IEC 61300-3-55

Edition 1.0 2020-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-55: Examinations and measurements – Polarisation extinction ratio and keying accuracy of polarisation maintaining, passive, optical components

Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures – Partie 3-55: Examens et mesures – Rapport d'extinction de polarisation et précision du détrompage des composants optiques passifs maintenant la polarisation

IEC 61300-3-55:2020-05(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 33.180.20

ISBN 978-2-8322-8255-7

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 61300-3-55 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

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

FDIS	Report on voting
86B/4276/FDIS	86B/4290/RVD

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

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

A list of all parts in the IEC 61300 series, published under the general title *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*, 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 "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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- withdrawn,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

INTRODUCTION

This document contains and expands the content of IEC 61300-3-24 and IEC 61300-3-40.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 3-55: Examinations and measurements – Polarisation extinction ratio and keying accuracy of polarisation maintaining, passive, optical components

1 Scope

This part of IEC 61300 provides methods for measuring the polarisation extinction ratio (PER) of single-mode, polarisation maintaining (PM) optical components based upon PM fibres. This document also provides methods for detecting the input and output orientation of the PM components' principal axes as well as methods for estimating the keying accuracy, i.e. the angular misalignment between the principal axes and the mechanical reference guide key of the connectors, if these are present.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in 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

3.1.1
principal state of polarisation
PSP
state of polarisation (SOP) that propagates unaltered through an optically anisotropic medium

Note 1 to entry: It is also known as "eigen polarisation".

Note 2 to entry: This note applies to the French language only.

3.1.2
polarisation extinction ratio
PER
fraction of the power of one PSP that leaks onto the orthogonal one as it propagates along the polarisation maintaining component

Note 1 to entry: This note applies to the French language only.

3.2 Abbreviated terms

Term	Description
DUT	device under test