

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Mechanical structures for electrical and electronic equipment – Tests for  
IEC 60917 and IEC 60297 series –  
Part 6: Security aspects for indoor cabinets**

**Structures mécaniques pour équipements électriques et électroniques – Essais  
pour les séries IEC 60917 et IEC 60297 –  
Partie 6: Aspects liés à la sécurité des baies intérieures**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**MECHANICAL STRUCTURES FOR  
ELECTRICAL AND ELECTRONIC EQUIPMENT –  
TESTS FOR IEC 60917 AND IEC 60297 SERIES –****Part 6: Security aspects for indoor cabinets****FOREWORD**

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International Standard IEC 61587-6 has been prepared by subcommittee 48D: Mechanical structures for electrical and electronic equipment, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

This second edition cancels and replaces the first edition published in 2017. This edition constitutes a technical revision.

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

- a) Revised and expanded terms and definitions.
- b) Additional information in 4.2 Access security level of the cabinet.
- c) Revised requirements for Security performance levels of cabinets and added additional levels in Table 2 – Security performance levels of cabinets.

- d) Added a column for panel strength in Table 3 – Security performance levels of cabinet – mechanical.
- e) Revised test for mechanical lock (and hinges added) in 5.2.2 Tests for strength of mechanical locks and hinges.
- f) Added 5.2.4 Tests for panel strength.
- g) Added additional description of Key function in Table 5 – Security performance levels of key.
- h) Revised test method for handles in Annex A.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
48D/736/FDIS	48D/737/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 61587 series, published under the general title *Mechanical structures for electrical and electronic equipment – Tests for IEC 60917 and IEC 60297 series*, can be found on the IEC website.

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

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## INTRODUCTION

The security of electrical and electronic equipment or systems currently applied in the fields of ICT (information and communication technology) and of industrial/infrastructure control systems, is of critical importance. The advent of 5G telecommunication service and edge computing/edge servers/edge switches places ICT equipment in industrial environments. This document defines performance levels for cabinets not only for ICT data centre and office locations but for any combination of equipment, purpose, and location.

In general, security is achieved by restrictions and protections against improper or unauthorized access from both the hardware and software sides of the systems.

The security of the hardware of electrical and electronic equipment or systems, which are housed in mechanical structures such as cabinets based on IEC 60297 series and IEC 60917 series, depends:

- on conditions of their installation sites,
- on the system hardware which provides access protection at the installation sites, and
- on the robustness of the mechanical structures and of their mechanical locks both at the access gates/doors of the installation sites and of the mechanical structures.

Therefore, a classification of the installation conditions and of the levels of security measures for the hardware is very important for design and practices of various electronic equipment or systems, which are used in the field of ICT, industrial control, transportation and others.

From this point of view, this document intends to clarify the relationship between the installation conditions and the security requirements for indoor cabinets, and to provide the required performance and test methods on mechanical components related with security provisions for indoor cabinets which are in accordance with the IEC 60297 series and IEC 60917 series.

Vandalism protection is typically controlled by user-specific requirements. Therefore, this document does not address vandalism.

# MECHANICAL STRUCTURES FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – TESTS FOR IEC 60917 AND IEC 60297 SERIES –

## Part 6: Security aspects for indoor cabinets

### 1 Scope

This part of IEC 61587 specifies security aspects and security performance levels of the mechanical construction of indoor cabinets in accordance with IEC 60917 (all parts) and IEC 60297 (all parts). This document does not address vandalism.

NOTE Protection against vandalism is typically controlled by user-specific requirements.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60297 (all parts), *Mechanical structures for electrical and electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60917 (all parts), *Modular order for the development of mechanical structures for electronic equipment practices*

IEC 61587-1, *Mechanical structures for electronic equipment – Tests for IEC 60917 and IEC 60297 series – Part 1: Environmental requirements, test set-up and safety aspects for cabinets, racks, subracks and chassis under indoor condition use and transportation*

IEC 61587-2, *Mechanical structures for electronic equipment – Tests for IEC 60917 and IEC 60297 – Part 2: Seismic tests for cabinets and racks*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### handle

<cabinet> mechanical component to open or close the door of a cabinet, equipped on the door of the cabinet