

<b>STN</b>	<b>Kremenné kryštálové jednotky so stanovenou kvalitou</b> <b>Časť 1: Kmeňová špecifikácia</b> <b>Zmena A1</b>	<b>STN</b> <b>EN 60122-1/A1</b>  35 8413
------------	--	---

Quartz crystal units of assessed quality -- Part 1: Generic specification

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/19

STN EN 60122-1 zo septembra 2003 sa bez tejto zmeny A1 môže používať do 12. 1. 2021.

Obsahuje: EN 60122-1:2002/A1:2018, IEC 60122-1:2002/AMD1:2017

**127801**

EUROPEAN STANDARD

**EN 60122-1:2002/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2018

ICS 31.140

English Version

**Quartz crystal units of assessed quality - Part 1: Generic  
specification  
(IEC 60122-1:2002/A1:2017)**

Résonateurs à quartz sous assurance de la qualité - Partie  
1: Spécification générique  
(IEC 60122-1:2002/A1:2017)

Schwingquarze mit bewerteter Qualität - Teil 1:  
Fachgrundspezifikation  
(IEC 60122-1:2002/A1:2017)

This amendment A1 modifies the European Standard EN 60122-1:2002; it was approved by CENELEC on 2018-01-12. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN 60122-1:2002/A1:2018 (E)****European foreword**

The text of document 49/1254/FDIS, future edition 1 of IEC 60122-1:2002/A1, prepared by IEC/TC 49 "Piezoelectric and dielectric devices for frequency control and selection" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60122-1:2002/A1:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-10-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-01-12

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

**Endorsement notice**

The text of the International Standard IEC 60122-1:2002/A1:2017 was approved by CENELEC as a European Standard without any modification.

Replace Annex ZA of EN 60122-1:2002 by the following one:

**Annex ZA**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60027	series	Letter symbols to be used in electrical technology - Part 1: General	60027	series
IEC 60050-561	1991	International Electrotechnical Vocabulary (IEV) - Chapter 561: Piezoelectric devices for frequency control and selection	-	-
IEC 60068-1	1988	Environmental testing - Part 1: General and guidance	-	-
IEC 60068-2-1	1990	Environmental testing - Part 2: Tests - Tests A: Cold	-	-
IEC 60068-2-2	1974	Environmental testing - Part 2: Tests - Tests B: Dry heat	-	-
IEC 60068-2-3	1969	Basic environmental testing procedures - Part 2: Tests - Test Ca: Damp heat, steady state	-	-
IEC 60068-2-6	1995	Environmental testing -- Part 2: Tests - Test Fc: Vibration (sinusoidal)	-	-
IEC 60068-2-7	1983	Basic environmental testing procedures - Part 2-7: Tests - Test Ga and guidance: Acceleration, steady state	EN 60068-2-7	1993
IEC 60068-2-13	1983	Basic environmental testing procedures - Part 2-13: Tests - Test M: Low air pressure	EN 60068-2-13	1999
IEC 60068-2-14	1984	Environmental testing - Part 2: Tests - Test N: Change of temperature	-	-
IEC 60068-2-17	1994	Basic environmental testing procedures - Part 2-17: Tests - Test Q: Sealing	EN 60068-2-17	1994
IEC 60068-2-20	1979	Environmental testing - Part 2: Tests - Test T: Soldering	-	-
IEC 60068-2-21	1999	Environmental testing - Part 2-21: Tests - Test U: Robustness of terminations and integral mounting devices	-	-
IEC 60068-2-27	1987	Basic environmental testing procedures - Part 2: Tests - Test Ea and guidance: Shock	-	-

**EN 60122-1:2002/A1:2018 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-29	1987	Environmental testing - Part 2: Tests - Test - Eb and guidance: Bump	-	-
IEC 60068-2-30	1980	Basic environmental testing procedures. Part 2: Tests. Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)	-	-
IEC 60068-2-32	1975	Basic environmental testing procedures - Part 2: Tests - Test Ed: Free fall	-	-
IEC 60068-2-45	1980	Basic environmental testing procedures - Part 2-45: Tests - Test XA and guidance: Immersion in cleaning solvents	EN 60068-2-45	1992
IEC 60122-3	2001	Quartz crystal units of assessed quality - Part 3: Standard outlines and lead connections	-	-
IEC 60444-1	1986	Measurement of quartz crystal unit parameters by zero phase technique in a pi-network - Part 1: Basic method for the measurement of resonance frequency and resonance resistance of quartz crystal units by zero phase technique in a pi-network	EN 60444-1	1997
IEC 60444-2	1980	Measurement of quartz crystal unit parameters by zero phase technique in a pi-network - Part 2: Phase offset method for measurement of motional capacitance of quartz crystal units	EN 60444-2	1997
IEC/TR 60444-4	1988	Measurement of quartz crystal unit parameters by zero phase technique in a pi-network - Part 4: Method for the measurement of the load resonance frequency $f_L$ , load resonance resistance $R_L$ and the calculation of other derived values of quartz crystal units, up to 30 MHz	EN 60444-4	1997
IEC 60444-5	1995	Measurement of quartz crystal unit parameters - Part 5: Methods for the determination of equivalent electrical parameters using automatic network analyzer techniques and error correction	EN 60444-5	1997
IEC 60444-6	1995	Measurement of quartz crystal unit parameters - Part 6: Measurement of drive level dependence (DLD)	-	-
IEC 60617	series	Graphical symbols for diagrams - Part 1: General information, general index, Cross-reference tables	EN 60617	series
IEC 61178-2	1993	Quartz crystal units - A specification in the IEC Quality Assessment System for electronic Components (IECQ) - Part 2: Sectional specification - Capability approval	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61178-3	1993	Quartz crystal units - A specification in the IEC Quality Assessment System for electronic Components (IECQ) - Part 3: Sectional specification - Qualification approval	-	-
IEC 61760-1	2006	Surface mounting technology - Part 1: Standard method for the specification of surface mounting components (SMDs)	EN 61760-1	2006
IEC QC 001001	2000	IEC Quality Assessment System for Electronic Components (IECQ) - Basic rules	-	-
IEC QC 001002-2	1998	IEC Quality Assessment System for Electronic Components (IECQ) - Rules of Procedure -- Part 2: Documentation	-	-
IEC QC 001002-3	1998	IEC Quality Assessment System for Electronic Components (IECQ) - Rules of Procedure - Part 3: Approval procedures	-	-
IEC QC 001005	2000	Register of firms, products and services approved under the IECQ system, including ISO 9000	-	-
ISO 1000	1992	SI units and recommendations for the use of their multiples and of certain other units	-	-



IEC 60122-1

Edition 3.0 2017-12

# INTERNATIONAL STANDARD

AMENDMENT 1

---

**Quartz crystal units of assessed quality –  
Part 1: Generic specification**



**THIS PUBLICATION IS COPYRIGHT PROTECTED****Copyright © 2017 IEC, Geneva, Switzerland**

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

**About the IEC**

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

**About IEC publications**

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

**IEC Catalogue - [webstore.iec.ch/catalogue](http://webstore.iec.ch/catalogue)**

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

**IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)**

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

**IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

**Electropedia - [www.electropedia.org](http://www.electropedia.org)**

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

**IEC Glossary - [std.iec.ch/glossary](http://std.iec.ch/glossary)**

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

**IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [csc@iec.ch](mailto:csc@iec.ch).



IEC 60122-1

Edition 3.0 2017-12

# INTERNATIONAL STANDARD

AMENDMENT 1

---

**Quartz crystal units of assessed quality –  
Part 1: Generic specification**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

---

ICS 31.140

ISBN 978-2-8322-5094-5

**Warning! Make sure that you obtained this publication from an authorized distributor.**

## FOREWORD

This amendment has been prepared by IEC technical committee 49: Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection.

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

FDIS	Report on voting
49/1254/FDIS	49/1259/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website 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.

---

### 1.2 Normative references

*Add the following reference to the existing list of normative references:*

IEC 61760-1:2006, *Surface mounting technology – Part 1: Standard method for the specification of surface mounting components (SMDs)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**