IEC 63171-7

Edition 1.0 2023-05

INTERNATIONAL STANDARD

colour inside

Connectors for electrical and electronic equipment – Part 7: Detail specification for up to 7 ways including PE or FE (data/power) and shield pin, free and fixed circular connectors for balanced single-pair data transmission with current-carrying capacity – Mechanical mating information, pin assignment and additional requirements for type 7

IEC 63171-7:2023-05(en)

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –

Part 7: Detail specification for up to 7 ways including PE or FE (data/power) and shield pin, free and fixed circular connectors for balanced single-pair data transmission with current-carrying capacity – Mechanical mating information, pin assignment and additional requirements for type 7

FOREWORD

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IEC 63171-7 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:

Draft	Report on voting
48B/3033/FDIS	48B/3044/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- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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 the complete specification regarding connectors described in this Part of the IEC 63171 series, read this document in conjunction with IEC 63171.

A general overview about the connectors in this document is shown in Figure 1.

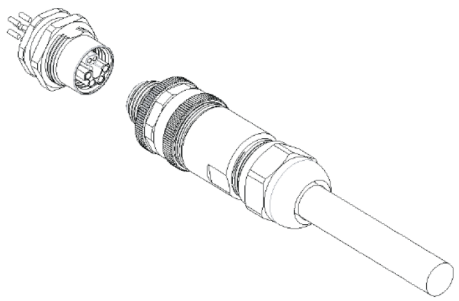
IEC SC 48B – Electrical connectors **Specification available from:** **IEC General secretariat or from the addresses shown on the inside cover.**	**IEC 63171-7 Ed. 1**
DETAIL SPECIFICATION in accordance with IEC 61076-1	M12 screw locking or push-pull locking (or both)
	Circular connectors, size 12, with 4 up to 7 ways including PE or FE (according to coding) for power and data transmission, either – with M12 screw-locking mechanism (styles with M12 in the name), or – with a quick-locking push-pull mechanism with a size derived from that (styles with P12 in the name), or – with both mechanisms combined (styles with C12 in the name). Multiple mating interfaces, each associated with a coding referred to as "type I" through "type VII", differing by power transmission capabilities and intents. 2 ways + additional shield pin (to be connected to the cable sheath) support balanced differential data transmission with frequencies up to 600 MHz, Category B as per IEC 63171. Free cable connectors: – male or female, – straight connectors, – rewireable or non-rewireable.
	Fixed connectors: – male or female, – single-hole mounting. With circular mounting orientation

Figure 1 – Type 7 connector overview