

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Plugs, socket-outlets and couplers for industrial purposes –
Part 2: Dimensional interchangeability requirements for pin and contact-tube
accessories**

**Prises de courant pour usages industriels –
Partie 2: Règles d'interchangeabilité dimensionnelle pour les appareils à
broches et alvéoles**



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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Definitions.....	7
3 Normative references.....	8
4 General.....	8
5 Standard ratings.....	8
6 Classification.....	9
7 Marking.....	9
8 Dimensions.....	12
9 Protection against electric shock.....	17
10 Provision for earthing.....	17
11 Terminals and terminations.....	17
12 Interlocks and retaining devices.....	20
13 Resistance to ageing of rubber and thermoplastic material.....	20
14 General construction.....	21
15 Construction of socket-outlets.....	22
16 Construction of plugs and connectors.....	23
17 Construction of appliance inlets.....	24
18 Degrees of protection.....	25
19 Insulation resistance and dielectric strength.....	25
20 Breaking capacity.....	25
21 Normal operation.....	25
22 Temperature rise.....	26
23 Flexible cables and their connection.....	26
24 Mechanical strength.....	26
25 Screws, current-carrying parts and connections.....	26
26 Creepage distances, clearances and distances through sealing compound.....	26
27 Resistance to heat, fire and tracking.....	26
28 Corrosion and resistance to rusting.....	26
29 Conditional short-circuit current withstand test.....	26
30 Electromagnetic compatibility.....	26
Standards sheets.....	54
Figures.....	91
Annex AA (informative) List of the clause numbers that require re-testing.....	105
Table 101.....	8
Table 102.....	12
Table 103-1 – General purpose accessories with rated voltage not exceeding 50 V.....	13
Table 103-2 – Special application accessories with rated voltage not exceeding 50 V.....	13
Table 104.....	14
Table 105.....	16

Table 106	17
Table 107 – Size of connectable conductors	19
Table 108	20
Table 109	21
Table 110	22
Table 111	23
Table 112	23

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PLUGS, SOCKET-OUTLETS AND COUPLERS
FOR INDUSTRIAL PURPOSES –****Part 2: Dimensional interchangeability requirements
for pin and contact-tube accessories**

FOREWORD

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International Standard IEC 60309-2 has been prepared by subcommittee 23H: Industrial plugs and socket-outlets, of IEC technical committee 23: Electrical accessories.

This part 2 shall be used in conjunction with part 1.

This consolidated version of IEC 60309-2 consists of the fourth (1999) [documents 23H/89/FDIS and 23H/92/RVD], its amendment 1 (2005) [documents 23H/175/FDIS and 23H/183/RVD] and its amendment 2 (2012) [documents 23H/275/FDIS and 23H/280/RVD].

The technical content is therefore identical to the base edition and its amendments and has been prepared for user convenience.

It bears the edition number 4.2.

A vertical line in the margin shows where the base publication has been modified by amendments 1 and 2.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

This standard is divided into several parts:

Part 1: General requirements, comprising clauses of a general character.

Subsequent parts: Particular requirements dealing with particular types. The clauses of these particular requirements supplement or modify the corresponding clauses in Part 1. Where the text of subsequent parts indicates an "addition" to or a "replacement" of the relevant requirement, test specification or explanation of Part 1, these changes are made to the relevant text of Part 1, which then becomes part of the standard. Where no change is necessary, the words "This clause of Part 1 is applicable" are used.

PLUGS, SOCKET-OUTLETS AND COUPLERS FOR INDUSTRIAL PURPOSES –

Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories

1 Scope

Replacement:

This standard applies to plugs and socket-outlets, cable couplers and appliance couplers with a rated operating voltage not exceeding 1 000 V, 500 Hz and a rated current not exceeding 125 A, primarily intended for industrial use, either indoors or outdoors.

NOTE All references for accessories with a rated current of more than 125 A in part 1 are not applicable to this part 2.

This standard applies to plugs and socket-outlets, cable couplers and appliance couplers with pins and contact tubes of standardized configurations.

This standard applies to plugs and socket-outlets, cable couplers and appliance couplers, hereinafter referred to as accessories, for use when the ambient temperature is normally within the range $-25\text{ }^{\circ}\text{C}$ to $40\text{ }^{\circ}\text{C}$.

The use of these accessories on building sites and for agricultural, commercial and domestic applications is not precluded.

This standard applies to accessories with screwless type terminals or insulation piercing terminals, with a rated current up to and including 32 A for series I and 30 A for series II.

Socket-outlets or appliance inlets incorporated in or fixed to electrical equipment are within the scope of this standard. This standard also applies to accessories intended to be used in extra-low voltage installations.

NOTE This standard does not apply to accessories primarily intended for domestic and similar general purposes. In locations where special conditions prevail, for example on board ship or where explosions are liable to occur, additional requirements may be necessary.

2 Definitions

This clause of part 1 is applicable except as follows:

Additional subclause:

2.101

phase inverter

a plug or an appliance inlet with operating means to interchange the position of two phase pins without disconnecting them from the conductors

3 Normative references

This clause of part 1 is applicable except as follows:

Addition:

IEC 60364-4-41, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock*

IEC 60617-2:1996, *Graphical symbols for diagrams – Part 2: Symbol elements, qualifying symbols and other symbols having general application*

4 General

This clause of part 1 is applicable except as follows:

4.1 The last paragraph of this subclause of Part 1 is not applicable.

See Amendment 1 of IEC 60309-1.

Additional subclause:

4.101 If gauges are used, they shall be of hardened steel, all corners shall be slightly rounded-off with a maximum radius of 0,1 mm, and the surface finish for all measurement surfaces shall be $\sqrt[.N8]{}$ min., if not otherwise specified.

In this standard:

2P + $\frac{1}{2}$ covers both 2P + $\frac{1}{2}$ and 1P + N + $\frac{1}{2}$ and

3P + $\frac{1}{2}$ covers both 3P + $\frac{1}{2}$ and 2P + N + $\frac{1}{2}$

unless specifically excluded (see Table 104).

5 Standard ratings

This clause of part 1 is applicable except as follows:

5.2 *Replacement:*

Standard rated currents are given in Table 101.

Table 101

Series I	Series II
A	A
16	20
32	30
63	60
125	100

5.101 The standard IP ratings according to IEC 60529 are:

- IP44,
- IP67,
- IP66/IP67.