



BSI Standards Publication

Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection — Glossary

Part 5: Piezoelectric sensors

National foreword

This Published Document is the UK implementation of IEC TS 61994-5:2019.

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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019
Published by BSI Standards Limited 2019

ISBN 978 0 539 01983 4

ICS 01.040.31; 31.140

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 July 2019.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------



IEC TS 61994-5

Edition 1.0 2019-06

TECHNICAL SPECIFICATION

**Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection – Glossary –
Part 5: Piezoelectric sensors**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 01.040.31; 31.140

ISBN 978-2-8322-7104-9

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

CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	5
Bibliography.....	8

Currently in preview, click buy full version

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PIEZOELECTRIC, DIELECTRIC AND ELECTROSTATIC DEVICES
AND ASSOCIATED MATERIALS FOR FREQUENCY CONTROL,
SELECTION AND DETECTION –
GLOSSARY –**

Part 5: Piezoelectric sensors

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). 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. 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 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, also issue IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a Technical Specification when

- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical Specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 61944-5, which is a Technical Specification, 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 Technical Specification is based on the following documents:

Draft TS	Report on voting
49/1295/DTS	49/1296/RVDTS

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61994 series, published under the general title *Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection – Glossary*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

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

**PIEZOELECTRIC, DIELECTRIC AND ELECTROSTATIC DEVICES
AND ASSOCIATED MATERIALS FOR FREQUENCY CONTROL,
SELECTION AND DETECTION –
GLOSSARY –**

Part 5: Piezoelectric sensors

1 Scope

This part of IEC 61994 gives the terms and definition for sensors representing the state of the art, which are intended for manufacturing piezoelectric elements, cells and the modules.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

delay line type sensor element

piezoelectric sensor component using a delay-line of surface acoustic wave (SAW) transversal filter type

[SOURCE: IEC 63041-1:2017, 3.2.3, modified – The phrase has been rewritten in an easy-to-understand manner using a well-known term.]

3.2

non-acoustic type sensor element

piezoelectric sensor component using the electrical charge induced by a quasi-static force, torque or the like

[SOURCE: IEC 63041-1:2017, 3.2.4, modified – Note 1 to entry has been deleted.]

3.3

piezoelectric biochemical sensor element

piezoelectric sensor component including a receptive layer (target recognition material), which is necessary for the practical measurement of complex biological molecules in quantity, and which works mainly in aqueous media and detects biomolecules therein

[SOURCE: IEC 63041-1:2017, 3.3.2]