

TECHNICAL SPECIFICATION

Direct current (DC) appliance couplers for information and communication technology (ICT) equipment installed in data centres and telecom central offices –

Part 3: AC/DC appliance inlet

[IEC TS 63236-3:2021](#)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIRECT CURRENT (DC) APPLIANCE COUPLERS FOR INFORMATION
AND COMMUNICATION TECHNOLOGY (ICT) EQUIPMENT INSTALLED
IN DATA CENTRES AND TELECOM CENTRAL OFFICES –**

Part 3: AC/DC appliance inlet

FOREWORD

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IEC TS 63236-3 has been prepared by IEC technical committee 23: Electrical accessories. It is a Technical Specification.

The text of this Technical Specification is based on the following documents:

DTS	Report on voting
23/917/DTS	23/959A/RVDTS

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 Technical Specification 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.

This Part 3 is to be used in conjunction with IEC TS 63236-1:2021.

The clauses of this document supplement or modify the corresponding clauses in IEC 63236-1. When a particular subclause or annex of Part 1 is not mentioned in this Part 3, the subclause or annex of IEC 63236-1 applies as far as is reasonable. Where this document states “addition”, “amendment” or “replacement”, the relevant requirement, test specification or explanatory matter in IEC 63236-1 is to be adapted accordingly.

Clauses or subclauses which are additional to those in Part 1 are numbered starting from 101.

A list of all the parts in the IEC 63236 series, published under the general title *Direct current (DC) appliance couplers for information and communication technology (ICT) equipment installed in data centres and telecom central offices*, 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 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- withdrawn,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.

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DIRECT CURRENT (DC) APPLIANCE COUPLERS FOR INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) EQUIPMENT INSTALLED IN DATA CENTRES AND TELECOM CENTRAL OFFICES –

Part 3: AC/DC appliance inlet

1 Scope

This part of IEC 63236, which is a Technical Specification, sets the additional requirements for appliance inlets used for information and communication technology (ICT) equipment installed in data centres and telecom central offices and which are suitable for both alternating current and direct current.

The accessories according to this document are intended to be used by ordinary persons in data centres only where the value of the voltage distribution system is defined as follows:

- for a DC voltage distribution system the values defined in IEC TS 63236-1:2021, Clause 1, apply;
- for an AC voltage distribution system the voltage does not exceed 250 V (AC) and the rated current according to the standard sheets.

Appliance couplers complying with this document are suitable for normal use at ambient air temperatures not normally exceeding +60 °C, with a lower limit of the ambient air temperature of -5 °C.

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This document is valid for appliance couplers for protection class I equipment.

Appliance couplers are not suitable for

- use in place of plug and socket-outlet systems according to the IEC TS 62735 series,
- use in place of plug and socket-outlet systems according to the IEC 60884 series,
- use in place of devices for connecting luminaires (DCLs) according to IEC 61995 (all parts) or luminaire supporting couplers (LSCs).

2 Normative references

This clause of IEC TS 63236-1:2021 applies.

3 Terms and definitions

This clause of IEC TS 63236-1:2021 applies except as follows:

Addition:

3.101

hybrid appliance inlet

appliance inlet designed to mate standardized connectors for alternating current according to IEC 60320-3 and direct current according to IEC TS 63236-1

4 General requirements

This clause of IEC TS 63236-1:2021 applies.

5 General notes on tests

This clause of IEC TS 63236-1:2021 applies.

6 Standard ratings

This clause of IEC TS 63236-1:2021 is replaced as follows:

Replacement:

The hybrid appliance inlet shall have the following ratings:

For direct current:

- 294 V DC to 400 V DC, max 2 600 W

For alternating current:

- 10 A, 250 V AC

7 Classification of appliance couplers

This clause of IEC TS 63236-1:2020 applies except as follows:

Addition:

Add the following new list item:

- c) classified as suitable for both DC and AC supply.

8 Marking

8.1 General

This clause of IEC TS 63236-1:2021 applies except as follows:

Replace the three first dashes with the following:

– for direct current:

max rated voltage, for example	400 VDC
max rated power in watts or kilowatts, for example	max 2 600 W to max 2,6 kW

– for alternating current:

rated current in amperes, for example	10 A
rated voltage, for example	250 V AC

8.2 Additional markings

This clause of IEC TS 63236-1:2021 applies.

8.3 Symbols or alphanumeric notations

This clause of IEC TS 63236-1:2021 applies except as follows:

Addition:

Add the following new entry:

alternating current AC or ~

8.4 Legibility of markings

This clause of IEC TS 63236-1:2021 applies.

8.5 Terminal markings and wiring instructions

This clause of IEC TS 63236-1:2021 applies.

9 Dimensions and compatibility

This clause of IEC TS 63236-1:2021 applies except as follows:

9.4 Dimensions for appliance couplers

Replacement:

Replace the first paragraph with the following:

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The hybrid appliance inlet shall comply with standard sheet 1 (Figure D.1) in Annex D.

10 Protection against electric shock

This clause of IEC TS 63236-1:2021 applies.

11 Provision for earthing

This clause of IEC TS 63236-1:2021 applies.

12 Terminals and terminations

This clause of IEC TS 63236-1:2021 applies:

13 Construction

This clause of IEC TS 63236-1:2021 applies.

14 Insulation resistance and electric strength

This clause of IEC TS 63236-1:2021 applies.

15 Forces necessary to insert and to withdraw the connector

This clause of IEC TS 63236-1:2021 is not applicable.

16 Operation of contacts

This clause of IEC TS 63236-1:2021 applies.

17 Resistance to heating of appliance couplers

This clause of IEC TS 63236-1:2021 applies.

18 Breaking capacity

This clause of IEC TS 63236-1:2021 is not applicable.

19 Normal operation

This clause of IEC TS 63236-1:2021 is not applicable.

20 Temperature rise

This clause of IEC TS 63236-1:2021 is not applicable.

21 Cables and their connection

This clause of IEC TS 63236-1:2021 is not applicable.

22 Mechanical strength

This clause of IEC TS 63236-1:2021 applies.

23 Resistance to heat and ageing

This clause of IEC TS 63236-1:2021 applies.

24 Screws, current-carrying parts and connections

This clause of IEC TS 63236-1:2021 applies.

25 Creepage distances, clearances and distances through sealing compound

This clause of IEC TS 63236-1:2021 applies.

26 Resistance of insulating material to heat, fire and tracking

This clause of IEC TS 63236-1:2021 applies.

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