

Australian/New Zealand Standard™

**Telecommunications installations—  
Generic cabling for commercial premises  
(ISO/IEC 11801:2002, MOD)**



## **AS/NZS 3080:2003**

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 March 2003 and on behalf of the Council of Standards New Zealand on 5 March 2003.

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**Telecommunications installations—  
Generic cabling for commercial premises  
(ISO/IEC 11801:2002, MOD)**

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling and supersedes AS/NZS 3080(Int):2002.

*This Standard incorporates Amendment No. 1 (February 2009). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

A1 | This Standard is an adoption with national modifications and has been reproduced from ISO/IEC 11801:2002, *Information technology—Generic cabling for customer premises*, and its Corrigendum 1:2002, Corrigendum 2:2002, Corrigendum 3:2002, Amendment 1:2008 and Corrigendum 1:2008. The Corrigenda, the Amendment and the Corrigendum to the Amendment can be found at the end of the source text.

The objective of this Standard is to provide building owners, managers, architects, designers, manufacturers, installers, maintainers and users, with requirements to ensure compatibility with equipment and services and to ensure performance of infrastructure to meet present and foreseeable future requirements.

This Standard applies to the use of generic cabling within commercial premises, which may comprise single buildings or multiple buildings on a campus.

The application of this Standard should lead to the installation of cabling systems that satisfy user requirements and provide a useful life of at least 10 years.

Annex ZA has been added and it provides additional information and guidance for Australian and New Zealand users.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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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>	
IEC		AS	
60068	Environmental testing	60068	Environmental testing procedures for electrotechnology
60068-1	Part 1: General and guidance	60068.1	Part 1: General and guidance
60512	Electromechanical components for electronic equipment; basic testing procedures and measuring methods	3726	Electromechanical components for electronic equipment—Basic testing procedures and measuring methods
60512-2	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests Amendment 1 (1988)	3726.2	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests

IEC		AS/NZS	
60825	Safety of laser products (all parts)	2211	Safety of laser products (Parts 3, 4, 6, 7 and 9 are identical to IEC Parts 3, 4, 6, 7 and 9)

## CONTENTS

	<i>Page</i>
1	Scope ..... 1
2	Normative references..... 1
3	Definitions, abbreviations and symbols ..... 5
3.1	Definitions ..... 5
3.2	Abbreviations..... 11
3.3	Symbols ..... 12
3.3.1	Variables ..... 12
3.3.2	Indices..... 13
4	Conformance ..... 13
5	Structure of the generic cabling system ..... 14
5.1	General ..... 14
5.2	Functional elements..... 14
5.3	Cabling subsystems..... 15
5.3.1	General..... 15
5.3.2	Campus backbone cabling subsystem..... 15
5.3.3	Building backbone cabling subsystem ..... 16
5.3.4	Horizontal cabling subsystem..... 16
5.3.5	Design objectives..... 16
5.4	Interconnection of subsystems..... 17
5.4.1	General..... 17
5.4.2	Centralised cabling architecture..... 18
5.5	Accommodation of functional elements ..... 18
5.6	Interfaces ..... 18
5.6.1	Equipment interfaces and test interfaces..... 18
5.6.2	Channel and permanent link ..... 20
5.6.3	External network interface..... 20
5.7	Dimensioning and configuring..... 20
5.7.1	Distributors ..... 20
5.7.2	Cables ..... 22
5.7.3	Work area cords and equipment cords ..... 22
5.7.4	Patch cords and jumpers ..... 22
5.7.5	Telecommunications outlet (TO) ..... 23
5.7.6	Consolidation point ..... 24
5.7.7	Telecommunications rooms and equipment rooms ..... 24
5.7.8	Building entrance facilities ..... 24
5.7.9	External services cabling ..... 24
6	Performance of balanced cabling..... 25
6.1	General ..... 25
6.2	Layout ..... 26
6.3	Classification of balanced cabling ..... 27
6.4	Balanced cabling performance..... 27
6.4.1	General..... 27

6.4.2	Return loss .....	27
6.4.3	Insertion loss/attenuation .....	28
6.4.4	NEXT .....	29
6.4.5	Attenuation to crosstalk ratio (ACR) .....	32
6.4.6	ELFEXT .....	33
6.4.7	Direct current (d.c.) loop resistance .....	35
6.4.8	Direct current (d.c.) resistance unbalance .....	36
6.4.9	Current carrying capacity .....	36
6.4.10	Operating voltage .....	36
6.4.11	Power capacity .....	36
6.4.12	Propagation delay .....	36
6.4.13	Delay skew .....	37
6.4.14	Unbalance attenuation .....	37
6.4.15	Coupling attenuation .....	38
7	Reference implementations for balanced cabling .....	38
7.1	General .....	38
7.2	Balanced cabling .....	38
7.2.1	General .....	38
7.2.2	Horizontal cabling .....	38
7.2.3	Backbone cabling .....	42
8	Performance of optical fibre cabling .....	43
8.1	General .....	43
8.2	Component choice .....	43
8.3	Channel attenuation .....	44
8.4	Channel topology .....	44
8.5	Propagation delay .....	46
9	Cable requirements .....	46
9.1	General .....	46
9.2	Balanced cables .....	46
9.2.1	Basic performance requirements .....	46
9.2.2	Additional requirements .....	47
9.2.3	Additional performance requirements for flexible cables .....	48
9.3	Additional crosstalk considerations for cable sharing in balanced cables .....	48
9.3.1	General .....	48
9.3.2	Power summation in backbone cables .....	48
9.3.3	Hybrid, multi-unit and cables connected to more than one TO .....	48
9.4	Optical fibre cables .....	49
9.4.1	Optical fibre types .....	49
9.4.2	Generic performance requirements .....	49
9.4.3	Multimode optical fibre cable .....	49
9.4.4	Single-mode optical fibre cables .....	50
10	Connecting hardware requirements .....	50
10.1	General requirements .....	50
10.1.1	Applicability .....	50
10.1.2	Location .....	51
10.1.3	Design .....	51
10.1.4	Operating environment .....	51
10.1.5	Mounting .....	51

	<i>Page</i>
10.1.6 Installation practices .....	51
10.1.7 Marking and colour coding .....	52
10.2 Connecting hardware for balanced cabling .....	52
10.2.1 General requirements .....	52
10.2.2 Performance marking .....	52
10.2.3 Mechanical characteristics .....	52
10.2.4 Electrical characteristics .....	54
10.2.5 Telecommunications outlet requirements .....	60
10.2.6 Design considerations for installation .....	61
10.3 Optical fibre connecting hardware .....	62
10.3.1 General requirements .....	62
10.3.2 Marking and colour coding .....	62
10.3.3 Mechanical and optical characteristics .....	62
10.3.4 Telecommunications outlet requirements .....	63
10.3.5 Connection schemes for optical fibre cabling .....	63
11 Screening practices .....	65
11.1 General .....	65
11.2 Electromagnetic performance .....	65
11.3 Earthing .....	66
12 Administration .....	66
13 Balanced cords .....	66
13.1 Introduction .....	66
13.2 Insertion loss .....	66
13.3 Return loss .....	67
13.4 NEXT .....	67
Annex A (normative) Balanced permanent link and CP link performance .....	70
A.1 General .....	70
A.2 Performance .....	70
A.2.1 General .....	70
A.2.2 Return loss .....	71
A.2.3 Insertion loss/attenuation .....	72
A.2.4 NEXT .....	73
A.2.5 Attenuation to crosstalk ratio (ACR) .....	76
A.2.6 ELFEXT .....	77
A.2.7 Direct current (d.c.) loop resistance .....	80
A.2.8 Direct current (d.c.) resistance unbalance .....	81
A.2.9 Propagation delay .....	81
A.2.10 Delay skew .....	82
Annex B (normative) Test procedures .....	84
B.1 General .....	84
B.2 Channel and link performance testing .....	84
B.2.1 Testing balanced cabling channels, permanent links and CP links .....	84
B.2.2 Testing optical fibre cabling channels .....	84
B.2.3 Channel and link test schedules .....	84
B.3 Transmission testing of cords for balanced cabling .....	85
B.4 Transmission testing of components for cabling .....	86
B.4.1 Transmission testing of copper cables for balanced cabling .....	86

	<i>Page</i>
B.4.2 Transmission testing of connecting hardware for balanced cabling .....	86
B.4.3 Transmission testing of cables for optical cabling.....	86
B.4.4 Transmission testing of connectors for optical cabling.....	86
Annex C (normative) Mechanical and environmental performance testing of connecting hardware for balanced cabling .....	87
C.1 Introduction.....	87
C.2 Test requirements .....	87
C.2.1 General.....	87
C.2.2 Initial test measurements .....	87
C.2.3 Environmental and mechanical performance .....	88
Annex D (informative) Electromagnetic characteristics .....	92
Annex E (informative) Acronyms for balanced cables .....	93
Annex F (informative) Supported applications .....	95
F.1 Supported applications for balanced cabling .....	95
F.2 Supported applications for optical fibre cabling .....	97
Annex G (informative) Channel and permanent link models for balanced cabling .....	101
G.1 General .....	101
G.2 Insertion loss .....	101
G.2.1 Insertion loss of the channel configuration .....	101
G.2.2 Insertion loss of the permanent link configurations.....	102
G.2.3 Assumptions for insertion loss .....	102
G.3 NEXT .....	103
G.3.1 NEXT of the channel configuration.....	103
G.3.2 NEXT of the permanent link configurations .....	103
G.3.3 Assumptions for NEXT .....	104
G.4 ELFEXT .....	107
G.4.1 ELFEXT of the channel configuration .....	107
G.4.2 ELFEXT for the permanent link configurations .....	107
G.4.3 Assumptions for ELFEXT .....	108
G.5 Return loss .....	108
G.5.1 Return loss of the channel and permanent link configurations.....	108
G.5.2 Assumptions for the return loss circuit analysis method .....	109
Annex H (informative) Class F channel and permanent link with two connections.....	112
Annex I (informative) Significant changes to balanced cabling requirements with respect to earlier editions of this International Standard.....	113
I.1 General .....	113
I.2 References .....	113
I.3 Structural elements.....	113
I.4 Product designation .....	113
I.5 Component requirements.....	113
I.6 Installed cabling requirements .....	114
Bibliography.....	120

Figure 1 – Structure of generic cabling.....	15
Figure 2 – Hierarchical structure of generic cabling.....	17
Figure 3 – Structures for centralised generic cabling.....	17
Figure 4 – Accommodation of functional elements.....	18
Figure 5 – Interconnect models.....	19
Figure 6 – Cross-connect models.....	19
Figure 7 – Equipment and test interfaces.....	19
Figure 8 – Example of a generic cabling system with combined BD and FD.....	21
Figure 9 – Inter-relationship of functional elements in an installation with redundancy.....	22
Figure 10 – Channel, permanent link and CP link of a balanced cabling.....	25
Figure 11 – Example of a system showing the location of cabling interfaces and extent of associated channels.....	26
Figure 12 – Horizontal cabling models.....	40
Figure 13 – Backbone cabling model.....	42
Figure 14 – Combined backbone/horizontal channels.....	45
Figure 15 – Eight-position outlet pin and pair grouping assignments (front view of connector).....	61
Figure 16 – Duplex SC connectivity configuration.....	64
Figure 17 – Optical fibre patch cord.....	65
Figure A.1 – Link options.....	70
Figure E.1 – Cable naming schema.....	93
Figure E.2 – Cable types.....	94
Figure G.1 – Example of computation of NEXT with higher precision.....	104
Figure H.1 – Two connection channel and permanent link.....	112
Figure I.1 – Horizontal cabling model.....	115
Figure I.2 – Backbone cabling model.....	115

	<i>Page</i>
Table 1 – Maximum channel lengths .....	20
Table 2 – Return loss for channel.....	28
Table 3 – Informative return loss values for channel at key frequencies .....	28
Table 4 – Insertion loss for channel.....	29
Table 5 – Informative insertion loss values for channel at key frequencies .....	29
Table 6 – NEXT for channel .....	30
Table 7 – Informative NEXT values for channel at key frequencies.....	30
Table 8 – PS NEXT for channel.....	31
Table 9 – Informative PS NEXT values for channel at key frequencies .....	31
Table 10 – Informative ACR values for channel at key frequencies.....	32
Table 11 – Informative PS ACR values for channel at key frequencies .....	33
Table 12 – ELFEXT for channel.....	34
Table 13 – Informative ELFEXT values for channel at key frequencies .....	34
Table 14 – PS ELFEXT for channel .....	35
Table 15 – Informative PS ELFEXT values for channel at key frequencies .....	35
Table 16 – Direct current (d.c.) loop resistance for channel.....	35
Table 17 – Propagation delay for channel .....	36
Table 18 – Informative propagation delay values for channel at key frequencies .....	37
Table 19 – Delay skew for channel.....	37
Table 20 – Unbalance attenuation for channel.....	38
Table 21 – Horizontal link length equations .....	41
Table 22 – Backbone link length equations .....	43
Table 23 – Channel attenuation.....	44
Table 24 – Basic requirements of balanced cables .....	46
Table 25 – Mechanical characteristics of balanced cables.....	47
Table 26 – Optical fibre cable attenuation .....	49
Table 27 – Multimode optical fibre modal bandwidth.....	50
Table 28 – Mechanical characteristics of connecting hardware for use with balanced cabling.....	53
Table 29 – Electrical characteristics of telecommunications outlets intended for use with balanced cabling .....	55
Table 30 – Return loss .....	56
Table 31 – Insertion loss .....	56
Table 32 – Near end crosstalk (NEXT) .....	56
Table 33 – Power sum near end crosstalk (PS NEXT).....	57
Table 34 – Far end crosstalk (FEXT).....	57
Table 35 – Power sum far end crosstalk (PS FEXT) .....	58
Table 36 – Input to output resistance .....	58
Table 37 – Input to output resistance unbalance .....	58
Table 38 – Current carrying capacity.....	59
Table 39 – Propagation delay.....	59
Table 40 – Delay skew .....	59

Table 41 – Transverse conversion loss (TCL) f.f.s.....	59
Table 42 – Transfer impedance (screened connectors only).....	60
Table 43 – Insulation resistance.....	60
Table 44 – Voltage proof.....	60
Table 45 – Matrix of backward compatible mated modular connector performance.....	61
Table 46 – Mechanical and optical characteristics of optical fibre connecting hardware.....	63
Table 47 – Minimum return loss for balanced cords.....	67
Table 48 – Informative values of return loss at key frequencies for Category 5, 6 and 7 cords.....	67
Table 49 – Informative values of NEXT at key frequencies for Category 5, 6 and 7 cords.....	69
Table A.1 – Return loss for permanent link or CP link.....	71
Table A.2 – Informative return loss values for permanent link with maximum implementation at key frequencies.....	71
Table A.3 – Insertion loss for permanent link or CP link.....	72
Table A.4 – Informative insertion loss values for permanent link with maximum implementation at key frequencies.....	73
Table A.5 – NEXT for permanent link or CP link.....	74
Table A.6 – Informative NEXT values for permanent link with maximum implementation at key frequencies.....	74
Table A.7 – PS NEXT for permanent link or CP link.....	75
Table A.8 – Informative PS NEXT values for permanent link with maximum implementation at key frequencies.....	76
Table A.9 – Informative ACR values for permanent link with maximum implementation at key frequencies.....	77
Table A.10 – Informative PS ACR values for permanent link with maximum implementation at key frequencies.....	77
Table A.11 – ELFEXT for permanent link or CP link.....	78
Table A.12 – Informative ELFEXT values for permanent link with maximum implementation at key frequencies.....	79
Table A.13 – PS ELFEXT for permanent link or CP link.....	80
Table A.14 – Informative PS ELFEXT values for permanent link with maximum implementation at key frequencies.....	80
Table A.15 – Direct current (d.c.) loop resistance for permanent link or CP link.....	81
Table A.16 – Informative d.c. loop resistance for permanent link with maximum implementation.....	81
Table A.17 – Propagation delay for permanent link or CP link.....	82
Table A.18 – Informative propagation delay values for permanent link with maximum implementation at key frequencies.....	82
Table A.19 – Delay skew for permanent link or CP link.....	83
Table A.20 – Informative delay skew for permanent link with maximum implementation.....	83
Table B.1 – Cabling characteristics of copper and optical fibre cabling for acceptance, compliance and reference testing.....	85
Table C.1 – Group P.....	88
Table C.2 – Group A.....	89
Table C.3 – Group B.....	90
Table C.4 – Group C.....	91

Table C.5 – Group D .....	91
Table F.1 – Applications using balanced cabling .....	96
Table F.2 – Modular connector pin assignment for applications.....	97
Table F.3 – Supported applications using optical fibre cabling.....	98
Table F.4 – Maximum channel lengths supported by optical fibre applications for multimode fibre .....	99
Table F.5 – Maximum channel length supported by optical fibre applications for single-mode fibres .....	100
Table G.1 – Insertion loss deviation. ....	102
Table H.1 – ACR and PS ACR values for 2 connection class F channels and permanent links at key frequencies .....	112
Table I.1 – Principal transmission performance requirements of 150 $\Omega$ connecting hardware.....	114
Table I.2 – Minimum return loss limits for links, permanent links and channels for the different cabling classes.....	116
Table I.3 – Maximum attenuation limits for links, permanent links and channels for the different cabling classes.....	116
Table I.4 – Minimum NEXT limits for links, permanent links and channels for the different cabling classes.....	117
Table I.5 – Minimum ACR limits for links, permanent links and channels for the different cabling classes.....	117
Table I.6 – Maximum propagation delay limits for links, permanent links and channels for the different cabling classes.....	118
Table I.7 – Maximum d.c. loop resistance limits for links, permanent links and channels for the different cabling classes.....	118
Table I.8 – Minimum unbalance attenuation (LCL/LCTL) limits for links, permanent links and channels for the different cabling classes .....	118
Table I.9 – Minimum PS NEXT, PS ACR, ELFEXT and PS ELFEXT limits for permanent links and channels for the different cabling classes.....	119
Table I.10 – Maximum delay skew limits for permanent links and channels for the different cabling classes.....	119

## INTRODUCTION

Within customer premises, the importance of the cabling infrastructure is similar to that of other fundamental building utilities such as heating, lighting and mains power. As with other utilities, interruptions to service can have a serious impact. Poor quality of service due to lack of design foresight, use of inappropriate components, incorrect installation, poor administration or inadequate support can threaten an organisation's effectiveness.

Historically, the cabling within premises comprised both application specific and multipurpose networks. The original edition of this standard enabled a controlled migration to generic cabling and the reduction in the use of application-specific cabling.

The subsequent growth of generic cabling designed in accordance with ISO/IEC 11801 has

- a) contributed to the economy and growth of Information and Communications Technology (ICT),
- b) supported the development of high data rate applications based upon a defined cabling model, and
- c) initiated development of cabling with a performance surpassing the performance classes specified in ISO/IEC 11801:1995 and ISO/IEC 11801 Ed1.2:2000.

NOTE ISO/IEC 11801, edition 1.2 consists of edition 1.0 (1995) and its amendments 1 (1999) and 2 (1999).

This second edition of ISO/IEC 11801 has been developed to reflect these increased demands and opportunities.

This International Standard provides:

- a) users with an application independent generic cabling system capable of supporting a wide range of applications;
- b) users with a flexible cabling scheme such that modifications are both easy and economical;
- c) building professionals (for example, architects) with guidance allowing the accommodation of cabling before specific requirements are known; that is, in the initial planning either for construction or refurbishment;
- d) industry and applications standardization bodies with a cabling system which supports current products and provides a basis for future product development.

This International Standard specifies a multi-vendor cabling system which may be implemented with material from single and multiple sources, and is related to:

- a) international standards for cabling components developed by committees of the IEC, for example copper cables and connectors as well as optical fibre cables and connectors (see Clause 2 and bibliography);
- b) standards for the installation and operation of information technology cabling as well as for the testing of installed cabling (see Clause 2 and bibliography);
- c) applications developed by technical committees of the IEC, by subcommittees of ISO/IEC JTC 1 and by study groups of ITU-T, for example for LANs and ISDN;
- d) planning and installation guides which take into account the needs of specific applications for the configuration and the use of cabling systems on customer premises (ISO/IEC 14709 series).

Physical layer requirements for the applications listed in Annex F have been analysed to determine their compatibility with cabling classes specified in this standard. These application requirements, together with statistics concerning the topology of premises and the model described in 7.2, have been used to develop the requirements for Classes A to D and the optical class cabling systems. New Classes E and F have been developed in anticipation of future network technologies.

As a result, generic cabling defined within this International Standard

- a) specifies a cabling structure supporting a wide variety of applications,
- b) specifies channel and link Classes A, B, C, D and E meeting the requirements of standardised applications,
- c) specifies channel and link Classes E and F based on higher performance components to support the development and implementation of future applications,
- d) specifies optical channel and link Classes OF-300, OF-500, and OF-2000 meeting the requirements of standardised applications and exploiting component capabilities to ease the implementation of applications developed in the future,
- e) invokes component requirements and specifies cabling implementations that ensure performance of permanent links and of channels that meet or exceed the requirements for cabling classes,
- f) is targeted at, but not limited to, the general office environment.

This International Standard specifies a generic cabling system that is anticipated to have a usable life in excess of 10 years.



## AUSTRALIAN/NEW ZEALAND STANDARD

**Telecommunications installations—Generic cabling for commercial premises  
(ISO/IEC 11801:2002, MOD)****1 Scope**

ISO/IEC 11801 specifies generic cabling for use within premises, which may comprise single or multiple buildings on a campus. It covers balanced cabling and optical fibre cabling.

ISO/IEC 11801 is optimised for premises in which the maximum distance over which telecommunications services can be distributed is 2 000 m. The principles of this International Standard may be applied to larger installations.

Cabling defined by this standard supports a wide range of services, including voice, data, text, image and video.

This International Standard specifies directly or via reference the:

- a) structure and minimum configuration for generic cabling,
- b) interfaces at the telecommunications outlet (TO),
- c) performance requirements for individual cabling links and channels,
- d) implementation requirements and options,
- e) performance requirements for cabling components required for the maximum distances specified in this standard,
- f) conformance requirements and verification procedures.

Safety (electrical safety and protection, fire, etc.) and Electromagnetic Compatibility (EMC) requirements are outside the scope of this International Standard, and are covered by other standards and by regulations. However, information given by this standard may be of assistance.

ISO/IEC 11801 has taken into account requirements specified in application standards listed in Annex F. It refers to available International Standards for components and test methods where appropriate.

**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 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-14, *Environmental testing – Part 2: Tests – Test N: Change of temperature*

IEC 60068-2-38, *Environmental testing – Part 2: Tests – Test Z/AD: Composite temperature/humidity cyclic test*

IEC 60352-3, *Solderless connections – Part 3: Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance*