

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Mechanical structures for electronic equipment – Outdoor enclosures –  
Part 1: Design guidelines**

**Structures mécaniques pour équipement électronique – Enveloppes de plein  
air –  
Partie 1: Lignes directrices pour la conception**



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## CONTENTS

|   |    |
|---|----|
| FOREWORD.....   | 3  |
| INTRODUCTION.....   | 5  |
| 1 Scope.....  | 6  |
| 2 Normative references .....                                | 7  |
| 3 Terms and definitions .....                               | 8  |
| 4 Dimensions .....  | 9  |
| 5 Environmental requirements and tests, safety aspects..... | 9  |
| 5.1 Classification of environmental conditions .....        | 9  |
| 5.2 Static load .....                                       | 10 |
| 5.3 Dynamic stress.....                                     | 10 |
| 5.4 Seismic performance.....                                | 10 |
| 6 Electromagnetic shielding.....                            | 10 |
| 7 Thermal management and acoustic noise suppression.....    | 11 |
| <br>  |    |
| Figure 1 – Typical outdoor enclosure .....                  | 6  |
| Figure 2 – Locations of outdoor enclosures.....             | 8  |
| <br>  |    |
| Table 1 – Environmental conditions .....                    | 9  |
| Table 2 – Safety aspects .....                              | 10 |

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MECHANICAL STRUCTURES FOR ELECTRONIC EQUIPMENT –  
OUTDOOR ENCLOSURES –****Part 1: Design guidelines**

## FOREWORD

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International Standard IEC 61969-1 has been prepared by subcommittee 48D: Mechanical structures for electronic equipment, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This second edition cancels and replaces the first edition issued in 1999. It constitutes a technical revision.

The main technical changes with regard to the previous edition are as follows:

- a) Addition of design guidance for thermal management and noise suppression as thermal/noise management is often considered a basic requirement of an empty outdoor enclosure. If thermal management components are included in the product, the environmental impact may become the responsibility of the empty outdoor enclosure manufacturer. Therefore the acoustic limitations shall be observed.

Typically, the user of the empty outdoor enclosure follows the local regulatory acoustic requirements (sound power and/or sound pressure). Acoustic measurements may be performed on the empty outdoor enclosure fitted with thermal management components only or, if agreed between manufacturer and user at the final stage of the application specific installation.

- b) Historically, Ed 1 intended to create a market for standardized empty outdoor enclosures offered by multiple vendors. Detail standards such as IEC 61969-2-1 Ed 1 and IEC 61969-2-2 Ed 1 were issued to guide users to preferred and available solutions.

However, development showed that this intend (created with user's participation) was not satisfying the user's expectations.

Consequently, the detail standards IEC 61969-2-1 Ed 1 and IEC 61969-2-2 Ed 1 will be withdrawn when IEC 61969-2 Ed 2 is issued. The IEC 61969-2 Ed 2 co-ordination dimensions are based on IEC 60917-1. The definition outdoor cases and outdoor cabinets are merged into the definition outdoor enclosures.

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

|              |                  |
|--------------|------------------|
| FDIS         | Report on voting |
| 48D/488/FDIS | 48D/498/RVD      |

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

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

A list of all parts of IEC 61969, under the general title, *Mechanical structures for electronic equipment – Outdoor enclosures*, can be found on the IEC website.

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

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

## INTRODUCTION

This standard is intended as a generic guide for the development of further standards. The products covered are empty enclosures to be equipped with application-specific solutions to be used at non-weather protected locations above ground. This standard is followed by a co-ordination dimension standard (IEC 61969-2 Ed 2) and an environmental requirements and tests, safety aspect standard (IEC 61969-3 Ed 2).

Withdrawn