

INTERNATIONAL STANDARD

**Connectors for electrical and electronic equipment –
Part 1: Detail specification for 2-way, shielded or unshielded, free and fixed
connectors – Mechanical mating information, pin assignment and additional
requirements for Type 1 (copper LC style)**

IEC 63171-1:2024

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –**Part 1: Detail specification for 2-way, shielded or unshielded, free and fixed connectors – Mechanical mating information, pin assignment and additional requirements for Type 1 (copper LC style)**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 63171-1 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.

This second edition cancels and replaces the first edition published in 2020. This edition constitutes a technical revision.

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

- a) Information on obtaining a license agreement was updated.
- b) Connector characteristics and test requirements were aligned with IEC 63171:2021 where applicable.

- c) Added requirements for Polarizing method (5.6.4) and Dynamic stress (5.6.5) to align with IEC 63171:2021.
- d) Added test group BP – Moisture (6.7.3.4) to align with IEC 63171:2021.

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

Draft	Report on voting
48B/3062/FDIS	48B/3083/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.

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.

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/publications.

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

- reconfirmed,
- withdrawn, or
- revised.

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INTRODUCTION

The IEC 63171 series is a set of International Standards covering shielded or unshielded free and fixed connectors for balanced single-pair data transmission with current carrying capacity.

IEC 63171 is the general requirements and tests part (general specifications) of the whole series.

Subsequent parts, such as this Part 1, identified as IEC 63171 followed by a dash and a progressive number starting with 1, are the product detail specifications of this series and do not duplicate information given in this document, but list only additional requirements.

Each subsequent part is identified by a type of connector covered with the same number identifying the part. Some parts can describe more embodiments, with different connectors geometries (rectangular, circular), sharing the core element and the relevant features.

For the complete specifications regarding a connector of this series, both the general specification and the relevant detail specification are therefore required.

For the qualification of a connector of this series, both the general specification and the relevant detail specification shall be met.

Figure 1 shows the interrelation of the standards.

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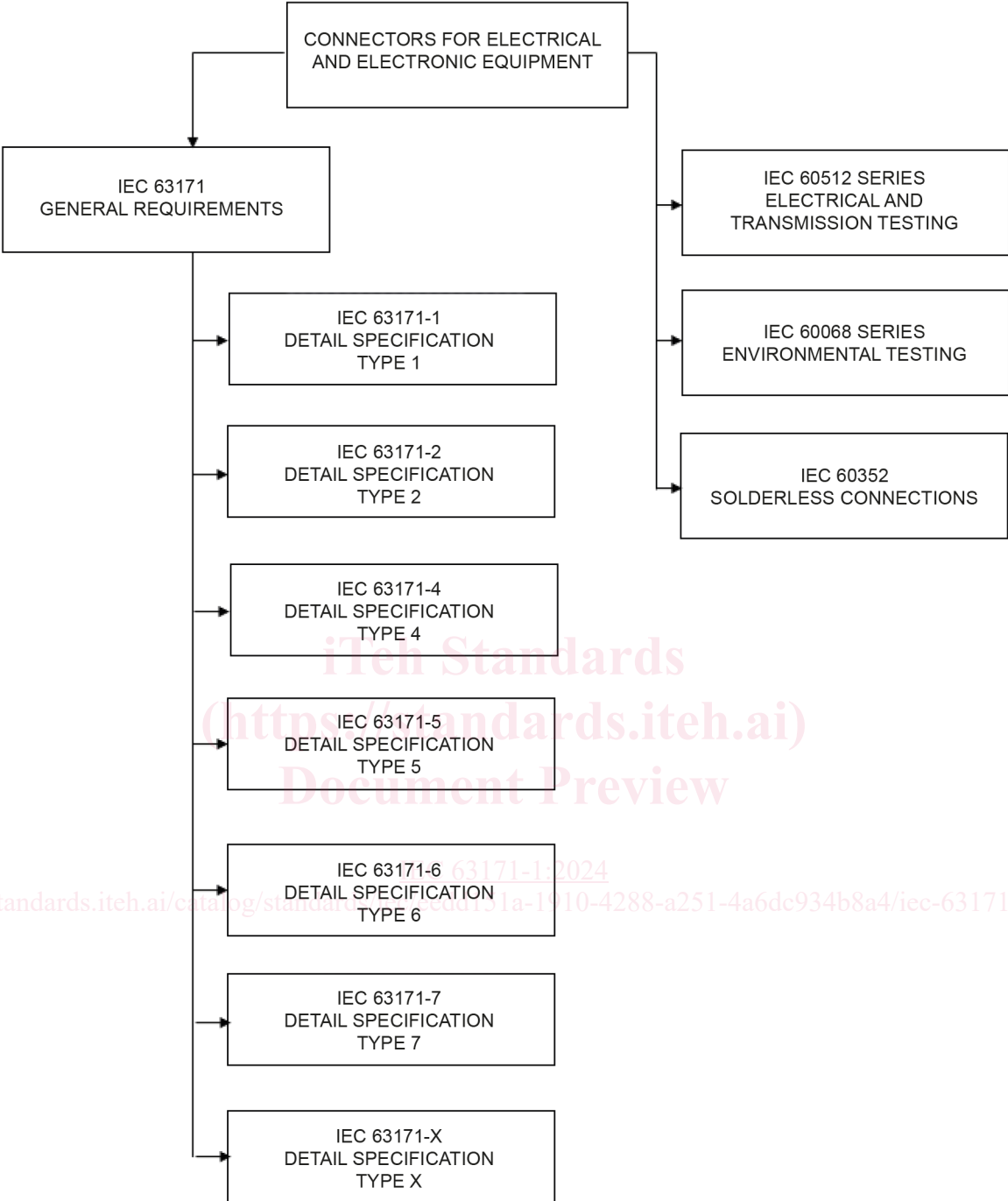


Figure 1 – Relationships between the IEC 63171 series and its related references

NOTE The project for Type 3 connectors detail specification was cancelled.

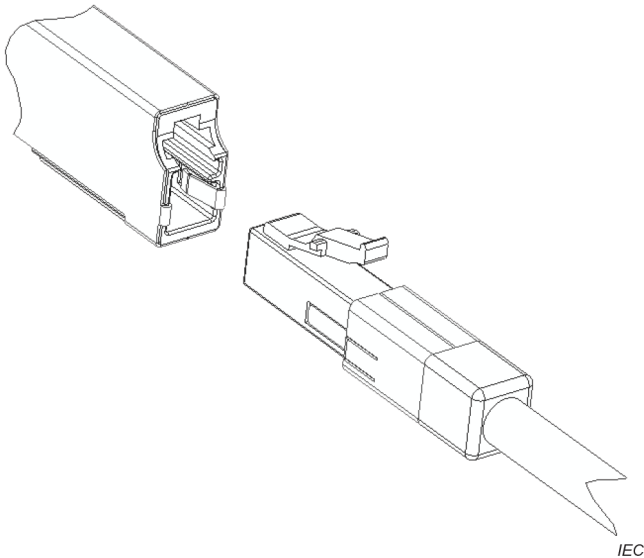
International Electrotechnical Commission	IEC 63171-1 Ed2
Subcommittee 48B: Electrical connectors	
 <p data-bbox="199 898 699 920">View showing typical fixed and free connectors</p>	<p data-bbox="1018 320 1385 465">Two-way, free and fixed connectors for balanced single-pair data transmission with frequencies up to 600 MHz and with current carrying capacity up to 2,0 A at 60 °C.</p> <p data-bbox="1018 483 1385 577">Fixed connectors are mounted on printed circuit board or bulkhead, the free connector is terminated on shielded or unshielded wire.</p>

Figure 2 – Connector overview

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