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Fibre optic active components and devices - Package and interface standards - Part 6: ATM-PON transceivers

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NATIONAL FOREWORD

| | |
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| See Eesti standard EVS-EN IEC 62148-6:2020 sisaldab Euroopa standardi EN IEC 62148-6:2020 ingliskeelset teksti. | This Estonian standard EVS-EN IEC 62148-6:2020 consists of the English text of the European standard EN IEC 62148-6:2020. |
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| Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.05.2020. | Date of Availability of the European standard is 01.05.2020. |
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ICS 33.180.20

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EUROPEAN STANDARD

EN IEC 62148-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2020

ICS 33.180.20

Supersedes EN 62148-6:2003 and all of its amendments
and corrigenda (if any)

English Version

**Fibre optic active components and devices - Package and
interface standards - Part 6: ATM-PON transceivers
(IEC 62148-6:2020)**

Composants et dispositifs actifs fibroniques - Normes de
boîtier et d'interface - Partie 6: Emetteurs-récepteurs ATM-
PON
(IEC 62148-6:2020)

Aktive Lichtwellenleiterbauelemente und -geräte - Gehäuse-
und Schnittstellennormen - Teil 6: ATM-PON Sende- und
Empfangsmodule
(IEC 62148-6:2020)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 86C/1590/CDV, future edition 2 of IEC 62148-6, prepared by SC 86C "Fibre optic systems and active devices" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62148-6:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-12-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-03-31

This document supersedes EN 62148-6:2003 and all of its amendments and corrigenda (if any).

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

Endorsement notice

The text of the International Standard IEC 62148-6:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

| | | |
|--------------------|------|---------------------------------|
| IEC 60130 (series) | NOTE | Harmonized as EN 60130 (series) |
| IEC 60191 (series) | NOTE | Harmonized as EN 60191 (series) |
| IEC 60603 (series) | NOTE | Harmonized as EN 60603 (series) |
| IEC 60794 (series) | NOTE | Harmonized as EN 60794 (series) |
| IEC 60825 (series) | NOTE | Harmonized as EN 60825 (series) |
| IEC 61076 (series) | NOTE | Harmonized as EN 61076 (series) |
| IEC 61281-1 | NOTE | Harmonized as EN IEC 61281-1 |
| ISO 1101 | NOTE | Harmonized as EN ISO 1101 |

CONTENTS

| | |
|--------------------------------------------------------------------------------------------------------|----|
| FOREWORD..... | 3 |
| INTRODUCTION..... | 5 |
| 1 Scope..... | 6 |
| 2 Normative references | 6 |
| 3 Terms, definitions and abbreviated terms | 6 |
| 3.1 Terms and definitions..... | 6 |
| 3.2 Abbreviated terms..... | 7 |
| 4 Classification..... | 7 |
| 5 Optical interface..... | 7 |
| 5.1 General..... | 7 |
| 5.2 Pigtail interface..... | 8 |
| 6 Electrical interface..... | 8 |
| 6.1 General..... | 8 |
| 6.2 Numbering of electrical terminals..... | 8 |
| 6.3 Electrical terminal assignment | 8 |
| 7 Outline..... | 9 |
| 7.1 Drawing of case outline..... | 9 |
| 7.2 Drawing of case footprint | 10 |
| Bibliography..... | 12 |
| | |
| Figure 1 – Numbering assignments of electrical terminals (viewed from above with pins underneath)..... | 8 |
| Figure 2 – Case outline..... | 10 |
| Figure 3 – Case footprint | 11 |
| | |
| Table 1 – Pin function definitions: transmitter section of the transceiver..... | 9 |
| Table 2 – Pin function definitions: receiver section of the transceiver..... | 9 |

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – PACKAGE AND INTERFACE STANDARDS –

Part 6: ATM-PON transceivers

FOREWORD

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International Standard IEC 62148-6 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2003, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) inconsistency of types in Clause 4 has been resolved;
- b) part and titles list in the Foreword has been deleted;
- c) references have been updated.

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

| | |
|--------------|------------------|
| CDV | Report on voting |
| 86C/1590/CDV | 86C/1613/RVC |

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 62148 series, published under the general title *Fibre optic active components and devices – Package and interface standards*, 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.

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INTRODUCTION

Fibre optic transceivers are used to convert electrical signals into optical signals and vice versa. This document covers the physical interface for transceivers for ATM-PON systems. This transceiver is designed as a 24-pin package for use with through holes on the printed circuit board.

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FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – PACKAGE AND INTERFACE STANDARDS –

Part 6: ATM-PON transceivers

1 Scope

This part of IEC 62148 covers the physical interface specification of optical transceivers for asynchronous transfer mode-passive optical network (ATM-PON) systems recommended by the International Telecommunication Union (ITU) as ITU Recommendation G.983.1.

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 60793-2 (all parts), *Optical fibres – Part 2: Product specifications*

IEC 60874 (all parts), *Fibre optic interconnecting devices and passive components – Connectors for optical fibres and cables*

IEC 61754 (all parts), *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*

IEC 62148-1, *Fibre optic active components and devices – Package and interface standards – Part 1: General and guidance*

ITU-T Recommendation G.652, *Characteristics of a single-mode optical fibre and cable*

ITU-T Recommendation G.657, *Characteristics of a bending-loss insensitive single-mode optical fibre and cable*

ITU-T Recommendation G.983.1, *Broadband optical access systems based on Passive Optical Networks (PON)*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62148-1, ITU-T Recommendation G.983.1 and the following 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>