SINGAPORE STANDARD

SS 504 : Part 1 : 2003

(IEC 61386-1 : 1996)

(ICS 29.120.10)

SPECIFICATION FOR

Conduit systems for cable management

Part 1 : General requirements

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National Foreword

This Singapore Standard was prepared by the Technical Committee on Electrical Accessories and Electric Cables under the direction of the Electrical and Electronic Standards Committee. This standard is identical to the First Edition of IEC 61386-1 : 1996-11 including its Amendment 1 : 2000, both published by the International Electrotechnical Commission. The generic title of Part 1 and all other parts of the series follows the new title of the IEC 61386 series as 'Conduit systems for cable management'.

This standard was established as a result of the review on SS 100 : 1974 – 'Specification for rigid steel conduits for electrical installations'. This part together with Part 21 replaces SS 100 : 1974.

Part 1 is to be used in conjunction with the appropriate Part 2, which contains clauses to supplement or modify the corresponding clauses in Part 1, to provide the relevant particular requirements for each type of product.

Annex A is an integral part of this standard.

In this publication, the following print types are used :

- Requirements proper : in roman type
- Test specifications : in italic type
- Explanatory matter : in smaller roman type

The Committee has decided that the contents of this publication will remain unchanged until **2005**. At this date, the publication will be

Reconfirmed

Withdrawn

Replaced by a revised edition, or

Amended

Attention is drawn to the following:

1. 'IEC 60529 : 1989' shall be replaced by 'SS IEC 529 : 1989 Degrees of protection provided by enclosures (IP Code)'
2. The comma has been used throughout as a decimal marker in IEC 61386-1, whereas in Singapore Standards it is a practice to use a full-point on the baseline as the decimal marker.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. SPRING Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. Singapore Standards are subject to periodic review to keep abreast of technological changes and new technical developments. The revisions of Singapore Standards are announced through the issue of either amendment slips or revised editions.

2. Compliance with a Singapore Standard does not exempt users from legal obligations.

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONDUIT SYSTEMS FOR ELECTRICAL INSTALLATIONS –

Part 1: General requirements

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.

3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 1386-1 has been prepared by subcommittee 23A: Cable management systems, of IEC technical committee 23: Electrical accessories.

The text of this standard is based on the following documents:

FDIS	Report on voting
23A/260/FDIS	23A/274/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This part 1 is to be used in conjunction with the appropriate part 2, which contains clauses to supplement or modify the corresponding clauses in part 1, to provide the relevant particular requirements for each type of product. A conduit system which conforms to this standard is deemed safe for use.

In this publication, the following print types are used:

- Requirements proper: in roman type.
- *Test specifications: in italic type.*
- Explanatory matter: in smaller roman type.

Annex A is an integral part of this standard.

CONDUIT SYSTEMS FOR ELECTRICAL INSTALLATIONS –

Part 1: General requirements

1 Scope

This part of IEC 1386 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 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 IEC 670.

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 normative documents contain provisions which through reference in this text, constitute provisions of this part of IEC 1386. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 1386 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 417: 1973, *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets, as well as all of the supplements A to L*

IEC 423: 1993, *Conduits for electrical purposes – Outside diameters of conduits for electrical installations and threads for conduits and fittings*

IEC 529: 1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 670: 1989, *General requirements for enclosures for accessories for household and similar fixed electrical installations*

IEC 695-2-1/1:1991, *Fire hazard testing – Part 2: Test methods – Section 1/Sheet 1: Glow-wire end-product test and guidance*

IEC 695-2-4/1: 1991, *Fire hazard testing – Part 2: Test methods – Section 4/Sheet 1: 1 kW nominal pre-mixed test flame and guidance*

3 Definitions

For the purposes of this International Standard, the following definitions apply: