

Australian/New Zealand Standard™

**Testing of balanced communication  
cabling in accordance with  
ISO/IEC 11801**

**Part 1: Installed cabling**



## **AS/NZS IEC 61935.1:2006**

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 20 September 2006 and on behalf of the Council of Standards New Zealand on 22 September 2006.  
This Standard was published on 11 October 2006.

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*This Standard was issued in draft form for comment as DR 06363.*

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# Australian/New Zealand Standard™

## Testing of balanced communication cabling in accordance with ISO/IEC 11801

### Part 1: Installed cabling

Originated as AS/NZS 3087.1:2000.  
Previous edition AS/NZS 3087.1:2003.  
Jointly revised and redesignated as AS/NZS IEC 61935.1:2006.

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Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

## PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling to supersede AS/NZS 3087.1:2003, *Telecommunications installations—Generic cabling systems, Part 1: Specification for the testing balanced communication cabling*.

The objective of this Standard is to provide specific reference measurement procedures for cabling parameters and the requirements for field tester accuracy to measure cabling parameters identified in ISO/IEC 11801 which has been adopted as AS/NZS 3080.

This Standard is identical with, and has been reproduced from IEC 61935-1:2005, *Testing of balanced communication cabling in accordance with ISO/IEC 11801—Part 1: Installed cabling*.

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

- (a) Its number appears on the cover and title page while the international standard number appears only on the cover.
- (b) In the source text ‘this part of IEC 61935’ should read ‘this Australian/New Zealand Standard.’
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>	
ISO/IEC		AS/NZS	
11801	Information technology— Generic cabling for customer premises	3080	Telecommunications installations—Generic cabling for commercial premises

Only international references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

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## INTRODUCTION

Telecommunication cabling, once specified uniquely by each telecommunications application, has evolved into a generic cabling system. Telecommunications applications now use the ISO/IEC 11801 cabling standard to meet their cabling requirements. Formerly, connectivity tests and visual inspection were deemed sufficient to verify a cabling installation. Now users need more comprehensive testing in order to ensure that the link will support telecommunications applications that are designed to operate on the generic cabling system. This part of IEC 61935 addresses reference laboratory and field test methods and provides a comparison of these methods.

Transmission performance depends on cable characteristics, connecting hardware, patch cords and cross-connect cabling, the total number of connections, and the care with which they are installed and maintained. This standard provides test methods for installed cabling and pre-fabricated cable assemblies. These test methods, where appropriate, are based on those used for components of the cable assembly.

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



## AUSTRALIAN/NEW ZEALAND STANDARD

**TESTING OF BALANCED COMMUNICATION  
CABLING IN ACCORDANCE WITH ISO/IEC 11801 –****Part 1: Installed cabling****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 or IEC 61156-6, and connecting hardware as specified in IEC 60603-7 or IEC 61076-3-104. In the case where cables and/or connectors do not comply with these standards then additional tests may be required.

This standard is organized as follows:

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

NOTE 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 or IEC 61076-3-104 respectively.

NOTE 2 Wherever possible, cables and connectors used in cable assemblies, even if they are not described in IEC 61156 or IEC 60603-7/IEC 61076-3-104 shall be 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.

NOTE 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

This standard relates to performance with respect to 100  $\Omega$  cabling. For 120  $\Omega$  or 150  $\Omega$  cabling, the same principles apply but the measurement system should correspond to the nominal impedance level.

**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)*