



Conduit systems for cable management

Part 1: General requirements



This Australian Standard® was prepared by Committee EL-004, Electrical Accessories. It was approved on behalf of the Council of Standards Australia on 16 January 2015. This Standard was published on 10 February 2015.

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- Australian Chamber of Commerce and Industry
 - Australian Industry Group
 - Consumer Electronics Suppliers Association
 - Consumers Federation of Australia
 - Electrical Compliance Testing Association
 - Electrical Regulatory Authorities Council
 - Engineers Australia
 - International Accreditation New Zealand
 - Ministry of Business, Innovation & Employment, New Zealand
 - New Zealand Manufacturers and Exporters Association
 - NSW Office of Fair Trading
 - Plastics Industry Pipe Association of Australia
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This Standard was issued in draft form for comment as DR AS/NZS 61386.1:2014.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard®

Conduit systems for cable management

Part 1: General requirements

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004, Electrical Accessories. This Standard will run in parallel to AS/NZS 2053.1:2001, *Conduits and fittings for electrical installations, Part 1: General requirements*. It is the intention of Committee EL-004 that AS/NZS 2053.1 will be withdrawn at some appropriate future time.

This Standard incorporates Amendment No. 1 (December 2019). 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 | Amendment No. 1 to this Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee EL-004, Electrical Accessories. As a consequence of Amendment No. 1, which is published as an Australian-only amendment, the designation of this Standard has been changed from AS/NZS 61386.1:2015 to AS 61386.1:2015.

The objective of this Standard is to provide Australian and New Zealand electrical industries with general requirements for conduit systems for cable management.

This Standard is Part 1 of the following series:

A1 | AS or AS/NZS
 61386 Conduit systems for cable management
 61386.1 Part 1: General requirements (this Standard)
 61386.21 Part 21: Particular requirements—Rigid conduit systems
 61386.22 Part 22: Particular requirements—Pliable conduit systems
 61386.23 Part 23: Particular requirements—Flexible conduit systems

This Part 1 needs to be used in conjunction with the appropriate particular Standard (Part 21, 22 or 23) for each application.

This Standard is based on but not equivalent to IEC 61386-1, Ed.2.0 (2008), *Conduit systems for cable management, Part 1: General requirements*.

The main areas of variation from IEC include the following:

- (a) Classification.
- (b) Marking requirements.
- (c) Test for pull out strength.
- (d) Dimensions.
- (e) UV resistance.
- (f) Moisture absorption.

The essential safety requirements in AS/NZS 3820, *Essential safety requirements for electrical equipment*, that could be applicable to cable management systems are covered by 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.

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STANDARDS AUSTRALIA

Australian Standard

Conduit systems for cable management

Part 1: General requirements

1 SCOPE

This Standard specifies requirements and tests for conduit systems, including conduits and conduit fittings, for the protection and management of insulated conductors and/or cables in electrical installations or in communication systems up to 1000 V a.c. and/or 1500 V d.c. This Standard specifies general requirements and is intended to be used in conjunction with the appropriate particular Standard, AS/NZS 61386, Part 21, 22 or 23, for each application.

This Standard applies to metallic, non-metallic and composite conduit systems, including threaded and non-threaded entries which terminate the system.

This Standard does not apply to enclosures and connecting boxes, which come within the scope of AS/NZS IEC 60670.

NOTES:

- 1 Certain conduit systems may also be suitable for use in hazardous atmospheres. Regard should then be taken of the extra requirements necessary for equipment to be installed in such conditions.
- 2 Earthing conductors may or may not be insulated.

2 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard.

AS

- 60417 Graphical symbols for use on equipment (series)
- 60529 Degrees of protection provided by enclosures (IP Code)

AS/NZS

- 61386 Conduit systems for cable management
- 61386.21 Part 21: Particular requirements—Rigid conduit systems
- 61386.22 Part 22: Particular requirements—Pliable conduit systems
- 61386.23 Part 23: Particular requirements—Flexible conduit systems
- 60695 Fire hazard testing
- 60695.11.2 Part 11.2: Test flames—1 kW nominal pre-mixed flame—Apparatus, confirmatory test arrangement and guidance

AS/NZS IEC

- 60670 Boxes and enclosures for electrical accessories for household and similar fixed electrical installations (series)

IEC

- 60754 Test on gases evolved during combustion of materials from cables
- 60754-1 Part 1: Determination of the amount of halogen acid gas