES1 circuit.	N/A
5.6.4.2.1	France After the indent for pluggable equipment type A, the following is added: – in certain cases, the protective current rating of the circuit supplied from the mains is taken as 20 A instead of 16 A.	Es1 circuit.	N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm² to 1,5 mm² in cross-sectional area.		N/A
5.6.8	Norway To the end of the subclause the following is added: Equipment connected with an earthed mains plug is classified as class I equipment. See the Norway marking requirement in 4.1.15. The symbol IEC 60417-6092, as specified in F.3.6.2, is accepted.		N/A
5.7.6	Denmark To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A

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5.7.6.2	Denmark To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
5.7.7.1	Norway and Sweden To the end of the subclause the following is added: The screen of the television 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 needs 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 a retailer, for example. 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: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)” NOTE In Norway, due to regulation for CATV-installations, 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): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV		N/A

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	nettet.” Translation to Swedish: ”Apparater 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 apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.		
8.5.4.2.3	United Kingdom Add the following after the 2nd dash bullet in 3rd paragraph: An emergency stop system complying with the requirements of IEC 60204-1 and ISO 13850 is required where there is a risk of personal injury.		N/A
B.3.1 and B.4	Ireland and United Kingdom The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Denmark To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. 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 a single-phase equipment having a RATED CURRENT exceeding 13 A or if a polyphase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a <i>Justification:</i> Heavy Current Regulations, Section 6c		N/A
G.4.2	United Kingdom To the end of the subclause the following is added: 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 °C. 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

IEC 62368-1 ATTACHMENT No.: 6			
Clause	Requirement + Test	Result - Remark	Verdict
G.7.1	United Kingdom To the first paragraph the following is added: Equipment 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 shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc. (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, 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
G.7.1	Ireland To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	Ireland and United Kingdom To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm² is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A

IEC 62368-1 ATTACHMENT No.: 6			
Clause	Requirement + Test	Result - Remark	Verdict
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
10.5.2	Germany The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. <i>Justification:</i> German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de		N/A

IEC 62368-1 ATTACHMENT No.: 6			
Clause	Requirement + Test	Result - Remark	Verdict

ZD	IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS (EN)		N/A					
	<table><tr><th rowspan="2">Type of flexible cord</th><th colspan="2">Code designations</th></tr><tr><th>IEC</th><th>CENELEC</th></tr></table>		Type of flexible cord	Code designations		IEC	CENELEC	-
	Type of flexible cord	Code designations						
		IEC	CENELEC					
	PVC insulated cords							
	Flat twin tinsel cord	60227 IEC 41	H03VH-Y					
	Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F					
	Ordinary polyvinyl chloride sheathed flexible cord	60227 IEC 53	H05VV-F H05VVH2-F					
	Rubber insulated cords							
	Braided cord	60245 IEC 51	H03RT-F					
	Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F					
	Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F					
	Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F					
	Cords having high flexibility							
	Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H					
	Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H					
	Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H					
	Cords insulated and sheathed with halogen-free thermoplastic compounds							
	Light halogen-free thermoplastic insulated and sheathed flexible cords		H03Z1Z1-F H03Z1Z1H2-F					
Ordinary halogen-free thermoplastic insulated and sheathed flexible cords		H05Z1Z1-F H05Z1Z1H2-F						

IEC62368_1E ATTACHMENT 7			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62368-1:2018 Republic of Korea NATIONAL DIFFERENCES Audio/video, information and communication technology equipment - Part 1: Safety requirements			
Differences according to.....: KC 62368-1(2021-08)			
TRF template used:: IECEE OD-2020-F3, Ed. 1.2			
Attachment Form No.....: KR_ND_IEC62368_1E			
Attachment Originator: KTL			
Master Attachment: 2024-09-02			
Copyright © 2024 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	National Differences		P
4.1.1	As of January 1, 2023, internal and external components and subassemblies that comply with IEC 60950-1 or IEC 60065 are not acceptable if those components and subassemblies mandates KC certification.		P
G.4.2	Plugs for the connection of the apparatus to the supply main shall comply with the Korean requirement (KS C 8305 or KC 60884-1 or KC 60799).		N/A
	Special national conditions (if any)		
Voltage	The marking of rated voltage or rated voltage range, for appliances intended to be connected to the supply mains, shall include 110 V, 220 V or 380 V.	Not connected to mains	N/A
Frequency	Only appliances having supply frequency of 60 Hz or a frequency range including 60 Hz are accepted.	Not connected to mains	N/A
Instruction	Instruction manuals and appliance marking related safety, including nameplate shall be in Korean		N/A

Attachment No. 8

PHOTOGRAPHS

Attachment contains

Total: 12 pages

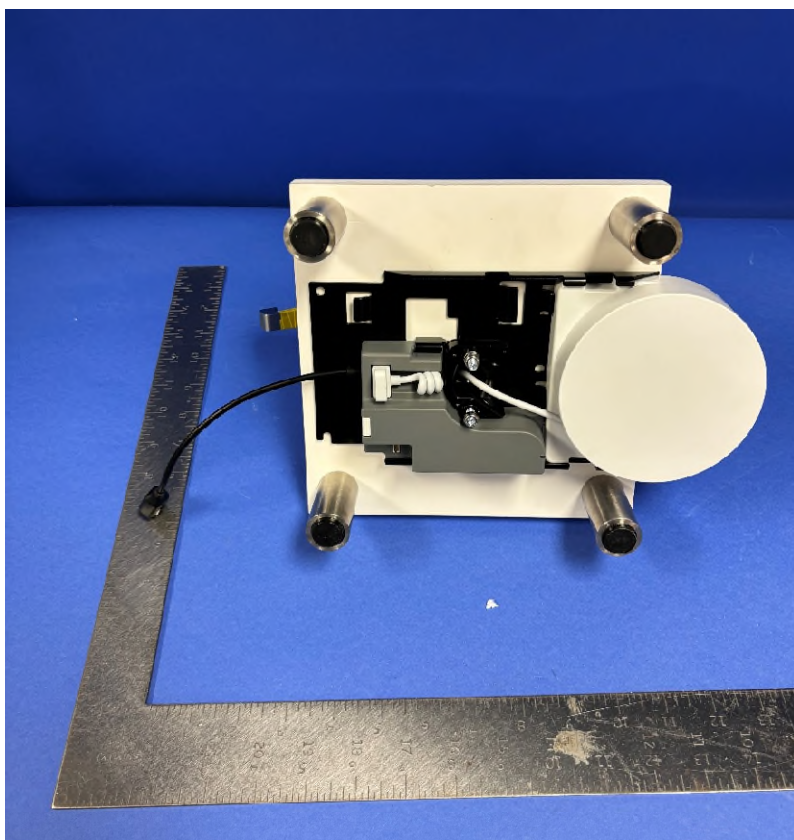
Cover page: 1 page

PHOTOS: 11 pages

Photographs: General External View of 2300-H with DAH500, representative to all models



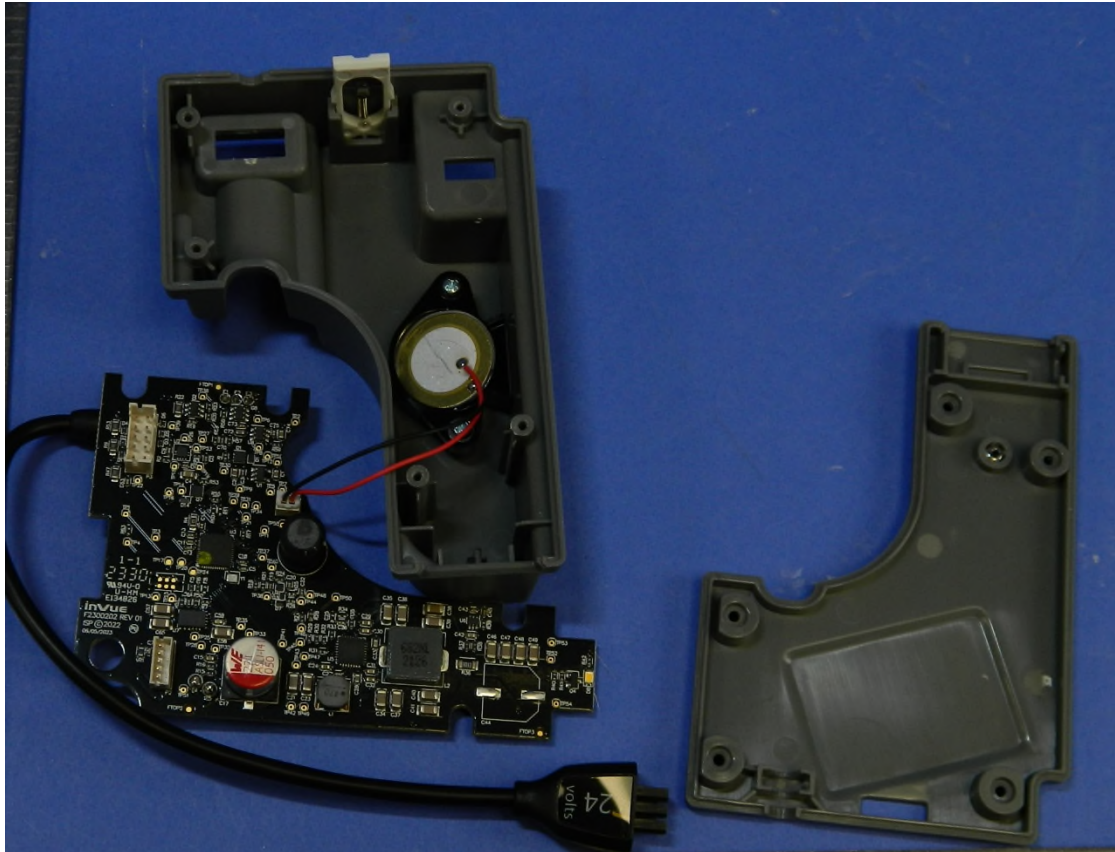
Photographs: Back View of 2300-H representative to all models



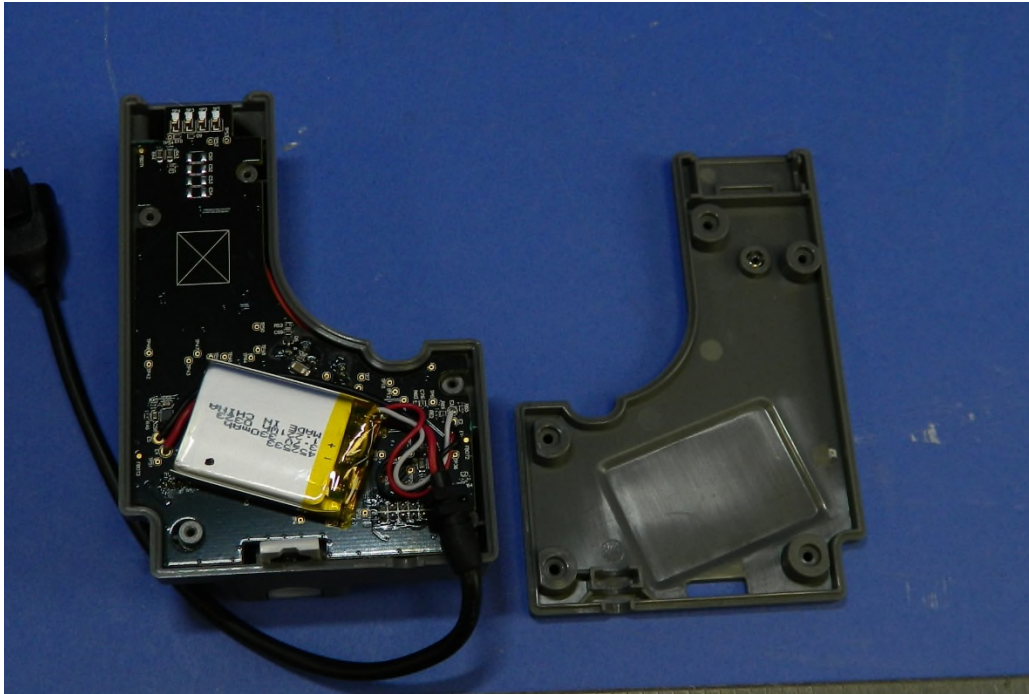
Photographs: view of Alarm Module DAA400



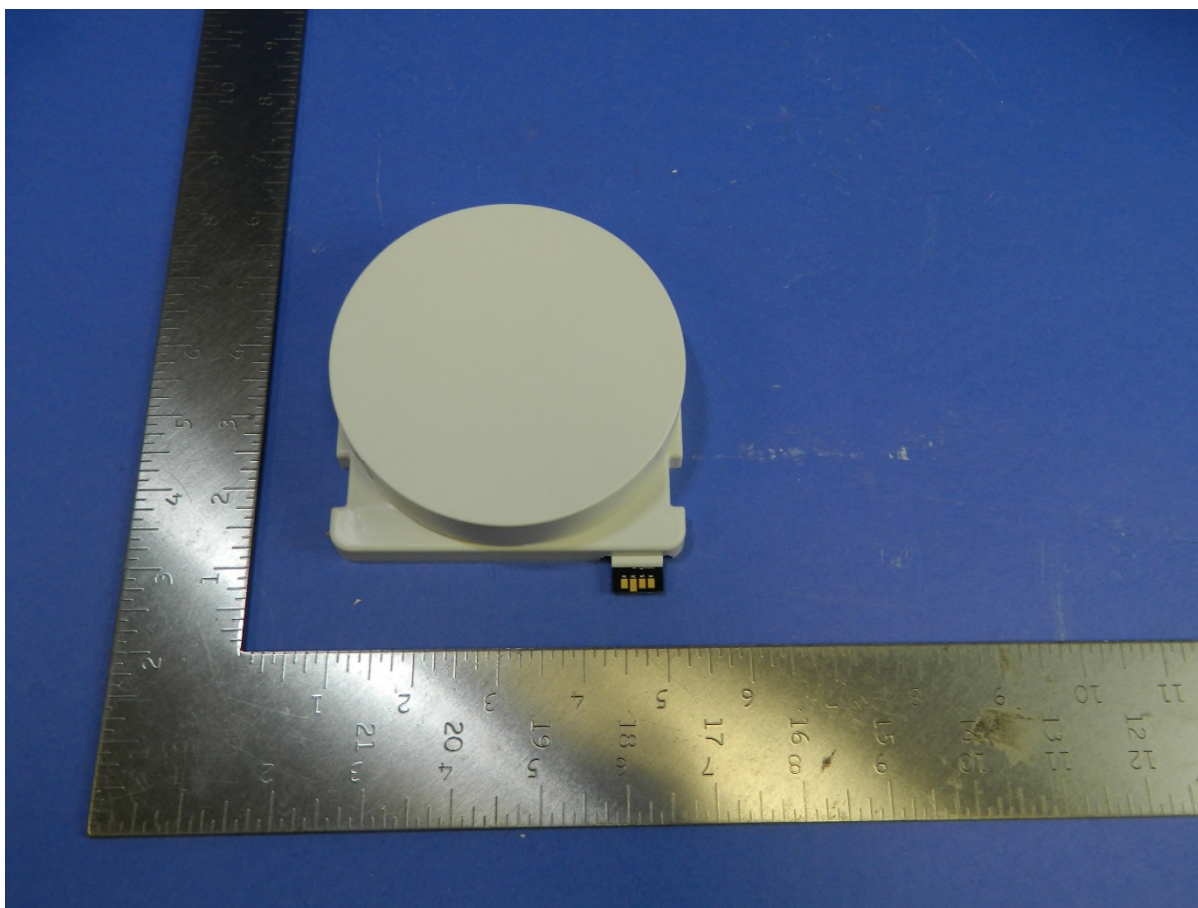
Photographs: Internal view of Alarm module DAA400



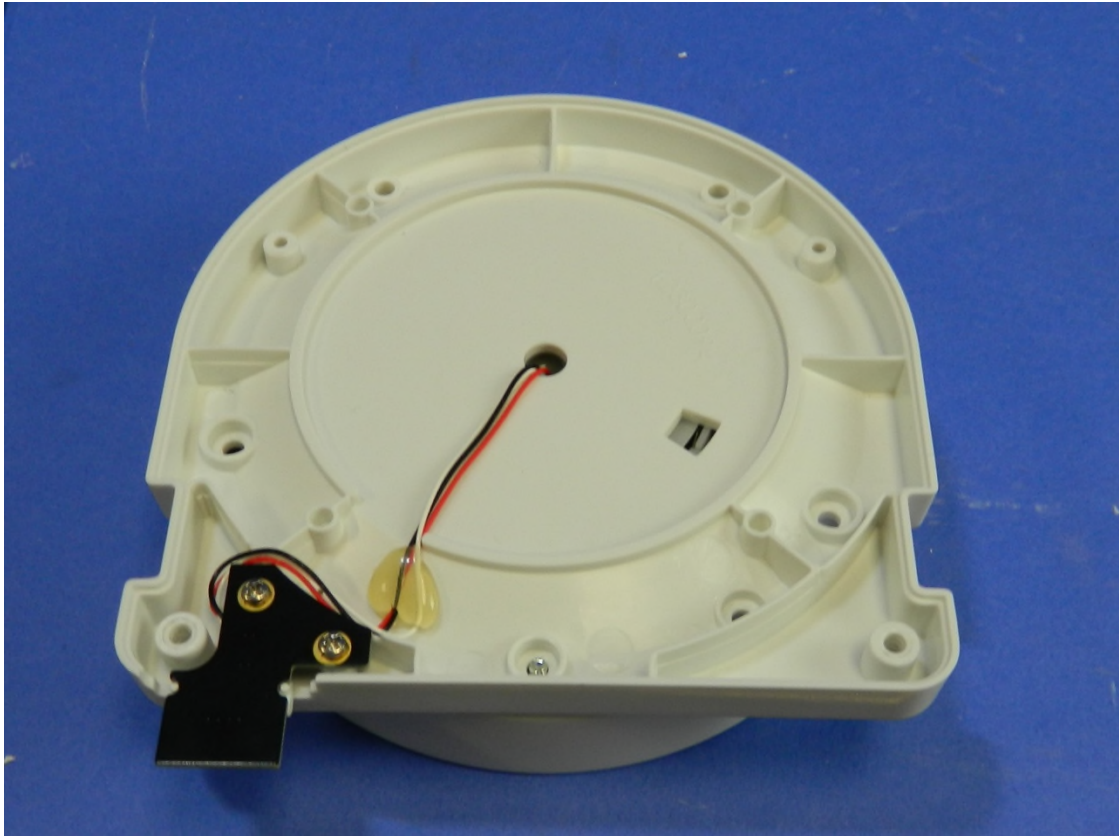
Photographs: Internal view of Alarm module DAA400



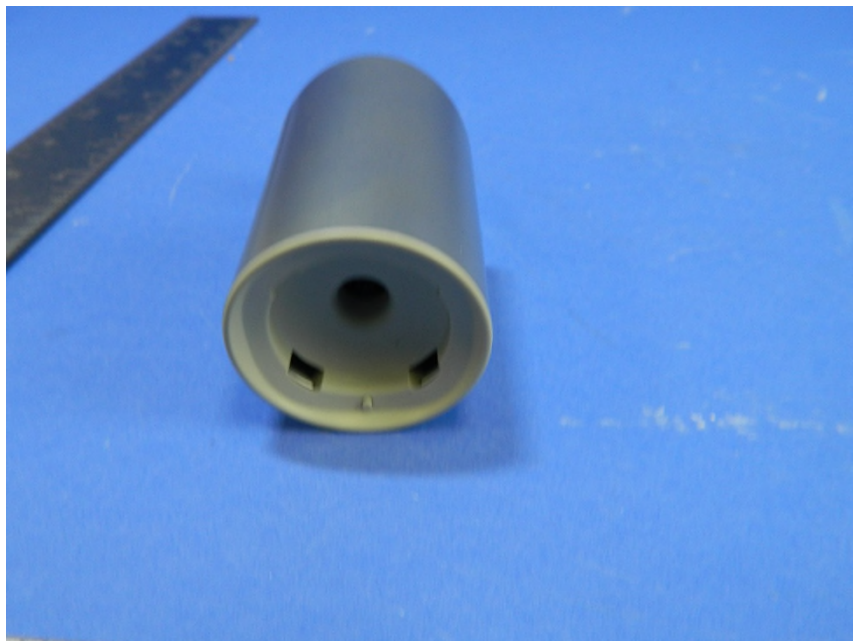
Photographs: General view of reflector DAR300



Photographs: Internal view of reflector DAR300



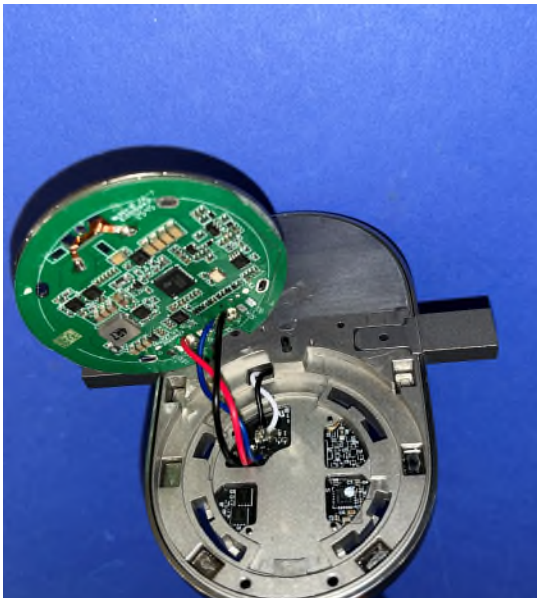
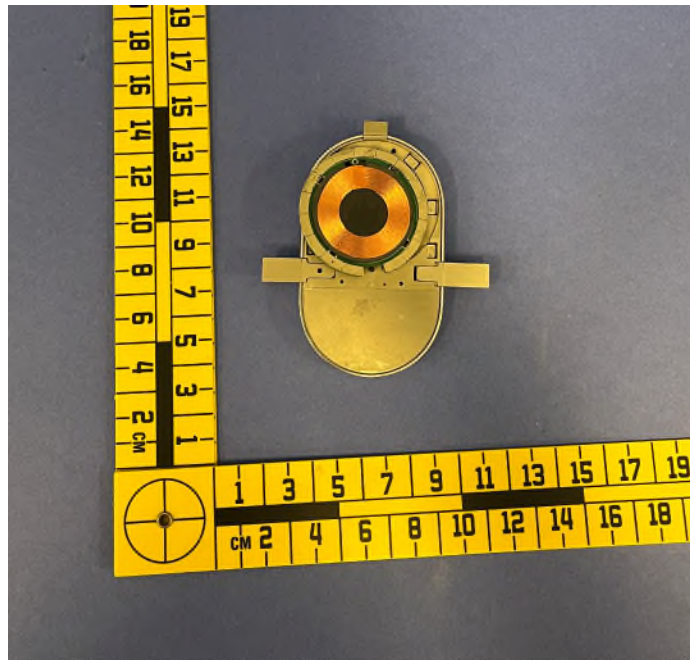
Photographs: View of Stem DAD100 representative to all stem difference only length.



Photographs: General view of DAH501



Photographs: Internal view of DAH501



Photographs: General External View of 2300-H with DAH501

