

BS EN 60689:2009



BSI British Standards

Measurement and test methods for tuning fork quartz crystal units in the range from 10 kHz to 200 kHz and standard values

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National foreword

This British Standard is the UK implementation of EN 60689:2009. It is identical to IEC 60689:2008.

The UK participation in its preparation was entrusted to Technical Committee EPL/49, Piezoelectric devices for frequency control and selection.

A list of organizations represented on this committee can be obtained on request to its secretary.

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EUROPEAN STANDARD
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EN 60689

March 2009

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English version

Measurement and test methods for tuning fork quartz crystal units in the range from 10 kHz to 200 kHz and standard values (IEC 60689:2008)

Méthodes de mesure et
d'essai concernant le réglage
des résonateurs à quartz
dans la plage comprise entre
10 kHz et 200 kHz et valeurs normales
(CEI 60689:2008)

Mess- und Prüfverfahren
für Stimmgabelquarze
im Frequenzbereich
von 10 kHz bis 200 kHz
sowie Richtwerte
(IEC 60689:2008)

This European Standard was approved by CENELEC on 2009-03-01. 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.

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CENELEC

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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of document 48/809/FDIS, future edition 2 of IEC 60689, 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 60689 on 2009-03-01.

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) 2009-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2012-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60689:2008 was approved by CENELEC as a European Standard without any modification.

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

IEC 60068-1	NOTE Harmonized as EN 60668-1:1994 (not modified).
IEC 60068-2-1	NOTE Harmonized as EN 60668-2-1:2007 (not modified).
IEC 60068-2-2	NOTE Harmonized as EN 60668-2-2:2007 (not modified).
IEC 60068-2-7	NOTE Harmonized as EN 60668-2-7:1993 (not modified).
IEC 60068-2-13	NOTE Harmonized as EN 60668-2-13:1999 (not modified).
IEC 60068-2-14	NOTE Harmonized as EN 60668-2-14:1999 (not modified).
IEC 60068-2-17	NOTE Harmonized as EN 60668-2-17:1994 (not modified).
IEC 60068-2-20	NOTE Harmonized as EN 60668-2-20:2008 (not modified).
IEC 60068-2-21	NOTE Harmonized as EN 60668-2-21:2006 (not modified).
IEC 60068-2-27	NOTE Harmonized as EN 60668-2-27:1993 (not modified).
IEC 60068-2-30	NOTE Harmonized as EN 60668-2-30:2005 (not modified).
IEC 60068-2-31	NOTE Harmonized as EN 60668-2-31:2008 (not modified).
IEC 60068-2-45	NOTE Harmonized as EN 60668-2-45:1992 (not modified).
IEC 60068-2-78	NOTE Harmonized as EN 60668-2-78:2001 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

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 60027	Series	Letter symbols to be used in electrical technology	EN 60027	Series
IEC 60050-561	- ¹⁾	International Electrotechnical Vocabulary (IEV) - Chapter 561: Piezoelectric devices for frequency control and selection	-	-
IEC 60122-1	- ¹⁾	Quartz crystal units of assessed quality - Part 1: Generic specification	EN 60122-1	2002 ²⁾
IEC 60122-3	- ¹⁾	Quartz crystal units of assessed quality - Part 3: Standard outlines and lead connections	EN 60122-3	2001 ²⁾
IEC 60444	Series	Measurement of quartz crystal unit parameters by zero phase technique in a pi-network	EN 60444	Series
IEC 60617	Data-base	Graphical symbols for diagrams	-	-
ISO 1000	1992	SI units and recommendations for the use of their multiples and of certain other units	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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MEASUREMENT AND TEST METHODS FOR TUNING FORK QUARTZ CRYSTAL UNITS IN THE RANGE FROM 10 kHz TO 200 kHz AND STANDARD VALUES

1 Scope

This International Standard applies to measurements and test methods for tuning fork quartz crystal units in the range from 10 kHz to 200 kHz and standard values for frequency control and selection.

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 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050-561, *International Electrotechnical Vocabulary – Chapter 561: Piezoelectric devices for frequency control and selection*

IEC 60122-1, *Quartz crystal units of assessed quality – Part 1: Generic specification*

IEC 60122-3, *Quartz crystal units of assessed quality – Part 3: Standard outlines and lead connections*

IEC 60444 (series), *Measurement of quartz crystal unit parameters by zero phase technique in a π -network*

IEC 60617, *Graphical symbols for diagrams*

ISO 1000:1992, *SI units and recommendations for the use of their multiples and certain other Units*

3 Overview

3.1 General

Units, graphical symbols, letter symbols and terminology shall, wherever possible, be taken from the following standards: IEC 60027, IEC 60050-561, IEC 60122-1, IEC 60617, and ISO 1000.

3.2 Applied frequency range

The frequency range is from 10 kHz to 200 kHz.

3.3 Measurement method

The measurement method is according to the IEC 60444 series.

It is permitted to use the bridge method as a simple measuring method.