

Australian Standard™

**Environmental testing**

**Part 2.32: Tests—Test Ed: Free fall**

This Australian Standard was prepared by Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment. It was approved on behalf of the Council of Standards Australia on 10 April 2003 and published on 16 May 2003.

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The following are represented on Committee EL-026:

Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturer's Association  
Electrical Compliance Testing Association  
Electrical Regulatory Authorities Council  
Electricity Supply Association of Australia  
Testing Interests (Australia)

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## PREFACE

This Standard was prepared by the Standards Australia Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment.

The objective of this Standard is to provide the electrotechnology industry with a complete set of environmental test procedures published as a series under AS 60068 *Environmental testing*. This Standard is Part 2.32 of that series.

This Standard is identical with, and has been reproduced from, IEC 60068-2-32:1975, *Environmental testing—Part 2-32: Tests—Test Ed: Free fall* incorporating Amendment 2:1990 (incorporating Amendment 1:1982).

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- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
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In this Standard, the following print types are used:

- requirements proper: in arial type;
- *test specifications: in italic type;*
- explanatory matter: in smaller arial type.

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## INTRODUCTION

This test is divided into two procedures. The first simulates falls which a specimen, normally in the unpacked state, could undergo during handling and is normally restricted to two falls from a prescribed attitude onto a specified surface from a specified height.

The second procedure simulates repeated falls which may occur to such devices as connectors or small remote control units which are normally attached to cables during use. Repeated falls onto a specified surface from a specified height are achieved by using a suitable apparatus, e.g. a tumbling (rotating) barrel.

## STANDARDS AUSTRALIA

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**Procedure 1 – Free fall****1 Scope**

To assess the effects on a specimen of simple standard tests intended to be representative of the fall likely to be experienced during rough handling, or to demonstrate a minimum degree of robustness, for the purpose of assessing safety requirements.

This test is primarily intended for specimens not in their packing and for items in their transport case when the latter may be considered as part of the specimen itself.

**2 Test conditions****2.1 Test surface**

The test surface shall be a smooth, hard, rigid surface of concrete or steel. Where necessary, other surfaces may be prescribed in the relevant specification.

**2.2 Height of fall**

The height shall be measured from the part of the specimen nearest to the test surface, when the specimen is suspended prior to letting it fall.

**2.3 Method of release**

The method of releasing the specimen shall be such as to allow free fall from the position of suspension, with a minimum of disturbance at the moment of release.

**3 Severities**

The height of fall shall be taken from the following series:

25 mm, 50 mm, **100 mm**, 250 mm, **500 mm**, **1 000 mm**

The values in bold type are preferred values.

NOTE – It may not be appropriate for heavy equipment to be subjected to the higher severities.

**4 Initial measurements**

The specimen shall be visually examined and electrically and mechanically checked, as required by the relevant specification.