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Connectors for electrical and electronic equipment – Part 2: Detail specification for 2-way, shielded or unshielded, free and fixed connectors: mechanical mating information, pin assignment and additional requirements for type 2

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CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –

Part 2: Detail specification for 2-way, shielded or unshielded, free and fixed connectors: mechanical mating information, pin assignment and additional requirements for type 2

FOREWORD

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IEC 63171-2 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment. It is an International Standard.

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

FDIS	Report on voting
48B/2875/FDIS	48B/2886/RVD

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 parts in the IEC 63171 series, published under the general title *Connectors for electrical and electronic equipment*, 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- withdrawn,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

IEC 63171 is the base specification of the whole series. Subsequent specifications do not duplicate information given in the base document, but list only additional requirements. For complete specification regarding a component of a higher number document, all lower numbered documents must be considered as well. Figure 1 shows the interrelation of the documents:

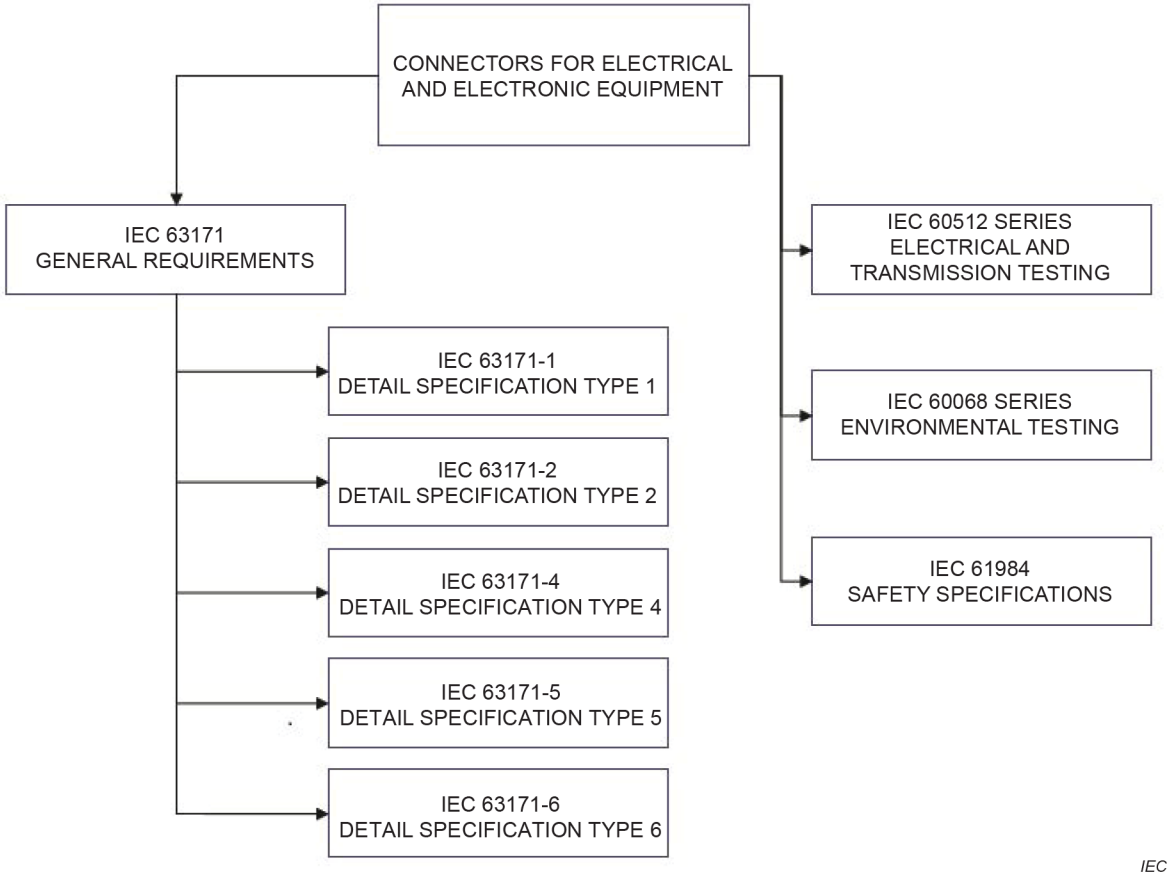
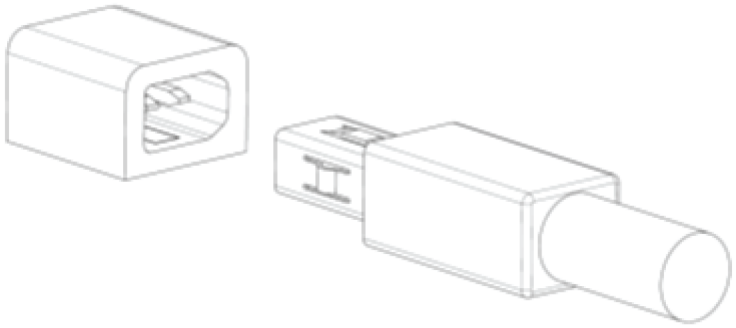
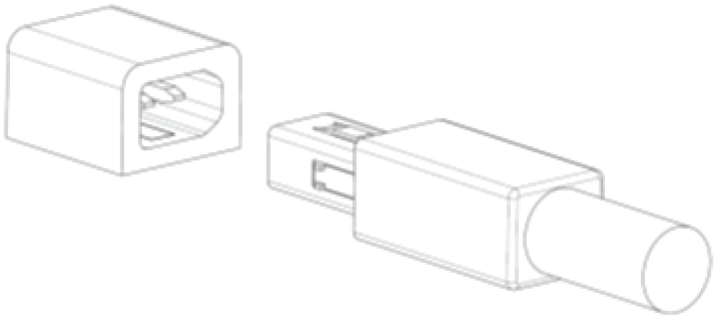
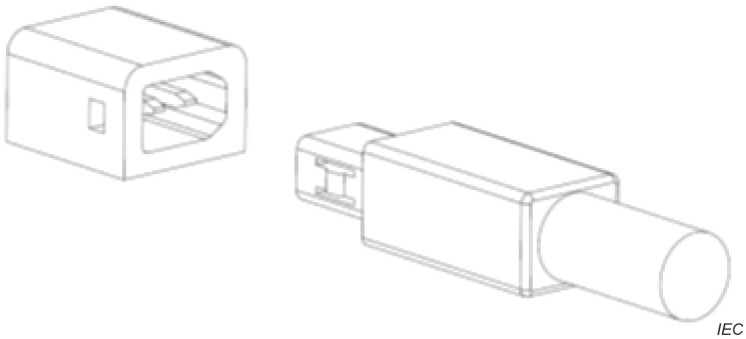
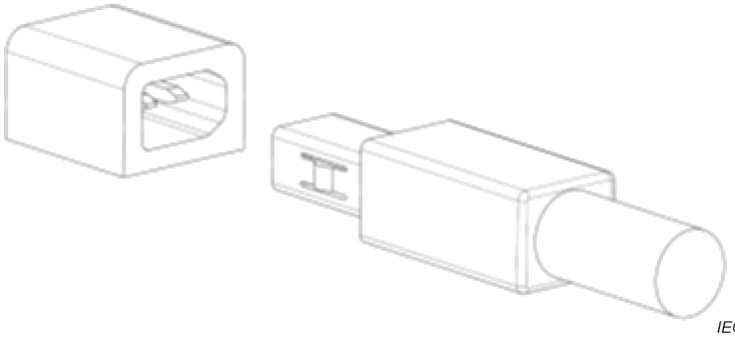


Figure 1 – Relationships between the IEC 63171 series and their related references

NOTE IEC 63171-1 and IEC 63171-6 contain duplicate information, which is either equal to or better than the minimum requirements of IEC 63171; such duplicate information is due to be removed in later editions.

This document refers to International Standards for test and measurement, environmental testing as well as solderless connections.

IEC SC 48B – Electrical connectors Specification available from: IEC General secretariat or from the addresses shown on the inside cover.	IEC 63171-2 Ed. 1
 IEC	Shielded connector with snap-in mechanism
 IEC	Shielded connector with locking device
 IEC	Unshielded connector with snap-in mechanism
 IEC	Unshielded connector with locking device

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –

Part 2: Detail specification for 2-way, shielded or unshielded, free and fixed connectors: mechanical mating information, pin assignment and additional requirements for type 2

1 Scope

This part of IEC 63171 covers 2-way, shielded or unshielded, free and fixed connectors for data transmission up to 600 MHz, with current-carrying capacity, known as Type 2. It specifies the common dimensions, mechanical, electrical and transmission characteristics and environmental requirements as well as test specifications respectively.

The form factor of these connectors allows their use for cable sharing with already installed TO's for structured cabling.

NOTE The overall performance of the transmission channel in such case has to be evaluated.

Intermateable and interoperable versions for circular connector for sealed applications including this connector are described in IEC 63171-5.

The shielded and unshielded connectors are interoperable for their internal transmission performance and can be exchanged. The shielded version has improved alien crosstalk and coupling attenuation properties.

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 60050-581, *International Electrotechnical Vocabulary (IEV) – Part 581: Electromechanical components for electronic equipment*

IEC 60512-1, *Connectors for electrical and electronic equipment – Tests and measurements – Part 1: Generic specification*

IEC 60512-28-100, *Connectors for electrical and electronic equipment – Tests and measurements – Part 28-100: Signal integrity tests up to 2 000 MHz – Tests 28a to 28g*

IEC 60664-1, *Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests*

IEC TR 63040, *Guidance on clearances and creepage distances in particular for distances equal to or less than 2 mm – Test results of research on influencing parameters*

IEC 63171, *Connectors for electrical and electronic equipment – Shielded or unshielded, free and fixed connectors for balanced single-pair data transmission with current carrying capacity: General requirements and tests*[1]

IEC 63171-5, *Connectors for electrical and electronic equipment – Part 5: Detail specification for 2-way, shielded or unshielded, free and fixed connectors: mechanical mating information, pin assignment and additional requirements for type 5*[2]

ISO/IEC 11801-1, *Information technology – Generic cabling for customer premises – Part 1: General requirements*

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1 Under preparation. Stage at the time of publication: IEC/RFDIS 63171:2020.

2 Under preparation. Stage at the time of publication: IEC/PRVC 63171-5:2020.