

# INTERNATIONAL STANDARD



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

IEC 61587-6:2017

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## CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Security aspects for indoor cabinets .....	8
4.1 General.....	8
4.2 Access security level of the cabinet .....	9
5 Security performance levels of cabinets.....	9
5.1 General.....	9
5.2 Security performance levels of cabinet mechanical components .....	10
5.2.1 Handle and associated mechanical lock.....	10
5.2.2 Key.....	12
5.2.3 Cabinet floor anchoring.....	13
Annex A (normative) Mechanical performance and test methods for handles .....	14
A.1 Mechanical strengths of levers of handles .....	14
A.1.1 General .....	14
A.1.2 Static loading test, push/pull performance.....	14
A.1.3 Static loading test, turn performance .....	15
Bibliography.....	16
Figure 1 – Typical mechanical components for security provision of the cabinet .....	8
Figure 2 – Concept of access protection within buildings or premises .....	9
Figure 3 – Static loading test for handle and associated mechanical lock.....	11
Figure A.1 – Lever handles push/pull performance.....	14
Figure A.2 – Lever handles turn performance.....	15
Table 1 – Access security levels of indoor cabinet installation sites .....	9
Table 2 – Security performance levels of cabinets .....	10
Table 3 – Security performance levels of handle and associated mechanical lock.....	10
Table 4 – Test procedures for operation of handle and mechanical lock.....	12
Table 5 – Security performance levels of key.....	12
Table 6 – Security performance level of cabinet floor anchoring.....	13

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

### Part 6: Security aspects for indoor cabinets

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FDIS	Report on voting
48D/634/FDIS	48D/641/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.

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WITHDRAWN

## INTRODUCTION

The security of electrical and electronic equipment or systems, which nowadays is being applied in many electronic equipment or systems in the fields of ICT (information and communication technology) and of industrial/infrastructure control systems, is becoming a critical issue.

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

Considering the security of the hardware of electronic equipment or systems, which are built up in the mechanical structures such as cabinets based on IEC 60297 series and IEC 60917 series, it depends on conditions of their installation sites, on the security level of 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 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 performances and test methods on mechanical components related with security provisions for indoor cabinets which are in accordance with IEC 60297 series and IEC 60917 series.

Vandalism protection aspect is applied by user-specific requirements in general. Therefore, this document has no definition of vandalism.

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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

### 1 Scope

This part of IEC 61587 specifies security aspects and security performance levels of indoor cabinets in accordance with IEC 60917 and IEC 60297.

### 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 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 60917-1, *Modular order for the development of mechanical structures for electronic equipment practices – Part 1: Generic standard*

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 60297 series – Part 2: Seismic tests for cabinets and racks*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60917-1 and the following 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

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



**3.2****key**

device to allow only authorized access to a cabinet, assembled into the handle of the cabinet or on the door of the cabinet configured with a mechanical lock

**3.3****mechanical lock**

mechanical component assembled in the door of a cabinet, deemed to provide closure of the door of the cabinet for security

**3.4****access protection**

protection against unauthorized access to a cabinet mainly dependent on the access security level within the location and functional requirements where the cabinet is installed

**3.5****security performance**

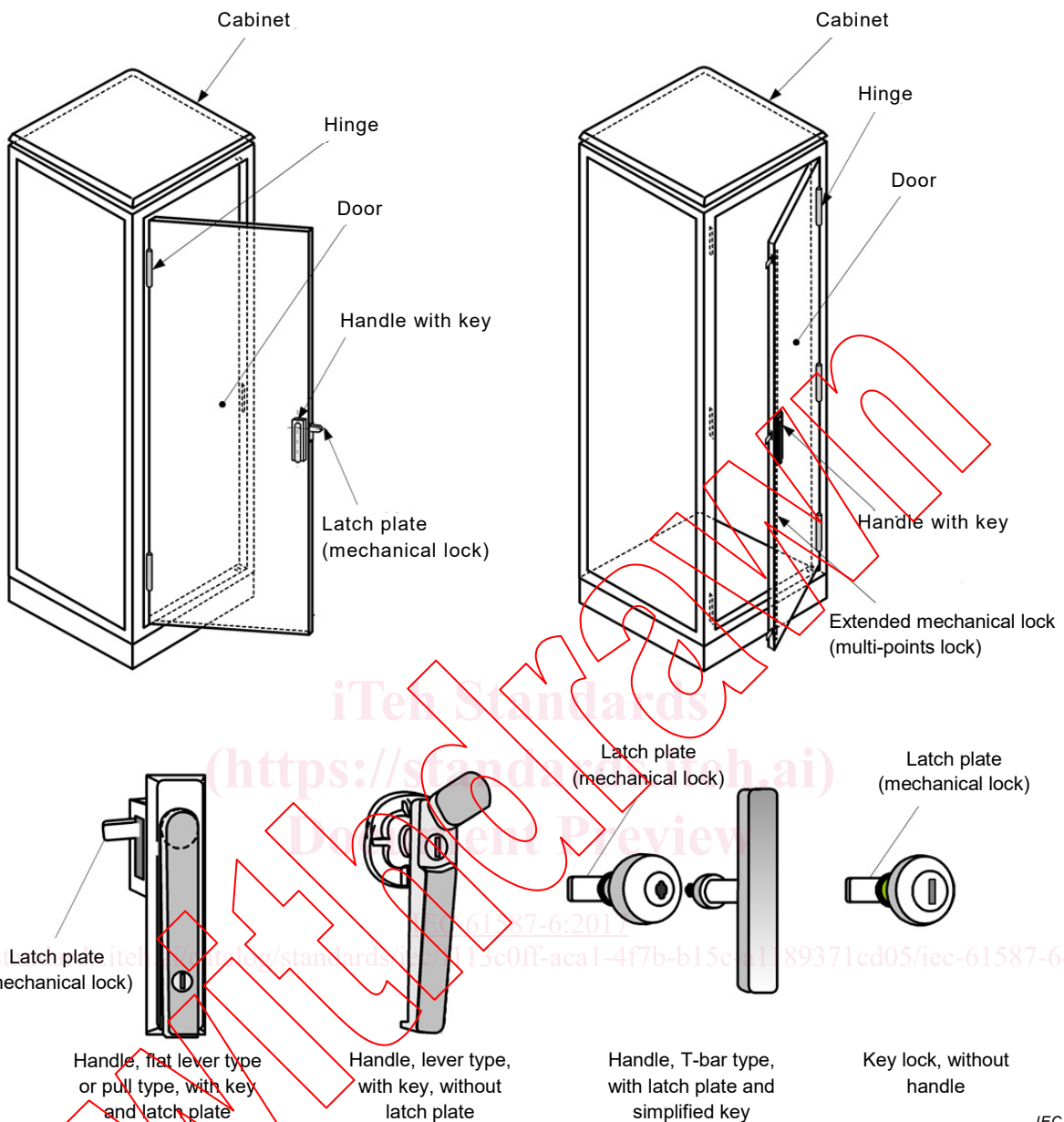
required performance of the mechanical components of a cabinet to achieve the intended access security level

SEE Figure 1.

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**Figure 1 – Typical mechanical components for security provision of the cabinet**

## 4 Security aspects for indoor cabinets

### 4.1 General

In general, security for cabinets for electronic equipment should be designed on both points of view from hardware and software. Considering the security on hardware of the cabinets, security aspects of the cabinets depends on the following factors:

- a) access security level of the cabinet installation site (access security within the building);
- b) security performance of the cabinet.

The access security within the building, as part of the so-called physical security, is primarily aimed to be effective against unauthorized forced entry. In this regard, many international or regional regulations and specifications for building doors, gates, building door handles and key-locking systems and other building physical security facilities are defined.