

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Connectors for electrical and electronic equipment –
Part 6: Detail specification for 2-way and 4-way (data/power), shielded, free
and fixed connectors for power and data transmission with frequencies
up to 600 MHz**

**Connecteurs pour équipements électriques et électroniques –
Partie 6: Spécification particulière pour les fiches et les embases écrantées
à 2 voies et 4 voies (données/puissance) pour la transmission de données
et de puissance à des fréquences jusqu'à 600 MHz**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –**Part 6: Detail specification for 2-way and 4-way (data/power),
shielded, free and fixed connectors for power and data
transmission with frequencies up to 600 MHz**

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International Standard IEC 63171-6 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

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

FDIS	Report on voting
48B/2764/FDIS	48B/2777/RVD

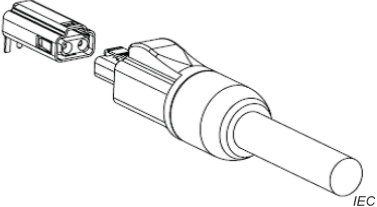
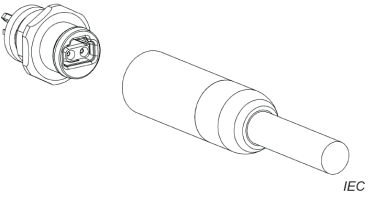
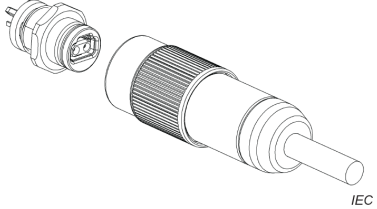
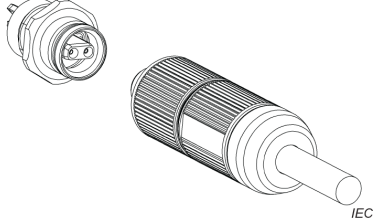
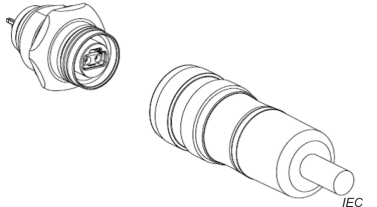
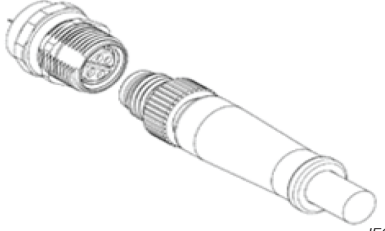
Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 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
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<p align="center">IEC SC 48B – Electrical connectors</p> <p align="center">Specification available from: IEC General secretariat or from the addresses shown on the inside cover.</p>	<p align="center">IEC 63171-6 Ed. 1</p>
<p align="center">DETAIL SPECIFICATION in accordance with IEC 61076-1</p>	
	<p align="center">2-way data IP20, latch locking</p>
	<p align="center">2-way data IP65/IP67, snap-in locking</p>
	<p align="center">2-way data IP65/IP67, push-pull locking</p>
	<p align="center">2-way data IP65/IP67, M8 screw locking</p>
	<p align="center">2-way data IP65/IP67, M12 screw locking or push-pull locking (or both)</p>
	<p align="center">4-way (2 power + 2 data) IP65/IP67, M8 screw locking</p>

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –

Part 6: Detail specification for 2-way and 4-way (data/power), shielded, free and fixed connectors for power and data transmission with frequencies up to 600 MHz

1 Scope

This part of IEC 63171 covers 2-way and 4-way (data/power) shielded free and fixed connectors for data transmission with frequencies up to 600 MHz and specifies the common dimensions, mechanical, electrical and transmission characteristics and environmental requirements as well as test specifications respectively.

This document specifies several properties overlapping with specifications in the IEC 63171 series which have been drafted later. In case of conflict the specifications within this document prevail.

NOTE The connectors are intended to be used for single-pair Ethernet (SPE) according to the following IEEE Standards: 10BaseT1 (IEEE 802.3cg), 100Base-T1 (IEEE 802.3bw), 1000Base-T1 (IEEE 802.3bp), and optionally with Power over Data line (PoDL) power supply according to IEEE 802.3bu.

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) – Chapter 581: Electromechanical components for electronic equipment*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-38, *Environmental testing – Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test*

IEC 60352 (all parts), *Solderless connections*

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

IEC 60512-1-1, *Connectors for electronic equipment – Tests and measurements – Part 1-1: General examination – Test 1a: Visual examination*

IEC 60512-1-2, *Connectors for electronic equipment – Tests and measurements – Part 1-2: General examination – Test 1b: Examination of dimension and mass*

IEC 60512-2-1, *Connectors for electronic equipment – Tests and measurements – Part 2-1: Electrical continuity and contact resistance tests – Test 2a: Contact resistance – Millivolt level method*

IEC 60512-3-1, *Connectors for electronic equipment – Tests and measurements – Part 3-1: Insulation tests – Test 3a: Insulation resistance*