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**Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 1: General specifications (IEC 61834-1:1988)**

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) -- Part 1: General specifications

Aufzeichnungstechnik - Videokassettensystem mit digitaler Schrägspuraufzeichnung auf Magnetband 6,35 mm für den Heimgebrauch (Systeme 525-60, 625-50, 1125-60, 1250-50) -- Teil 1: Allgemeine Festlegungen

[SIST EN 61834-1:2003](https://standards.iteh.ai/catalog/standards/sist/d0a18de8-8e10-480e-b2b5-61834-1-2003)

Enregistrement - Système de magnétoscope numérique à cassette à balayage hélicoïdal utilisant la bande magnétique de 6,35 mm, destiné au grand public (Systèmes 525-60, 625-50, 1125-60 et 1250-50) -- Partie 1: Spécifications générales

**Ta slovenski standard je istoveten z: EN 61834-1:1998**

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

October 1998

ICS 33.160.40

Descriptors: Video equipment, digital technics, magnetoscopes, video recording, sound recording, cassette for magnetic tapes, magnetic tapes, specifications, recording characteristics, dimensions, position (location), modulation, data blocks, electrical properties, mechanical properties, interchangeability

English version

**Recording - Helical-scan digital video cassette recording system  
using 6,35 mm magnetic tape for consumer use  
(525-60, 625-50, 1125-60 and 1250-50 systems)  
Part 1: General specifications  
(IEC 61834-1:1998)**

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625-50, 1125-60 et 1250-50)  
Partie 1: Spécifications générales  
(CEI 61834-1:1998)

Aufzeichnung - Videokassettensystem  
mit digitaler Schrägspuraufzeichnung  
auf Magnetband 6,35 mm für den  
Heimgebrauch (Systeme 525-60,  
625-50, 1125-60 und 1250-50)  
Teil 1: Allgemeine Festlegungen  
(IEC 61834-1:1998)

This European Standard was approved by CENELEC on 1998-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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# CENELEC

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The text of document 100B/165/FDIS, future edition 1 of IEC 61834-1, prepared by SC 100B, Recording, of IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61834-1 on 1998-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2001-07-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 61834-1:1998 was approved by CENELEC as a European Standard without any modification.

SIST EN 61834-1:2003

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**Annex ZA (normative)****Normative references to international publications  
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61834-2	1998	Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) Part 2: SD format for 525-60 and 625-50 systems	EN 61834-2	1998

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INTERNATIONALE  
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**61834-1**

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**Enregistrement –**

**Système de magnétoscope numérique à cassette  
à balayage hélicoïdal utilisant la bande magnétique  
de 6,35 mm, destiné au grand public  
(Systèmes 525-60, 625-50, 1125-60 et 1250-50) –**

**Partie 1:**

**Spécifications générales**

**(standards.iteh.ai)**

**Recording –**

SIST EN 61834-1:2003

<https://standards.iteh.ai/catalog/standards/sist/d0a18de8-8e10-480e-b2b5-1b37b392405c/sist-en-61834-1-2003>

**Helical-scan digital video cassette  
recording system using 6,35 mm magnetic tape  
for consumer use (525-60, 625-50, 1125-60  
and 1250-50 systems) –**

**Part 1:**

**General specifications**

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International Electrotechnical Commission  
Telefax: +41 22 919 0300

e-mail: [inmail@iec.ch](mailto:inmail@iec.ch)

3, rue de Varembé Geneva, Switzerland  
IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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For price, see current catalogue

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RECORDING – HELICAL-SCAN DIGITAL VIDEO CASSETTE  
RECORDING SYSTEM USING 6,35 mm MAGNETIC TAPE  
FOR CONSUMER USE  
(525-60, 625-50, 1125-60 and 1250-50 systems) –**

**Part 1: General specifications**

**FOREWORD**

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61834-1 has been prepared by subcommittee 100B: Audio, video and multimedia information storage systems, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

FDIS	Report on voting
100B/165/FDIS	100B/175/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.

IEC 61834 consists of the following parts, under the general title *Recording – Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems)*

- Part 1: General specifications
- Part 2: SD format for 525-60 and 625-50 systems <sup>1)</sup>
- Part 3: HD format for 1125-60 and 1250-50 systems <sup>1)</sup>
- Part 4: The pack header table and the contents <sup>1)</sup>
- Part 5: The character information system <sup>1)</sup>

Part 1 describes the common specifications which are cassettes, helical recordings, modulation method, magnetization and basic system data.

Part 2 describes the specifications for 525-60 and 625-50 systems which are not included in part 1.

Part 3 describes the specifications for 1125-60 and 1250-50 systems which are not included in part 1 and part 2.

Part 4 describes the pack header table and the contents of packs which are applicable to the whole recording system of helical-scan digital video cassette.

Part 5 describes the character information system which is applicable to the whole recording system of helical-scan digital video cassette.

For manufacturing SD digital video cassette recording system, part 1, part 2, part 4 and part 5 are referred to.

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For manufacturing HD digital video cassette recording system, part 1, part 3, part 4 and part 5 are referred to.

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<sup>1)</sup> To be published.

# RECORDING – HELICAL-SCAN DIGITAL VIDEO CASSETTE RECORDING SYSTEM USING 6,35 mm MAGNETIC TAPE FOR CONSUMER USE

(525-60, 625-50, 1125-60 and 1250-50 systems) –

## Part 1: General specifications

### 1 General

#### 1.1 Scope

This part of IEC 61834 specifies the content, format and recording method of the data blocks forming the helical records on the tape. It describes the common specifications for cassettes, modulation method, magnetization and basic system data, for helical-scan digital video cassette recording system using 6,35 mm (1/4 inch) magnetic tape. The object of this standard is to define the electrical and mechanical characteristics of equipment which will provide for the interchangeability of recorded cassettes.

#### 1.2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All normative documents are subject to revision, and parties to agreements based on this International standard are encouraged to investigate the possibility of applying the most recent edition of the normative document listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 61834-2, — *Recording – Helical-scan digital video cassette recording system using 6,5 mm magnetic tape for consumer use (525-60, 625-50, 1 125-60 and 1 250-50 systems) – Part 2: SD format for 525-60 and 625-50 systems*<sup>1)</sup>

#### 1.3 Definitions, symbols and abbreviations

For the purpose of this International Standard, the following definitions or abbreviations apply.

##### **525-60 system**

standard definition television signal in the 525-line system with a frame frequency of 29,97 Hz

##### **625-50 system**

standard definition television signal in the 625-line system with a frame frequency of 25,00 Hz

##### **1125-60 system**

high definition television signal in the 1125-line system with a frame frequency of 30,00 Hz

<sup>1)</sup>To be published.

**1250-50 system**

high definition television signal in the 1250-line system with a frame frequency of 25,00 Hz

VCR:	Video cassette recorder.
API:	Application ID of area $i$ , where $i = 1, 2, 3, \dots, n$ .
APM:	Application ID of MIC.
APT:	Application ID of a track.
BCID:	Basic cassette ID.
EEPROM:	Electrical erasable programmable read only memory.
FeRAM:	Ferroelectric random access memory.
FID:	First ID of a start-sync block.
FTI:	First track information of a TI-sync block.
GF:	Galois field.
ITI:	Insert and track information.
LSB:	Least significant bit of data.
MIC:	Memory in cassette.
MSB:	Most significant bit of data.
NRZ1:	Non-return to zero change on one or non-return to zero mark.
PF:	Pilot frame of tracking servo.
SCK:	Serial clock line.
SDA:	Serial data line.
SID:	Second ID of a start-sync block.
SP:	Standard play.
SSA:	Start-sync block area.
STI:	Second track information of a TI-sync block.
TIA:	Track information area.
UV:	Undefined value.

**1.4 Environment and test conditions**

Tests and measurements for checking the conformity with the requirements of this standard shall be carried out under the following conditions.

- Temperature: 20 °C ± 1 °C
- Relative humidity: (50 ± 2) %
- Barometric pressure: from 86 kPa to 106 kPa
- Tape conditioning: not less than 24 h

## 2 Cassette

### 2.1 Mechanical parameters

#### 2.1.1 Cassette dimensions

The dimensions of the two types of cassettes shall be in accordance with figures 1 to 22 and symmetrical in form unless specified otherwise. The dimensions of the cassette shall correspond to the dimensions indicated for surfaces including the radii of the ridgelines outlining the cassette which shall be 0,3 mm or less, unless specified otherwise. General tolerances for dimensions shall be as specified in table 1 except for special specified tolerances. The dimensions marked with □ are nominal values.

#### 2.1.2 Identification of cassette

The sizes of the two types of cassettes shall be identified as follows:

Standard cassette (approximate size: 125,0 mm × 78,0 mm × 14,6 mm)

Small cassette (approximate size: 66,0 mm × 48,0 mm × 12,2 mm).

#### 2.1.3 Tape length

The length of the magnetic tape  $L$  shall be determined by the following formula:

$$L_{CAL} = (1 + 0,005) \times Vt \times (T + 2) \times 0,06 \text{ m}$$

$$L = L_{CAL} \begin{smallmatrix} +k \\ 0 \end{smallmatrix} \text{ m}$$

where

$L_{CAL}$  is the calculated length of a magnetic tape;

$L$  is the length of the magnetic tape;

$Vt$  is the tape speed in millimetres per second;

$T$  is the playable time in minutes;

$k$  is the tolerance

- 1 m for less than 120 min cassette,
- 2 m for not less than 120 min cassette.

#### 2.1.4 Coating face

The magnetic coating on the tape shall face out of the cassette as specified in figures 4 and 15.

#### 2.1.5 Datum hole and datum plane

Datum holes shall be as specified in figures 3 and 14.

Datum plane Z is determined by datum areas A, B and C as specified in figures 1, 3, 12 and 14.

Datum plane X shall be orthogonal to datum plane Z and shall run through the centre of datum hole A and datum hole B as specified in figures 2, 3, 13 and 14.

Datum plane Y shall be orthogonal to both datum plane X and datum plane Z, and shall run through the centre of datum hole A as specified in figures 2, 3, 13 and 14.