

Australian/New Zealand Standard™

**Telecommunications installations—  
Generic cabling systems**

**Part 1: Specification for the testing of  
balanced communication cabling**

### **AS/NZS 3087.1:2003**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CT-001, Communications Cabling. It was approved on behalf of the Council of Standards Australia on 30 July 2003 and on behalf of the Council of Standards New Zealand on 8 July 2003. It was published on 24 November 2003.

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# Australian/New Zealand Standard™

## Telecommunications installations— Generic cabling systems

### Part 1: Specification for the testing of balanced communication cabling

Originated as part of AS/NZS 3087:2000.  
Jointly revised and redesignated in part as AS/NZS 3087.1:2003.

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling to supersede AS/NZS 3087:2000 (in part).

The objective of this Standard is to address test methods for installed cabling and pre-fabricated cable assemblies, and provides a comparison of these methods. These test methods, where appropriate, are based on those used for components of the cable assembly. Transmission performance depends on cable characteristics, connecting hardware, patch cords and cross-connect cabling, on the total number of connections and the care with which they are installed and maintained.

This Standard is identical with, and has been reproduced from IEC 61935-1:2002 Ed 1.1, *Generic cabling systems—Specification for the testing of balanced communication cabling in accordance with ISO/IEC 11801—Part 1: Installed cabling*. This consolidated version of IEC 61935-1 is based on the first edition (2000) and its amendment 1 (2002).

This Part 1 contains the test methods required for installed cabling. Part 2 contains the test methods required for patch cords and work area cables.

This Standard is organized as follows—

- (a) reference laboratory measurement procedures are specified in clause 4. In some cases, these procedures may be used in the field;
- (b) descriptions and requirements for measurements in the field are specified in clause 5;
- (c) performance requirements for field testers and procedures to verify performance are specified in clause 6.

## NOTES:

- 1 This Standard does not include tests that are normally performed on the cables and connectors separately. These tests are described in IEC 61156-1 and IEC 60603-7 respectively.
- 2 Wherever possible, cables and connectors used in cable assemblies, even if they are not described in the series IEC 61156 or in IEC 60603-7 are tested separately according to the tests given in the relevant generic specification. In this case, most of the environmental and mechanical tests described in this Standard may be omitted.
- 3 Users of this Standard are advised to consult with applications standards, equipment manufacturers and system integrators to determine the suitability of these requirements for specific networking applications.

In this Standard, the following print types are used:

- (i) requirements proper: in arial type;
- (ii) *test specifications: in italic type*
- (iii) explanatory matter: in smaller arial type.

As this Standard is reproduced from an International Standard, the following applies:

- (A) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (B) In the source text ‘this part of IEC 61935’ should read ‘this part of AS/NZS 3087’.
- (C) A full point should be substituted for a comma when referring to a decimal marker.
- (D) Any French text on figures should be ignored.

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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**Australian/New Zealand Standard****Telecommunications installations—Generic cabling systems**  
**Part 1: Specification for the testing of balanced communication cabling**

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**1 Scope**

This part of IEC 61935 specifies reference measurement procedures for cabling parameters and the requirements for field tester accuracy to measure cabling parameters identified in ISO/IEC 11801. References in this standard to ISO/IEC 11801 mean ISO/IEC 11801 or equivalent cabling standards.

This standard applies when the cable assemblies are constructed of cables complying with IEC 61156-1, IEC 61156-2, IEC 61156-3, IEC 61156-4, IEC 61156-5 and IEC 61156-6, and connecting hardware as specified in IEC 60603-7 or IEC 60807-8. In the case where cables and/or connectors do not comply with these standards, then additional testing may be required.

This standard relates to performance with respect to 100  $\Omega$ , 120  $\Omega$  or 150  $\Omega$  cabling.

**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 60169-16, Radio-frequency connectors – Part 16: R.F. coaxial connectors with inner diameter of outer conductor 7 mm (0,276 in) with screw coupling – Characteristic impedance 50 ohms (75 ohms) (type N)

IEC 60169-22, *Radio-frequency connectors – Part 22: RF two-pole bayonet coupled connectors for use with shielded balanced cables having twin inner conductors (type BNO)*

IEC 60603-7:1996, *Connectors for frequencies below 3 MHz for use with printed boards – Part 7: Detail specification for connectors, 8-way, including fixed and free connectors with common mating features, with assessed quality*

IEC 60807-8:1992, *Rectangular connectors for frequencies below 3 MHz – Part 8: Detail specification for connectors, four-signal contacts and earthing contacts for cable screen*

IEC 61156-1:1994, *Multicore and symmetrical pair/quad cables for digital communications – Part 1: Generic specification*

IEC 61156-2:1995, *Multicore and symmetrical pair/quad cables for digital communications – Part 2: Horizontal floor wiring – Sectional specification*

IEC 61156-3:1995, *Multicore and symmetrical pair/quad cables for digital communications – Part 3: Work area wiring – Sectional specification*

IEC 61156-4:1995, *Multicore and symmetrical pair/quad cables for digital communications – Part 4: Riser cables – Sectional specification*