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Plugs, socket-outlets and couplers with arcuate contacts

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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International Standard IEC 62986 has been prepared by subcommittee 23H: Plugs, socket-outlets and couplers for industrial and similar applications, and for electric vehicles, of IEC technical committee 23: Electrical accessories.

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

FDIS	Report on voting
23H/386/FDIS	23H/387/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.

In this standard, the following print types are used:

– requirements: in roman type;
– *conformity statements: in italic type*;
– notes: in small roman type.

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- withdrawn,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.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

The object of this document is to provide for a safe, compact and practical IEC system of standardized plugs and socket-outlets with arcuate contacts. It contains performance and dimensional requirements taking into account essential differences in the infrastructures and installation rules throughout the world.

PLUGS, SOCKET-OUTLETS AND COUPLERS WITH ARCUATE CONTACTS

1 Scope

This document sets the general and dimensional interchangeability requirements for plugs, socket-outlets, connectors and appliance inlets with arcuate contacts of standardized configurations (hereinafter referred to as accessories), with a rated operating voltage not exceeding 600 V AC at a frequency of 50 Hz and 60 Hz and with rated currents of 20 A and 30 A, primarily intended for commercial use indoors, in conditions where the presence of water is negligible.

This document applies to accessories for use when the ambient temperature is normally within the range of –25 °C to +40 °C. These accessories are intended to be connected to cables of copper or copper alloy only.

Interchangeability requirements are defined for IP20 accessories.

NOTE The conditions of use indoors are based on the limitations given by IEC 60364-5-51:2005, Table 51A, AD1.

Socket-outlets or appliance inlets incorporated in or fixed to electrical equipment are within the scope of this document.

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 60227 (all parts), *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V*

IEC 60228:2004, *Conductors of insulated cables*

IEC 60245-4, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 4: Cords and flexible cables*

IEC 60269-1, *Low-voltage fuses – Part 1: General requirements*

IEC 60269-2, *Low-voltage fuses – Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to K*

IEC 60309-1:1999, *Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements*
IEC 60309-1:1999/AMD1:2005
IEC 60309-1:1999/AMD2:2012

IEC 60417, *Graphical symbols for use on equipment* (available at http://www.graphical-symbols.info/equipment)

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

ISO 1456, *Metallic and other inorganic coatings – Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium*

ISO 2081, *Metallic and other inorganic coatings – Electroplated coatings of zinc with supplementary treatments on iron or steel*

ISO 2093, *Electroplated coatings of tin – Specification and test methods*

NMX-J-436-ANCE-2014/CSA C22.2 No.49-14/ANSI/UL 62, *Flexible Cords and Cables*

UL 1581, *Reference Standard for Electrical Wires, Cables and Flexible Cords*