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Methods of measurement for the power consumption of audio, video and related equipment

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**METHODS OF MEASUREMENT FOR THE POWER CONSUMPTION
OF AUDIO, VIDEO AND RELATED EQUIPMENT**

FOREWORD

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International Standard IEC 62087 has been prepared by technical area 1: Terminals for audio, video and data services and contents of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition, published in 2002 and constitutes a technical revision.

The main changes with respect to the previous edition are listed below.

- Clause 2 is expanded to include references to video content to be used for On (average) mode measurements.
- Clause 3 is expanded to include additional definitions and abbreviations.
- Clause 4 is expanded to include On (average) mode for measuring average television power consumption.
- Clause 5 is modified to require reporting of the power supply voltage and frequency, and the ambient temperature. Clause 5 also includes updated requirements regarding the power measurement instrument.
- Subclause 6.7 is updated to indicate that it is maintained for backward compatibility.

- Clause 11 is newly added. It describes the methods for measuring On (average) mode television power.
- Annex B is newly added. It describes considerations for measuring On (average) mode television power.
- Annex C is newly added. It describes the video signals to be used for measuring On (average) mode television power.

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

| CDV | Report on voting |
|--------------|------------------|
| 100/1331/CDV | 100/1424/RVC |

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.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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- withdrawn;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.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

This standard specifies methods of measurement for the power consumption of television sets, video recording equipment, Set Top Boxes, audio equipment and multi-function equipment for consumer use.

This edition adds methods for measuring On (average) mode power consumption of television sets as defined in Clause 11. The power consumption of many televisions varies depending upon the video signal being displayed. Clause 11 includes three different video signals: static, dynamic broadcast-content, and Internet-content. For information about the three video signals and guidance on which signal(s) to use, see Annex C.

For additional considerations regarding average television power consumption, see Annex B.

METHODS OF MEASUREMENT FOR THE POWER CONSUMPTION OF AUDIO, VIDEO AND RELATED EQUIPMENT

1 Scope

This International Standard specifies methods of measurement for the power consumption of television sets, video recording equipment, Set Top Boxes (STBs), audio equipment and multi-function equipment for consumer use. Television sets include, but are not limited to, those with CRT, LCD, PDP or projection technologies.

Moreover the different modes of operation which are relevant for measuring power consumption are defined.

The methods of measurement are only applicable for equipment which can be connected to the mains.

The measuring conditions in this standard represent the normal use of the equipment and may differ from specific conditions, for example as specified in safety standards.

2 Normative references

The following referenced documents are indispensable for the application 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 60107-1:1997, *Methods of measurement on receivers for television broadcast transmissions – Part 1: General conditions – Measurements at radio and video frequencies*

IEC 61938:1996, *Audio, video and audiovisual systems – Interconnections and matching values – Preferred matching values of analogue signals*

EN 50049-1, *Domestic and Similar Electronic Equipment Interconnection Requirements: Peritelevision Connector*