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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 18233.4-2024

**Information technology - Generic cabling for customer
premises - Part 4: Home
(English Translation)**

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Appendix B (Normative) FTTR cabling reference implementation based on optical splitters

Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 4 of GB/T 18233 "General Cabling for Information Technology User Buildings". GB/T 18233 has been published.

The following parts.

- Part 1: General requirements;
- Part 2: Office space;
- Part 3: Industrial buildings;
- Part 4: Residential;
- Part 5: Data Center;
- Part 6: Distributed building facilities.

This document replaces GB/T 29269-2012 "General Cabling for Information Technology

Residential Buildings". Compared with GB/T 29269-2012, except for the structure in addition to adjustments and editorial changes, the main technical changes are as follows.

--- Added reference implementation of optical fiber-to-room cabling system based on optical splitters (see 3.1.11, 8.5, Appendix B);

--- The general requirements for universal cabling systems have been deleted, and only the specific requirements for universal cabling for residential use have been retained.

Request to incorporate into GB/T 18233.1 (see 5.6, Chapter 9, Chapter 10 and Chapter 11 of GB/T 29269-2012);

--- Deleted the command, control and communication (CCCB) channel performance and related reference implementation in the building (see GB/T 29269-2012, Chapter 6, 9.4, Appendix B.4);

--- Added requirements for residential optical fiber cabling implementation (see 6.3.4, 7.4, 8.5, 9.4 and 10.4).

This document is modified to adopt ISO/IEC 11801-4:2017 "Generic cabling for information technology user buildings Part 4: Single-tenant residences".

This document has the following structural adjustments compared to ISO/IEC 11801-4:2017.

---Add an additional clause under 5.6.2.2 (see 5.6.2.2.1 to 5.6.2.2.3);

---5.6.3 No more rules are set for the next level.

The technical differences between this document and ISO/IEC 11801-4:2017 and their reasons are as follows.

--- Replaced ISO/IEC 14763-2 (see Chapter 3, Chapter 4, 5.6 and 8.1) with the normative reference GB/T 34961.2 to comply with relevant safety regulations of my country and adapt to my country's technical conditions;

--- Added reference implementation of optical splitter-based fiber-to-room cabling system (see 3.1.11, 8.5, Appendix B) to adapt to our Technical requirements for the domestic all-fiber indoor cabling solution;

--- Added abbreviations BCT, EI, EQP, FTTR, ICT, TE, TI, TO (see 3.2) to improve the usability of the document;

--- ISO/IEC 30129 (see Chapter 4) has been replaced by the normative reference GB/T 43783 to comply with relevant safety regulations of my country.

To adapt to the technical conditions of our country;

--- Added normative references to IEC 61754-4 (all parts) (see 10.4.2.1), clarifying the use of SC type connectors in my country Technical conditions;

--- Changed the requirements for optical fiber cabling connection hardware (see 10.4.2.1) to adapt to my country's technical conditions;

--- Added normative references GB/T 28511.1 (see B.4) to provide references to fiber-to-room cabling systems based on optical splitters.

Support for calculation of system link performance.

The following editorial changes were made to this document.

--- In order to coordinate with the existing standards, the name of the standard is changed to "General Cabling for Information Technology User Buildings Part 4: Residential";

--- Incorporated the amendments to ISO/IEC 11801-4:2017/Cor.1:2018, the outer margin positions of the contents involved it is marked with vertical double lines (||);

--- Deleted the informative references to the abolished standards in Figure 1;

--- Deleted the statement about "for further study (ffs)" (see Chapter 4 of ISO/IEC 11801-4:2017);

--- Deleted the expression "provided by national and local laws and regulations" (see 5.5.3 and 5.5.4 of ISO/IEC 11801-4:2017);

--- Added examples of the effect of temperature on ICT channel length (see Table 2);

--- Changed the frequency bands for TV and broadcasting applications (see A.1.2~A.1.4).

Introduction

GB/T 18233 "General Cabling for Information Technology User Buildings" is intended to guide the design of general cabling systems in specific types of buildings.

GB/T 18233 is compiled based on ISO/IEC 11801. According to ISO/IEC 11801, according to different building types and scenes, GB/T 18233 is planned to consist of 6 parts.

--- Part 1: General requirements. The purpose is to provide a design basis for a general cabling system for user buildings and to provide a design basis for a cabling system for a specific location.

Provides a general reference for system design.

--- Part 2: Office space. The purpose is to provide a design basis for general cabling systems in office spaces.

--- Part 3: Industrial buildings. The purpose is to provide a design basis for a general cabling system for industrial buildings.

--- Part 4: Residential. The purpose is to provide a design basis for common residential cabling systems.