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Australian Standard®

# Electromechanical components for electronic equipment—Basic testing procedures and measuring methods

## Part 1: General





STANDARDS AUSTRALIA

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This Australian Standard was prepared by Committee ET/5, Environmental Testing Procedures. It was approved on behalf of the Council of Standards Australia on 5 June 1989 and published on 6 November 1989.

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The following interests are represented on Committee ET/5:

Aerospace Technologies of Australia

Confederation of Australian Industry

Department of Administrative Services

Department of Defence

Electricity Supply Association of Australia

Institution of Engineers, Australia

National Association of Testing Authorities

Society of Automotive Engineers, Australasia

Telecom Australia

University of New South Wales

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## Part 1: General

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# PREFACE

This Standard was prepared by the Standards Australia Committee on Environmental Testing Procedures. Part 1 is identical with IEC 512, Part 1: *General* issued by the IEC Committee TC/48, Electromechanical Components for Electronic Equipment.

The purpose of Part 1 is to provide fundamental information on test methods and procedures for use in detail specifications on the subject of specific components. The Standard is intended to be read in conjunction with AS 1099, *Basic environmental testing procedures for electrotechnology*. This Standard will select and prescribe the tests to be used, the required severity to be used, and the permissible performance limits to be attained. Detail specifications will be expected to specify deviations in the procedure and any special procedures which may be required.

This Standard applies to a group of electromechanical components which predominantly display particular physical characteristics or fulfil specific functions.

The page numbers of the IEC English text are given on the bottom left hand corner of each page of this Standard.

For the purpose of this Australian Standard, the text of the IEC Publication used herein should be modified as follows:

(a) *Terminology*: The words 'Australian Standard' should replace the words 'IED Publication' wherever they appear.

(b) *References*: The references to international Standards should be replaced by references to Australian Standards as follows:

| *Reference to international Standard* | *Appropriate Australian Standard* |
|---|---|
| IEC | AS |
| 50 International Electrotechnical Vocabulary (IEV) | 1852 International electrotechnical vocabulary (IEV) |
| 68 Basic environmental testing procedures | 1099 Basic environmental testing procedures for electrotechnology |

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# Australian Standard

# Electromechanical components for electronic equipment—Basic testing procedures and measuring methods

## Part 1: General

### 1. Introduction

This standard contains fundamental information on test methods and procedures.

It is intended to be used in those cases where a generic or detail specification for a certain component has been prepared, so as to achieve uniformity and reproducibility in the testing procedures.

The term "environmental conditioning" or "environmental testing" covers the natural and artificial environments (including electrical stresses) to which components may be exposed so that an assessment of their performance can be made under conditions of use, transport and storage to which they may be exposed in practice.

The requirements for the performance of the components are not covered by this standard. The relevant specification for the item under test defines the permissible performance limits.

A list of the tests currently envisaged and their arrangement is given in Appendix A. This appendix will be updated whenever appropriate.

To provide for future expansion of Publication 512 and to retain consistency of presentation, each test section will be subdivided. The subdivisions are identified by the addition of a lower-case letter, e.g.:

*Section Two — Electrical continuity and contact resistance tests*
Test 2a. Contact resistance — Millivolt level method
Test 2b. Contact resistance — Specified test current method

### 2. Scope

This standard is intended to be used as a basic specification. It contains basic test methods and procedures applicable to electromechanical components, with the following families or sub-families:

- Connections, solderless
- Connectors for frequencies below 3 MHz
- Sockets for electronic tubes
- Sockets for other plug-in devices
- Switches, lever
- Switches, push-button
- Switches, rotary
- Switches, sensitive
- Switches, thermal time-delay
- Switches, thermostatic.