

Australian/New Zealand Standard™

**Surge protective devices for
telecommunication applications**

AS/NZS 4117:1999

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TE/20, Telecommunication Overvoltage Protection. It was approved on behalf of the Council of Standards Australia on 6 August 1999 and on behalf of the Council of Standards New Zealand on 19 July 1999. It was published on 5 November 1999.

The following interests are represented on Committee TE/20:

Australian Chamber of Commerce and Industry
Australian Communications Authority
Australian Information Industry Association
Broadcast Industry Technical Advisory Group
Electricity Supply Association of Australia
Telecom, New Zealand
Telstra Corporation, Australia

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Australian/New Zealand Standard™

Surge protective devices for telecommunication applications

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE/20, Telecommunications Overvoltage Protection, to supersede AS/NZS 4117:1996, *Surge suppression devices for telecommunication applications*.

The objective of this Standard is to provide the telecommunication industry with minimum performance requirements and methods of test for stand-alone surge protective devices for use in telecommunication applications so that the Standard can be called up under telecommunication safety regulations.

The major differences to the previous edition are some changes in terminology and the modification of testing requirements to align more closely with those specified in IEC and ITU-T documents.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

In January 1997, the IEC began numbering its publications from 60000 by adding 60000 to the number of each publication. This coordinates IEC numbering with ISO numbering. During the transition period, an IEC document may be identified by its new or its old number (e.g. IEC 60050 or IEC 50).

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Surge protective devices for telecommunication applications****1 SCOPE**

This Standard sets out the minimum performance requirements for stand-alone surge protective devices (SPDs) having two or more terminals that are used for telecommunication applications.

2 APPLICATION

This Standard applies to individual stand-alone SPDs used for the suppression of indirect effects of lightning or other transient overvoltages and intended to be connected from telecommunication conductors to other telecommunication conductors and from telecommunication conductors to the protective earth (PE) system.

AS/NZS 3260 places particular requirements on protective devices that are permanently built into telecommunications equipment. Compliance with this Standard does not ensure compliance with the requirements of AS/NZS 3260.

Stand-alone SPDs include single component and multi-component devices.

NOTE: These devices include but are not limited to gas discharge tubes (GDTs), metal oxide varistors (MOVs), protective diodes such as foldback or crowbar devices and multi-component devices.

In areas where a high risk of electrical transients is known to exist, consideration should be given to using SPDs with a higher energy handling capacity than those that comply with the minimum requirements specified in this Standard. In addition, SPDs having a lower maximum limiting voltage than the limits specified in this Standard may be required to achieve effective surge protection for some types of equipment.

This Standard applies to SPDs used at altitudes not exceeding 2000 m.

This Standard does not apply to SPDs used within the public carriers' telecommunication networks.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1931 High voltage testing techniques

1931.1 Part 1: General definitions and test requirements

AS/NZS

3260 Approval and test specification—Safety of information technology equipment including electrical business equipment

AUSTEL

TS 009 Installation Requirements for Customer Cabling (Wiring Rules)

ITU-T

K.17 Tests on power-fed repeaters using solid-state devices in order to check the arrangements for protection from external interference