



CSA C22.2 No. 62368-1:19
(IEC 62368-1:2018, MOD)
National Standard of Canada



CSA C22.2 No. 62368-1:19
Audio/video, information and communication technology equipment —
Part 1: Safety requirements
(IEC 62368-1:2018, MOD)



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S. Lawrence	Synamedia, Scarborough, Ontario, Canada	<i>Chair</i>
K. Ban	PSC International, Division of 1019051 Ontario Limited, Richmond Hill, Ontario, Canada	
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C. Hamza	CSA Group, Toronto, Ontario, Canada	<i>Project Manager</i>
C. Lee	CSA Group, Toronto, Ontario, Canada	<i>Project Manager</i>

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Note: For brevity, this Standard will be referred to as "CSA C22.2 No. 62368-1" throughout.

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CONTENTS

Preface **13**

NATIONAL DIFFERENCES **15**

FOREWORD **17**

INTRODUCTION..... **21**

1 Scope 37

 1DV.1 Modify this clause by adding the following text: 39

 1DV.2 Modify Clause 1 by adding the following text: 39

 1DV.3 Modify Clause 1 by replacing Note 3 with the following: 39

 1DV.4 Modify Clause 1 by adding the following paragraph and Note: 39

 1DV.5 Add Clause 1DV.5.1 to Clause 1 40

2 Normative references 41

 2DV Modify Clause 2 by adding the following references: 48

3 Terms, definitions and abbreviated terms 52

 3.1 Energy source abbreviations 52

 3.2 Other abbreviations 52

 3.3 Terms and definitions 54

 3.3DV Modify 3.3 by adding the term “telecommunication network” to the list. 54

4 General requirements 72

 4.1 General 72

 4.2 Energy source classifications 77

 4.3 Protection against energy sources 78

 4.4 Safeguards 85

 4.5 Explosion 88

 4.6 Fixing of conductors 89

 4.7 Equipment for direct insertion into mains socket-outlets 90

 4.8 Equipment containing coin / button cell batteries 91

 4.9 Likelihood of fire or shock due to entry of conductive objects 94

 4.10 Components requirements 95

5 Electrically-caused injury 95

 5.1 General 95

 5.2 Classification and limits of electrical energy sources 95

 5.3 Protection against electrical energy sources 101

 5.4 Insulation materials and requirements 104

 5.5 Components as safeguards 147

 5.6 Protective conductor 152

 5.7 Prospective touch voltage, touch current and protective conductor current 160

 5.8 Backfeed safeguard in battery backed up supplies 169

6 Electrically-caused fire 169

 6.1 General 169

 6.2 Classification of power sources (PS) and potential ignition sources (PIS) 169

 6.3 Safeguards against fire under normal operating conditions and abnormal operating conditions 175

 6.4 Safeguards against fire under single fault conditions 176

 6.5 Internal and external wiring 194

 6.6 Safeguards against fire due to the connection of additional equipment 195

 6.7DV Add Clause 6.7DV to Clause 6: 196

7 Injury caused by hazardous substances 196

 7.1 General 196

 7.2 Reduction of exposure to hazardous substances 196

7.3	Ozone exposure	196
7.4	Use of personal safeguards or personal protective equipment (PPE)	196
7.5	Use of instructional safeguards and instructions	197
7.6	Batteries and their protection circuits	197
8	Mechanically-caused injury	197
8.1	General	197
8.2	Mechanical energy source classifications	197
8.3	Safeguards against mechanical energy sources	199
8.4	Safeguards against parts with sharp edges and corners	200
8.5	Safeguards against moving parts	200
8.6	Stability of equipment	208
8.7	Equipment mounted to a wall, ceiling or other structure	212
8.8	Handle strength	214
8.9	Wheels or casters attachment requirements	215
8.10	Carts, stands, and similar carriers	215
8.11	Mounting means for slide-rail mounted equipment (SRME)	217
8.12	Telescoping or rod antennas	220
9	Thermal burn injury	220
9.1	General	220
9.2	Thermal energy source classifications	220
9.3	Touch temperature limits	221
9.4	Safeguards against thermal energy sources	223
9.5	Requirements for safeguards	224
9.6	Requirements for wireless power transmitters	224
10	Radiation	228
10.1	General	228
10.2	Radiation energy source classifications	228
10.3	Safeguards against laser radiation	231
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)	231
10.5	Safeguards against X-radiation	235
10.6	Safeguards against acoustic energy sources	236

Annex A (informative) Examples of equipment within the scope of this document

Annex B (normative) Normal operating condition tests, abnormal operating condition tests and single fault condition tests

B.1	General	242
B.1.1	Test applicability	242
B.1.2	Type of test	242
B.1.3	Test samples	242
B.1.4	Compliance by inspection of relevant data	242
B.1.5	Temperature measurement conditions	242
B.2	Normal operating conditions	243
B.2.1	General	243
B.2.2	Supply frequency	243
B.2.3	Supply voltage	243
B.2.4	Normal operating voltages	243
B.2.5	Input test	244
B.2.6	Operating temperature measurement conditions	245
B.2.7	Battery charging and discharging under normal operating conditions	245
B.3	Simulated abnormal operating conditions	245
B.3.1	General	245
B.3.2	Covering of ventilation openings	246

B.3.3	DC mains polarity test	247
B.3.4	Setting of voltage selector	247
B.3.5	Maximum load at output terminals	247
B.3.6	Reverse battery polarity	247
B.3.7	Audio amplifier abnormal operating conditions	247
B.3.8	Compliance criteria during and after abnormal operating conditions	247
B.4	Simulated single fault conditions	247
B.4.1	General	247
B.4.2	Temperature controlling device	248
B.4.3	Motor tests	248
B.4.4	Functional insulation	248
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors	249
B.4.6	Short-circuit or disconnection of passive components	249
B.4.7	Continuous operation of components	249
B.4.8	Compliance criteria during and after single fault conditions	250
B.4.9	Battery charging and discharging under single fault conditions	250

Annex C (normative) UV radiation

C.1	Protection of materials in equipment from UV radiation	251
C.1.1	General	251
C.1.2	Requirements	251
C.1.3	Test method and compliance criteria	251
C.2	UV light conditioning test	252
C.2.1	Test apparatus	252
C.2.2	Mounting of test samples	252
C.2.3	Carbon-arc light-exposure test	252
C.2.4	Xenon-arc light-exposure test	252

Annex D (normative) Test generators

D.1	Impulse test generators	253
D.2	Antenna interface test generator	254
D.3	Electronic pulse generator	256

Annex E (normative) Test conditions for equipment containing audio amplifiers

E.1	Electrical energy source classification for audio signals	257
E.2	Audio amplifier normal operating conditions	257
E.3	Audio amplifier abnormal operating conditions	258

Annex F (normative) Equipment markings, instructions, and instructional safeguards

F.1	General	259
F.2	Letter symbols and graphical symbols	259
F.2.1	Letter symbols	259
F.2.2	Graphical symbols	259
F.2.3	Compliance criteria	259
F.2.3DV	Modify F.2.3 by adding the following text:	259
F.3	Equipment markings	259
F.3.1	Equipment marking locations	259
F.3.2	Equipment identification markings	260
F.3.3	Equipment rating markings	260
F.3.3DV	Modify F.3.3 by adding the following Note beneath the clause title:	260
F.3.4	Voltage setting device	263

F.3.5	Markings on terminals and operating devices	263
F.3.6	Equipment markings related to equipment classification	264
F.3.7	Equipment IP rating marking	265
F.3.7DV	Modify F.3.7 by adding the following:	265
F.3.8	External power supply output marking	265
F.3.9	Durability, legibility and permanence of markings	266
F.3.10	Test for the permanence of markings	266
F.4	Instructions	266
F.5	Instructional safeguards	267

Annex G (normative) Components

G.1	Switches	271
G.1.1	General	271
G.1.2	Requirements	271
G.1.3	Test method and compliance criteria	272
G.2	Relays	272
G.2.1	Requirements	272
G.2.2	Overload test	273
G.2.3	Relay controlling connectors supplying power to other equipment	273
G.2.4	Test method and compliance criteria	273
G.3	Protective devices	273
G.3.1	Thermal cut-offs	273
G.3.2	Thermal links	275
G.3.3	PTC thermistors	276
G.3.4	Overcurrent protective devices	276
G.3.5	Safeguard components not mentioned in G.3.1 to G.3.4	276
G.4	Connectors	277
G.4.1	Clearance and creepage distance requirements	277
G.4.2	Mains connectors	277
G.4.3	Connectors other than mains connectors	277
G.4.3DV	Modify G.4.3 as follows:	277
G.5	Wound components	278
G.5.1	Wire insulation in wound components	278
G.5.2	Endurance test	278
G.5.3	Transformers	280
G.5.4	Motors	290
G.6	Wire insulation	295
G.6.1	General	295
G.6.2	Enamelled winding wire insulation	296
G.7	Mains supply cords	296
G.7.1	General	296
G.7.2	Cross sectional area	297
G.7.2DV	Modify G.7.2 as follows:	298
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords	298
G.7.4	Cord entry	299
G.7.5	Non-detachable cord bend protection	300
G.7.6	Supply wiring space	301
G.7ADV	Add Clause G.7ADV as follows:	302
G.8	Varistors	305
G.8.1	General	305
G.8.2	Safeguards against fire	306
G.9	Integrated circuit (IC) current limiters	308
G.9.1	Requirements	308
G.9.2	Test program	308
G.9.3	Compliance criteria	309

G.10	Resistors	310
G.10.1	General	310
G.10.2	Conditioning.....	310
G.10.3	Resistor test.....	310
G.10.4	Voltage surge test.....	310
G.10.5	Impulse test	310
G.10.6	Overload test.....	310
G.11	Capacitors and RC units.....	311
G.11.1	General.....	311
G.11.2	Conditioning of capacitors and RC units	311
G.11.3	Rules for selecting capacitors	311
G.12	Optocouplers.....	312
G.13	Printed boards.....	312
G.13.1	General	312
G.13.2	Uncoated printed boards	312
G.13.3	Coated printed boards	312
G.13.4	Insulation between conductors on the same inner surface	314
G.13.5	Insulation between conductors on different surfaces.....	314
G.13.6	Tests on coated printed boards	314
G.14	Coatings on component terminals	318
G.14.1	Requirements	318
G.14.2	Test method and compliance criteria	318
G.15	Pressurized liquid filled components	318
G.15.1	Requirements	318
G.15.2	Test methods and compliance criteria.....	318
G.15.3	Compliance criteria.....	320
G.16	IC that includes a capacitor discharge function (ICX)	320
G.16.1	Requirements	320
G.16.2	Tests	320
G.16.3	Compliance criteria.....	320

Annex H (normative) Criteria for telephone ringing signals

H.1	General.....	322
H.2	Method A	322
H.2DV	Modify H.2 by adding the following text after the second dashed paragraph in a): ..	325
H.3	Method B	325
H.3.1	Ringing signal	325
H.3.2	Tripping device and monitoring voltage	326
H.4DV	Add Clause H.4DV.1 to Annex H:	327

Annex I (informative) Overvoltage categories(see IEC 60364-4-44)

Annex J (normative) Insulated winding wires for use without interleaved insulation

J.1	General	331
J.2	Type tests	331
J.2.1	General	331
J.2.2	Electric strength	331
J.2.3	Flexibility and adherence	332
J.2.4	Heat shock	333
J.2.5	Retention of electric strength after bending.....	333
J.3	Testing during manufacturing	333
J.3.1	General	333

J.3.2	Spark test	334
J.3.3	Sampling test	334

Annex K (normative) Safety interlocks

K.1	General	335
K.1.1	General requirements	335
K.1.2	Test method and compliance criteria	335
K.2	Components of the safety interlock safeguard mechanism	336
K.3	Inadvertent change of operating mode	336
K.4	Interlock safeguard override	336
K.5	Fail-safe	336
K.5.1	Requirement	336
K.5.2	Test method and compliance criteria	336
K.6	Mechanically operated safety interlocks	337
K.6.1	Endurance requirement	337
K.6.2	Test method and compliance criteria	337
K.7	Interlock circuit isolation	337
K.7.1	Separation distances for contact gaps and interlock circuit elements	337
K.7.2	Overload test	338
K.7.3	Endurance test	338
K.7.4	Electric strength test	338

Annex L (normative) Disconnect devices

L.1	General requirements	339
L.2	Permanently connected equipment	339
L.3	Parts that remain energized	339
L.4	Single-phase equipment	339
L.5	Three-phase equipment	340
L.6	Switches as disconnect devices	340
L.7	Plugs as disconnect devices	340
L.8	Multiple power sources	340
L.9	Compliance criteria	341

Annex M (normative) Equipment containing batteries and their protection circuits

M.1	General requirements	342
M.2	Safety of batteries and their cells	342
M.2.1	Requirements	342
M.2.2	Compliance criteria	342
M.3	Protection circuits for batteries provided within the equipment	342
M.3.1	Requirements	342
M.3.2	Test method	343
M.3.3	Compliance criteria	344
M.4	Additional safeguards for equipment containing a portable secondary lithium battery	344
M.4.1	General	344
M.4.2	Charging safeguards	344
M.4.3	Fire enclosure	345
M.4.4	Drop test of equipment containing a secondary lithium battery	346
M.5	Risk of burn due to short-circuit during carrying	347
M.5.1	Requirements	347
Test method and compliance criteria	347	
M.6	Safeguards against short-circuits	347
M.6.1	Requirements	347

M.6.2	Compliance criteria	347
M.7	Risk of explosion from lead acid and NiCd batteries	348
M.7.1	Ventilation preventing an explosive gas concentration	348
M.7.2	Test method and compliance criteria	348
M.7.3	Ventilation tests	351
M.7.4	Marking requirement	352
M.8	Protection against internal ignition from external spark sources of batteries with aqueous electrolyte	352
M.8.1	General	352
M.8.2	Test method	353
M.9	Preventing electrolyte spillage	355
M.9.1	Protection from electrolyte spillage	355
M.9.2	Tray for preventing electrolyte spillage	356
M.10	Instructions to prevent reasonably foreseeable misuse	356

Annex N (normative) Electrochemical potentials (V)

Annex O (normative) Measurement of creepage distances and clearances

Annex P (normative) Safeguards against conductive objects

P.1	General	369
P.2	Safeguards against entry or consequences of entry of a foreign object	369
P.2.1	General	369
P.2.2	Safeguards against entry of a foreign object	369
P.2.3	Safeguards against the consequences of entry of a foreign object	371
P.3	Safeguards against spillage of internal liquids	373
P.3.1	General	373
P.3.2	Determination of spillage consequences	373
P.3.3	Spillage safeguards	374
P.3.4	Compliance criteria	374
P.4	Metallized coatings and adhesives securing parts	374
P.4.1	General	374
P.4.2	Tests	375

Annex Q (normative) Circuits intended for interconnection with building wiring

Q.1	Limited power source	377
Q.1.1	Requirements	377
Q.1.2	Test method and compliance criteria	377
Q.2	Test for external circuits – paired conductor cable	378
Q.3DV	Add Clause Q.3DV.1 to Annex Q:	379

Annex R (normative) Limited short-circuit test

R.1	General	381
R.2	Test setup	381
R.3	Test method	381
R.4	Compliance criteria	382

Annex S (normative) Tests for resistance to heat and fire

S.1	Flammability test for fire enclosure and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	383
S.2	Flammability test for fire enclosure and fire barrier integrity	384
S.3	Flammability tests for the bottom of a fire enclosure.....	385
S.3.1	Mounting of samples	385
S.3.2	Test method and compliance criteria	385
S.4	Flammability classification of materials	386
S.5	Flammability test for fire enclosure materials of equipment with a steady state power exceeding 4 000 W	387

Annex T (normative) Mechanical strength tests

T.1	General	388
T.2	Steady force test, 10 N.....	388
T.3	Steady force test, 30 N.....	388
T.4	Steady force test, 100 N.....	388
T.5	Steady force test, 250 N.....	388
T.6	Enclosure impact test	388
T.7	Drop test.....	389
T.8	Stress relief test	389
T.9	Glass impact test.....	390
T.10	Glass fragmentation test	390
T.11	Test for telescoping or rod antennas	390

Annex U (normative) Mechanical strength of CRTs and protection against the effects of implosion

U.1	General.....	392
U.2	Test method and compliance criteria for non-intrinsically protected CRTs	392
U.3	Protective screen.....	393

Annex V (normative) Determination of accessible parts

V.1	Accessible parts of equipment.....	394
V.1.1	General	394
V.1.2	Test method 1 – Surfaces and openings tested with jointed test probes	394
V.1.3	Test method 2 – Openings tested with straight unjointed test probes	394
V.1.4	Test method 3 – Plugs, jacks, connectors.....	397
V.1.5	Test method 4 – Slot openings	398
V.1.6	Test method 5 – Terminals intended to be used by an ordinary person.....	399
V.2	Accessible part criterion.....	399

Annex W (informative) Comparison of terms introduced in this document

W.1	General	400
W.2	Comparison of terms	400

Annex X (normative) Alternative method for determining clearances for insulation in circuits connected to an AC mains not exceeding 420 V peak (300 V RMS)

Annex Y (normative) Construction requirements for outdoor enclosures

Y.1	General	416
Y.2	Resistance to UV radiation	416

Y.2DV Modify Y.2 by adding the following paragraph after the second paragraph:..... 416

Y.3 Resistance to corrosion 416

Y.3.1 General 416

Y.3.1DV Modify Y.3.1 by adding the following Note at the end: 417

Y.3.2 Test apparatus 417

Y.3.3 Water – saturated sulphur dioxide atmosphere 417

Y.3.4 Test procedure 418

Y.3.5 Compliance criteria 418

Y.4 Gaskets..... 418

Y.4.1 General 418

Y.4DV Modify Y.4 by adding the following paragraph at the end: 419

Y.4.2 Gasket tests 419

Y.4.3 Tensile strength and elongation tests 419

Y.4.4 Compression test 419

Y.4.5 Oil resistance..... 421

Y.4.6 Securing means 421

Y.5 Protection of equipment within an outdoor enclosure..... 421

Y.5.1 General 421

Y.5.1DV Modify Y.51 by adding the following paragraphs at the end:..... 422

Y.5.2 Protection from moisture..... 422

Y.5.3 Water spray test..... 423

Y.5.4 Protection from plants and vermin 426

Y.5.5 Protection from excessive dust..... 426

Y.6 Mechanical strength of enclosures..... 427

Y.6.1 General 427

Y.6.2 Impact test..... 427

Annex DVA (normative) Canadian and U.S. regulatory-based requirements

Annex DVA Add Annex DVA as follows: 428

Annex DVB (normative) Equipment used in health care facilities

Annex DVB Add Annex DVB as follows: 445

Annex DVC (normative) Under kitchen cabinet equipment

ANNEX DVC Add Annex DVC as follows:..... 449

Annex DVD (informative) D.C. powered equipment and centralized d.c. power systems (DC mains)

Annex DVD Add Annex DVD as follows:..... 452

Annex DVE (normative) UL and CSA component requirements (mandatory)

Annex DVE Add Annex DVE as follows: 457

Annex DVF (normative) UL and CSA component requirements (alternative to IEC standards)

Annex DVF Add Annex DVF as follows: 465

Annex DVG (normative) UL and CSA component requirements (alternative)

Annex DVG Add Annex DVG as follows: 474

Annex DVH (normative) Permanently connected equipment – mains connections

Annex DVH Add Annex DVH as follows: 477

Annex DVI (normative) Safeguards against electrically-caused fire due to overvoltage from power line crosses

Annex DVI Add Annex DVI as follows: 491

Annex DVJ (normative) Acoustic tests for telecommunications equipment

Annex DVJ Add Annex DVJ as follows: 501

Annex DVK (normative) Canadian and U.S. markings and instructions

Annex DVK Add Annex DVK as follows: 510

Bibliography

Preface

This is the harmonized CSA Group and UL standard for Audio/video, information and communication technology equipment – Part 1: Safety requirements. It is the third edition of CSA C22.2 No. 62368-1 and the third edition of UL 62368-1. This edition of CSA-C22.2 No. 62368-1 supersedes the previous edition published on December 1, 2014. This edition of UL 62368-1 supersedes the previous edition published on December 1, 2014.

This harmonized standard is based on IEC Publication 62368-1, third edition, Audio/video, information and communication technology equipment – Part 1: Safety requirements, issued October 2018. IEC Publication 62368-1 is copyrighted by the IEC.

This harmonized standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Committee (THC 62368) for Audio/Video, Information Technology, and Communication Technology Equipment are gratefully acknowledged.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This standard was reviewed by the CSA Subcommittee on Safety of Electronic Equipment within the Field of Audio/Video, Information, and Communication Technology, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

Level of harmonization

This standard adopts the IEC text with national differences.

This standard is published as an equivalent standard for CSA Group and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

All national differences from the IEC text are included in the CSA Group and UL versions of the standard. While the technical content is the same in each organization's version, the format and presentation may differ.

Reasons for differences from IEC

Differences from the IEC are being added in order to address safety and regulatory situations present in the US and Canada.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

IEC Copyright

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NATIONAL DIFFERENCES

GENERAL

National Differences from the text of International Electrotechnical Commission (IEC) Publication 62368-1, Audio/video, information and communication technology equipment – Part 1: Safety requirements, copyright 2018, are indicated by notations (differences) and are presented in bold text. The national difference type is included in the body.

There are five types of National Differences as noted below. The difference type is noted on the first line of the National Difference in the standard. The standard may not include all types of these National Differences.

DR – These are National Differences based on the **national regulatory requirements**.

D1 – These are National Differences which are based on **basic safety principles and requirements**, elimination of which would compromise safety for consumers and users of products.

D2 – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

DC – These are National Differences based on the **component standards** and will not be deleted until a particular component standard is harmonized with the IEC component standard.

DE – These are National Differences based on **editorial comments or corrections**.

Each national difference contains a description of what the national difference entails. Typically one of the following words is used to explain how the text of the national difference is to be applied to the base IEC text:

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Modification / Modify - A modification is an altering of the existing base IEC text such as the addition, replacement or deletion of certain words or the replacement of an entire clause, subclause, table, figure, or annex of the base IEC text.

Deletion / Delete - A deletion entails complete deletion of an entire numbered clause, subclause, table, figure, or annex without any replacement text.

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FOREWORD

INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT – Part 1: Safety requirements

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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International Standard IEC 62368-1 has been prepared by TC 108: Safety of electronic equipment within the field of audio/video, information technology and communication technology.

This third edition cancels and replaces the second edition published in 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- addition of requirements for outdoor equipment;
- new requirements for optical radiation;
- addition of requirements for insulating liquids;

- addition of requirements for work cells;
- addition of requirements for wireless power transmitters;
- addition of requirements for fully insulated winding wire (FIW);
- alternative method for determination of top, bottom and side openings for fire enclosures;
- alternative requirements for sound pressure.

The text of this document is based on the following documents:

FDIS	Report on voting
108/701/FDIS	108/707/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62368 series, published under the general title *Audio/video, information and communication technology equipment*, can be found on the IEC website.

The “in some countries” notes regarding differing national practices are contained in the following clauses, subclauses and tables:

[0.2.1](#), [1](#), [3.3.8.1](#), [3.3.8.3](#), [4.1.15](#), [4.7.3](#), [5.2.2.2](#), [5.4.2.3.2.4](#), [5.4.2.5](#), [5.4.5.1](#), [5.4.10.2.1](#), [5.4.10.2.2](#), [5.4.10.2.3](#), [5.5.2.1](#), [5.5.6](#), [5.6.4.2.1](#), [5.6.8](#), [5.7.6](#), [5.7.7.1](#), [8.5.4.2.3](#), [10.5.3](#), [10.6.1](#), [F.3.3.6](#), [Y.4.1](#), [Y.4.5](#), [Table 12](#), [Table 13](#), [Table 14](#) and [Table 39](#).

In this document, the following print types or formats are used:

- requirements proper and normative annexes: in roman type;
- compliance statements and test specifications: *in italic type*;
- notes/explanatory matter: in smaller roman type;
- normative conditions within tables: in smaller roman type;
- terms that are defined in [3.3](#): **bold**.

In figures and tables, if colour is available:

- green colour denotes a class 1 energy source;
- yellow colour denotes a class 2 energy source;
- red colour denotes a class 3 energy source.

A comparison of terms introduced in this document that are different from other existing IEC documents is given in Annex [W](#).

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

NOTE Explanatory information related to IEC 62368-1 is contained in IEC TR 62368-2. It provides rationale together with explanatory information related to this document.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

DV.1 DE Modification: Add the following to the IEC Foreword:

The numbering system in the standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1,000 and 1,01 means 1.01.

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INTRODUCTION

0 Principles of this product safety standard

0.1 Objective

This part of IEC 62368 is a product safety standard that classifies energy sources, prescribes SAFEGUARDS against those energy sources, and provides guidance on the application of, and requirements for, those SAFEGUARDS.

The prescribed SAFEGUARDS are intended to reduce the likelihood of pain, injury and, in the case of fire, property damage.

The objective of the INTRODUCTION is to help designers to understand the underlying principles of safety in order to design safe equipment. These principles are informative and not an alternative to the detailed requirements of this document.

0.2 Persons

0.2.1 General

This document describes SAFEGUARDS for the protection of three kinds of persons: the ORDINARY PERSON, the INSTRUCTED PERSON, and the SKILLED PERSON. Unless otherwise specified, the requirements for an ORDINARY PERSON apply. This document assumes that a person will not intentionally create conditions or situations that could cause pain or injury.

NOTE 1 In Australia, the work conducted by an instructed person or skilled person may require formal licensing from regulatory authorities.

NOTE 2 In Germany, a person may only be regarded as an instructed person or a skilled person if certain legal requirements are fulfilled.

0.2.2 Ordinary person

ORDINARY PERSON is the term applied to all persons other than INSTRUCTED PERSONS and SKILLED PERSONS. ORDINARY PERSONS include not only users of the equipment, but also all persons who may have access to the equipment or who may be in the vicinity of the equipment. Under NORMAL OPERATING CONDITIONS or ABNORMAL OPERATING CONDITIONS, ORDINARY PERSONS should not be exposed to parts comprising energy sources capable of causing pain or injury. Under a SINGLE FAULT CONDITION, ORDINARY PERSONS should not be exposed to parts comprising energy sources capable of causing injury.

0.2.3 Instructed person

INSTRUCTED PERSON is a term applied to persons who have been instructed and trained by a SKILLED PERSON, or who are supervised by a SKILLED PERSON, to identify energy sources that may cause pain (see [Table 1](#)) and to take precautions to avoid unintentional contact with or exposure to those energy sources. Under NORMAL OPERATING CONDITIONS, ABNORMAL OPERATING CONDITIONS or SINGLE FAULT CONDITIONS, INSTRUCTED PERSONS should not be exposed to parts comprising energy sources capable of causing injury.

0.2.4 Skilled person

SKILLED PERSON is a term applied to persons who have training or experience in the equipment technology, particularly in knowing the various energies and energy magnitudes used in the equipment. SKILLED PERSONS are expected to use their training and experience to recognize energy sources capable of causing pain or injury and to take action for protection from those energies. SKILLED PERSONS should also be protected against unintentional contact or exposure to energy sources capable of causing injury.