



IEC 62368-1 Edition 4

Global Safety Standard for Audio/Video, Information & Communication Technology Equipment

Published: May 26, 2023

Evolution of the Standard

Ed 1
2010

Initial publication with hazard-based approach

Ed 2
2014

Improved clarity and industry acceptance

Ed 3
2018

Further refinements and improvements

Ed 4
2023

Current edition with expanded scope



Scope & Applicability

Broader Product Range

Edition 4 encompasses an expanded range of products, including liquid cooling systems in data centers and emerging technologies. The standard remains technology-neutral and future-proof..



Technological Neutrality

Future-Proof Design

Continues the technology-neutral approach to accommodate rapid technological advancement, ensuring the standard remains relevant amid constantly evolving innovation.



Risk Assessment

Enhanced Hazard Control

Detailed risk assessment process accounts for potential hazards from new and emerging technologies. The hazard-based approach ensures proactive identification and mitigation of risks.



Equipment Coverage

Communication Equipment

Audio/Video Equipment

Information Technology

Business & Office Machines

- ✓ Components & sub-assemblies
- ✓ External/Internal power supply units
- ✓ Large equipment for restricted areas
- ✓ Equipment for outdoor locations
- ✓ Accessories (wireless chargers, etc.)



What's New in Edition 4

New Clauses and Requirements

- ◇ Additional safety requirements for emerging technologies and product types
- ◇ Enhanced provisions for liquid cooling systems in data center equipment
- ◇ New protective measures addressing modern hazard scenarios
- ◇ Expanded testing protocols for contemporary product designs

Construction & Enclosure Changes

- ◇ Multiple clause revisions related to side and bottom openings with new definitions and application methods
- ◇ Annex P additions establishing specific limits on opening sizes based on enclosure thickness
- ◇ Updated requirements for mechanical strength and stability
- ◇ Enhanced specifications for accessible parts and protective barriers

Editorial Improvements

- ◇ Clarification of requirements' intent for improved interpretation by design engineers
- ◇ Restructured sections for better logical flow and easier navigation
- ◇ Refined terminology and definitions for consistency
- ◇ Additional guidance notes and explanatory text

Technical Updates

- ◇ Modifications to clearance and creepage distance requirements
- ◇ Updated thermal testing criteria and measurement procedures
- ◇ Revised electrical strength and insulation requirements
- ◇ Enhanced requirements for component reliability and evaluation

Background & the removal of clause 4.1.1

- ◇ In earlier editions (Ed. 2 and Ed. 3) of IEC 62368-1, there was a clause (4.1.1) that allowed use of components/subassemblies certified under legacy standards (IEC 60950-1 or IEC 60065) without re-evaluation, under certain conditions.
- ◇ **In Ed. 4 (2023), clause 4.1.1 is removed.** That means the "automatic acceptance" of components only certified to the legacy standards is no longer supported.
- ◇ As a result, components or subassemblies certified only under IEC 60950-1 or IEC 60065 can no longer be simply

Impact Assessment Required: These changes may affect currently certified products. Manufacturers should conduct thorough gap analysis to determine compliance status and necessary modifications.



Global Implementation

Adoption Timeline Varies

Countries adopt standards at different paces. Some markets still use Edition 2, others recently adopted Edition 3, while Edition 4 is in various stages of adoption worldwide. EU adoption may take 12-24 months and requires CENELEC harmonization review for presumption of conformity.

What Do I Need to Do?



Review & Assess

If certified to Edition 2 or 3:

- **Review** new clauses and editorial changes
- **Assess** construction requirements (openings, Annex P)
- **Evaluate** impact on your product design
- **Check** market-specific adoption timelines



Retesting Required

You may need retesting if:

- Your target market mandates Edition 4
- New clauses affect your product design
- Construction changes impact openings/enclosures
- You're launching new products or variants



Pro Tip: Work with your certification body to conduct a gap analysis between your current certification and Edition 4 requirements to determine the scope of testing needed.

Hazard-Based Safety Approach
Technology-independent and future-proof standard for safeguarding users and environments

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