

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Optical fibre cables –
Part 1-403: Generic specification – Basic optical cable test procedures –
Electrical test methods – Electrical continuity test of cable metallic elements,
method H3**

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**Câbles à fibres optiques –
Partie 1-403: Spécification générique – Procédures fondamentales d’essais**

**des câbles optiques – Méthodes d’essais électriques – Essai de continuité
électrique des éléments métalliques des câbles, méthode H3**





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

**Part 1-403: Generic specification – Basic optical cable
test procedures – Electrical test methods – Electrical continuity
test of cable metallic elements, method H3**

FOREWORD

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IEC 60794-1-403 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This document partially cancels and replaces IEC 60794-1-24:2014.

The text of this International Standard is based on the following documents:

CDV	Report on voting
86A/2035/CDV	86A/2076/RVC

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all the parts in the IEC 60794 series, published under the general title *Optical fibre cables*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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- withdrawn,
- replaced by a revised edition, or
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INTRODUCTION

This document contains method H3 of IEC 60794-1-24:2014, which will be withdrawn. The system for optical fibre test methods have been restructured and renumbered. The electrical tests contained in IEC 60794-1-24:2014 will now be individually numbered in the IEC 60794-1-4xx series. Each test method is now considered to be an individual document rather than part of a multi-test method compendium. Full cross-reference details of the methods are given in IEC 60794-1-2.

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OPTICAL FIBRE CABLES –

Part 1-403: Generic specification – Basic optical cable test procedures – Electrical test methods – Electrical continuity test of cable metallic elements, method H3

1 Scope

This part of IEC 60794 specifies a method of verifying that cable metallic elements are electrically continuous throughout the cable. Electrical continuity is important for bonding and grounding, toning for location, and other related system issues, and may represent a "goodness of manufacture" criterion. Typically, the test is one of continuity and carries no resistance or conductivity requirement. The metallic elements can be tested individually or can be tested as a total group. Since this latter criterion is frequently the case, all elements are measured as a group unless specified otherwise.

NOTE It is possible detail specifications allow such elements as strength members to be non-continuous throughout the cable. This is a special case, and attention is directed to the detail specification.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60794-1-1, *Optical fibre cables – Part 1-1: Generic specification – General*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60794-1-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Sample

The sample is an entire cable to be measured. As this test is non-destructive, the cable may be shipped afterward.

5 Apparatus

The apparatus may be any device capable of assuring electrical continuity. Common examples include

- ohm meter, and
- low-voltage circuit test light.

6 Procedure

Perform the following steps, unless otherwise specified.

- 1) Open each end of the cable sufficiently to connect the test apparatus to the metallic member(s), singularly or as a group, as specified. When testing as a group, the metallic elements shall be connected in a loop. This may require stripping the sheath or other covering for a very short distance.
- 2) Connect the test device to both ends to complete the test circuit.

Record the presence or absence of conductivity or record the resistance of the cable element(s), if specified.

7 Requirements

The metallic elements shall be continuous. The requirement will apply to the elements as a group or singularly, as specified. If specified, the measured resistance shall be less than the maximum value at the indicated temperature.

8 Details to be specified

The following deviations from the standard test can be included and shall be performed if specified by the detail specification:

- a) metallic elements to be measured individually or in type groups;
- b) that element resistance is to be measured, and the maximum resistance value allowed; or
- c) any other special criteria to be applied.

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Bibliography

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

IEC 60794-1-24:2014, *Optical fibre cables – Part 1-24: Generic specification – Basic optical cable test procedures – Electrical test methods*

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