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TECHNICAL REPORT



Selection of optical fibre cable specifications relative to mechanical, ingress, climatic or electromagnetic characteristics – Guidance

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SELECTION OF OPTICAL FIBRE CABLE SPECIFICATIONS RELATIVE TO MECHANICAL, INGRESS, CLIMATIC OR ELECTROMAGNETIC CHARACTERISTICS – GUIDANCE

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IEC 62362 which is a technical report, has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
86A/1297/DTR	86A/1302/RVC

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

Optical fibre cable specification standards are defined in the IEC 60794 series, which are listed in Annex B. They are organized in a hierarchy similar to the IECQ system. They differ from the IECQ system in that they are all performance standards. Optical fibre cable standards mainly cover the attributes and tests that protect the fibre from the environment, including installation, and the fibre attributes that may be affected by cabling. The attributes of the fibres within the cable are defined by reference to optical fibre specification standards of the IEC 60793 series, which are listed in Annex C. A complete and up-to-date listing of standards in the IEC 60793 and IEC 60794 series is available on website of the IEC: <http://www.iec.ch>.

The different levels of hierarchy are: general, sectional, family, and product. The primary distinction between these is the level of detail. Typically more options or wider ranges are present at the higher level. At a given level, the distinctions are with respect to application or cable construction. The references section of this document gives a more complete mapping. Parts of the family specification include blank detail specifications for various attributes that do not have normative requirements.

At the sectional specification level, two main categories are indoor and outdoor cables. Typically the outdoor cables have tougher tests than the indoor cables. At the product specification level, there are series of standards intended to support ISO/IEC 11801 for premises cabling, using both indoor and outdoor varieties.

This guidance will not attempt to reproduce the requirements of all the different specifications. For each of the MICE attributes, it will discuss the situation and mention the key options.

SELECTION OF OPTICAL FIBRE CABLE SPECIFICATIONS RELATIVE TO MECHANICAL, INGRESS, CLIMATIC OR ELECTROMAGNETIC CHARACTERISTICS – GUIDANCE

1 Scope

The purpose of this guidance is to provide information on the specification of optical fibre cables with respect to the mechanical, ingress, climatic or electromagnetic characteristics (MICE) as classified within ISO/IEC 24702.

In this classification system each letter of the four initials of the acronym are subscripted with a value of from one to three to indicate different severities. The current attributes and severities are found in Annex A.

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 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures*

IEC 60794-2 (all parts), *Optical fibre cables – Part 2: Indoor optical fibre cables*

IEC 60794-3 (all parts), *Optical fibre cables – Part 3: Outdoor cables*

ISO/IEC 24702, *Information technology – Generic cabling – Industrial premises*

ISO/IEC 11801, *Information technology – Generic cabling for customer premises*