

Quartz crystal controlled oscillators of assessed quality - Part 3: Standard outlines and lead connections (IEC 60679-3:2001)

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EUROPEAN STANDARD

**EN 60679-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2001

ICS 31.140

English version

**Quartz crystal controlled oscillators of assessed quality  
Part 3: Standard outlines and lead connections  
(IEC 60679-3:2001)**

Oscillateurs pilotés par quartz sous  
assurance de la qualité  
Partie 3: Encombrements normalisés et  
connexions des sorties  
(CEI 60679-3:2001)

Quarzoszillatoren mit bewerteter Qualität  
Teil 3: Norm-Gehäusemaße und  
Anschlussdrähte  
(IEC 60679-3:2001)

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This European Standard was approved by CENELEC on 2001-10-01. 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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**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 49/495/FDIS, future edition 2 of IEC 60679-3, prepared by IEC TC 49, Piezoelectric and dielectric devices for frequency control and selection, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60679-3 on 2001-10-01.

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) 2002-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-10-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex A is normative.

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## Endorsement notice

The text of the International Standard IEC 60679-3:2001 was approved by CENELEC as a European Standard without any modification.

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- SIST EN 60679-3:2002
- |             |  |
|-------------|--|
| IEC 60679-1 | <a href="https://standards.iteh.ai/catalog/standards/sist-en-60679-3-2002">https://standards.iteh.ai/catalog/standards/sist-en-60679-3-2002</a> NOTE Harmonized as EN 60679-1:1998 (not modified). |
| IEC 60679-4 | NOTE Harmonized as EN 60679-4:1998 (not modified).   |

NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC

60679-3

Deuxième édition  
Second edition  
2001-07

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Oscillateurs pilotés par quartz  
sous assurance de la qualité –

Partie 3:  
Encombrements normalisés et connexions  
des sorties

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Part 3:  
Standard outlines and lead connections

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International Electrotechnical Commission  
Telefax: +41 22 919 0300

3, rue de Varembe Geneva, Switzerland  
e-mail: [inmail@iec.ch](mailto:inmail@iec.ch) IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**QUARTZ CRYSTAL CONTROLLED OSCILLATORS  
OF ASSESSED QUALITY –**
**Part 3: Standard outlines and lead connections**

## 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 specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
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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 60679-3 has been prepared by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

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

FDIS	Report on voting
49/495/FDIS	49/510/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 second edition cancels and replaces the first edition published in 1989, the first supplement (1991) and amendment 1 (1994). This second edition constitutes a technical revision.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

Annex A forms an integral part of this standard.

IEC 60679 consists of the following parts under the general title: Quartz crystal controlled oscillators of assessed quality:

- Part 1: Generic specification
- Part 2: Guide to the use of quartz crystal controlled oscillators
- Part 3: Standard outlines and lead connections
- Part 4: Sectional specification – Capability approval
- Part 4-1: Blank detail specification – Capability approval
- Part 5: Sectional specification – Qualification approval
- Part 5-1: Blank detail specification – Qualification approval

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

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

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## INTRODUCTION

The first edition of IEC 60679-3 (1989), its amendment and supplement contained 52 enclosure types showing the dimensional and geometrical characteristics of these enclosures. Since its release, due to progress in technology, many of the enclosures given in the standard have become obsolete.

Bearing this in mind, technical committee 49 has issued a questionnaire on all outlines contained in IEC 60679-3. Based on the replies received, technical committee 49 made a decision at the meeting held in Rotterdam in June 1996 to retain only enclosures which remained in “wide usage”. These enclosures are specified in the present standard.

The following 25 enclosure types have been deleted from the first edition of 60679-3 (1989) and its amendment and supplement:

CO 03 A1	CO 04 A1	CO 04 B1	CO 05 A1	CO 06 B.	CO 06 C.	CO 06 .1
CO 06 .2	CO 07 B.	CO 07 C.	CO 07 D.	CO 10 B1	CO 11 A1	CO 12 A1
CO 13 A1	CO 13 B1	CO 14 A1	CO 15 A1	CO 17 C1	CO 18 A1	CO 18 C1
CO 19 .2	CO 20 A1	CO 23 A1	CO 23 C1			

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## QUARTZ CRYSTAL CONTROLLED OSCILLATORS OF ASSESSED QUALITY –

### Part 3: Standard outlines and lead connections

#### 1 Scope

This part of IEC 60679 specifies the outline dimensions and lead connections for quartz crystal controlled oscillators with lead enclosures.

#### 2 Guidance for the standardization of outline drawings for frequency control and selection devices

In order to achieve a uniform presentation of all outline drawings for frequency control and selection devices, the following guide shall be considered.

**2.1** An outline drawing shall show all dimensional and geometrical characteristics of an enclosure necessary to ensure mechanical interchangeability with all other enclosures of the same outlines. Enlarged detail view may be used, if necessary.

**2.2** The outline drawing shall consist of three parts:

**2.2.1** A drawing with dimensional symbols (capital letters) as shown in figure 1 below with applicable notes, if necessary.

**2.2.2** A tabular listing relating the drawing symbols to the actual dimensions. Where possible, this shall be shown on the same page as the drawing.

**2.2.3** An “actual-size” sketch (scale:1:1).

**2.3** The outline drawing shall be executed in the third-angle projection.

**2.4** The function and identification of the lead connections (termination) shall be determined by agreement between the supplier and user. They shall not be defined on the outline drawing.

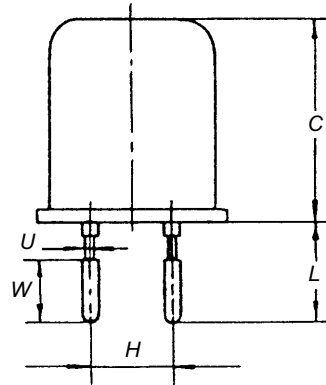
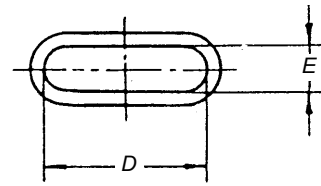
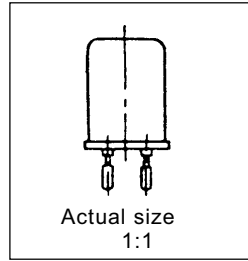
**2.5** Descriptive notes may be used at the bottom of, or adjacent to, the drawing with proper reference to the body of the drawing.

**2.6** All dimensions shall be in millimetres.

**2.7** Outline dimensions *A*, *B*, *C*, *D* and *E* shall be listed with maximum values only.

**2.8** Lead (termination) cross-sectional dimensions shall be listed with minimum and maximum values. If applicable, nominal dimensions may be added.

**2.9** The spacing of the leads (termination) – symbol *H* – shall be listed with minimum, nominal and maximum dimensions.



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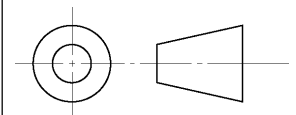
IEC 876/01

Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	-	-	x	
B	-	-	x	
C	-	-	x	
D	-	-	x	
E	-	-	x	
H	x	x	x	
K	x	-	x	1
L	x	-	x	
U	x	-	-	2
W	x	-	-	2

NOTE 1....  
NOTE 2....

**Figure 1 – Guidance for outline drawings**

Scale  
2:1



Sheet --

Date:

**2.10** Leads (terminations) for soldering applications shall be specified with the minimum length dimensions (symbol  $L$ ) only.

Leads (terminations) for plug-in applications shall be specified with minimum and maximum length dimensions.

**2.11** If leads (terminations) are provided with an undercut, dimensions  $U$  and  $W$  shall be listed with minimum dimensions only.

### 3 Dimensions of crystal oscillator enclosure

The dimensions in this standard apply to the completed quartz crystal controlled oscillators.

Only those dimensions which meet the requirements of the guidance for standardization of outline drawings are given (see clause 2).

### 4 Lead connections

Recommendations for the lead connections of quartz crystal controlled oscillators are given in annex A to this standard. Lead connections shall always be given in the detail specification.

### 5 Designation of crystal oscillator enclosures

Table 1 – Designation of crystal oscillator enclosures

No.	Type	Sheet No.	Description
1	CO 01 A1	Sheet 1	Plastic enclosure, 4 to 14 lead crystal oscillator outline
2	CO 02 A1 CO 02 B1	Sheet 2	Metal enclosure, welded, 4 to 18 lead crystal oscillator outline
3	CO 05 B1	Sheet 3	Metal enclosure, welded, eight lead crystal oscillator outline
4	CO 06 A1	Sheet 4	Metal enclosure, four lead crystal oscillator outline
5	CO 07 A1	Sheet 5	Metal enclosure, four to seven lead crystal oscillator outline
6	CO 08 A1 CO 08 B1 CO 08 C1	Sheet 6	Metal enclosure, five lead crystal oscillator outline
7	CO 09 A1 CO 09 B1	Sheet 7	Metal enclosure, five lead crystal oscillator outline
8	CO 10 A1	Sheet 8	Metal enclosure, five lead crystal oscillator outline
9	CO 15 B1 CO 15 C1	Sheet 9	Metal enclosure, five lead crystal oscillator outline
10	CO 16 A1 CO 16 B1 CO 16 C1	Sheet 10	Metal enclosure, four lead crystal oscillator outline