

Conversion adaptors for industrial use

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British Standard

ICS 29.120.30

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 15 and a back cover.

This British Standard, having been prepared under the direction of the Electrotechnical Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 March 1999

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ISBN 0 580 32131 2

Amendments issued since publication

Amd. No.	Date	Text affected

ICS 29.120.20

Descriptors: electrical equipment, industrial facilities, low voltage, connecting equipment, conversion adapters, definitions, specifications, characteristics, tests

English version

Conversion adapters for industrial use

Adaptateurs de conversion pour usages industriels Übergangsadapter für industrielle Anwendung

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard was prepared by the CENELEC BTWG 79-1, Conversion adapters for industrial use.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50250 on 1998-04-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1999-02-01

This European Standard is to be used in conjunction with EN 60309-1. The clauses in this European Standard amend or replace the clauses of EN 60309-1. Subclauses, tables and figures which are additional to these in EN 60309-1 are numbered starting with 101. Additional annexes are lettered AA, BB, etc.

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Introduction

This standard applies to conversion adapters, hereinafter referred to as adapters, for industrial use comprising a housing incorporating a plug and socket-outlets which can be used to connect one or two plugs of the domestic type to an industrial 2P +  16 A, 250 V~ 6 h, type socket-outlet.

This standard shall be used jointly with standards EN 60309-1, *Plugs, socket-outlets and couplers for industrial purposes — Part 1: General requirements*, EN 60309-2, *Plugs, socket-outlets and couplers for industrial purposes — Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories of harmonized configurations*, and with the relevant national standards for socket-outlets for household and similar use (listed in annex AA). The clauses in this standard amend or replace the clauses of the above mentioned standard EN 60309-1.

1 Scope

Replacement:

This standard applies to conversion adapters intended mainly for industrial use, comprising a housing of insulating material which incorporates an industrial 2 P + , 16 A, 6 h 250 V~ type plug part (Table 104

in EN 60309-2) and one or two socket-outlets in accordance with the relevant national standards for socket-outlets for household and similar use, with a rated current up to 16 A, intended mainly for industrial use either indoors or outdoors.

NOTE Adapters with three socket-outlets or a different type of plug part, according to EN 60309-2, are under consideration.

This standard applies to all applications where the ambient temperature does not normally exceed 40 °C.

The use of these adapters on building sites, for agricultural, commercial and domestic applications is not precluded but care should be taken in considering protecting devices in use.

Adapters are for temporary use only.

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 EN 60309-1 is applicable with the following additions.

2.101

adapter

portable accessory which allows the connection of one or more types of plug to a socket-outlet not designed to accept such plugs

2.101.1

single adapter

adapter having a single plug function and a single socket-outlet function

2.101.2

double adapter

adapter having a single plug function and two socket-outlet functions. The two socket-outlets may or may not comply with the same dimensional requirements

2.102

rated current of an adapter

the rated current of an adapter is:

- the rated current of the plug part of the adapter;
- the sum of the rated currents of the plugs that can be inserted into the adapter;

whichever is the lower

2.103

serviceable adapter

an adapter which can be disassembled, using ordinary tools (e.g. screwdrivers, etc.) for replacement or maintenance

2.104

non-serviceable adapter

an adapter which cannot be disassembled using ordinary tools (e.g. screwdrivers, etc.) without rendering it permanently useless

3 Normative references

This clause of EN 60309-1 is applicable with the following additions.

EN 60309-1:1997, *Plugs, socket-outlets and couplers for industrial purposes — Part 1: General requirements*. (IEC 60309-1:1997)

EN 60309-2:1998, *Plugs, socket-outlets and couplers for industrial purposes — Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories*. (IEC 60309-2:1997 + corrigendum 1998)

NOTE See annex AA for national standards for domestic socket-outlets.

4 General

This clause of EN 60309-1 is applicable except as follows.

4.1 General requirements

Replacement:

Adapters shall be so designed and constructed that in normal use their performance is reliable and without danger to the user or surroundings.

In general compliance is checked by carrying out all the tests specified.

4.2 General notes on tests

4.2.1 Replacement:

Tests according to this standard are type tests.

The parts of adapters are tested, unless otherwise specified, in accordance with the requirements of the relevant standard, as applicable; e.g. plug part is tested according to EN 60309-2 and socket-outlet parts are tested according to the relevant national standards.

4.2.4 Replacement:

Unless otherwise specified, one set of three specimens shall be subjected to all the tests.

4.2.5 Replace the first paragraph of the note by:

NOTE In general, it will only be necessary to repeat the tests which caused the failure, unless the specimens fail in test of clause 21, in which case tests shall be repeated from clause 20 onwards.

Addition:

4.2.101 If gauges are used, these shall be of hardened steel, and 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 ∇_{N8} min., unless otherwise specified.

5 Standard ratings

Replacement:

5.1 Rated voltage:

The recommended rated voltage is 250 V~.

5.2 Rated current:

Rated current: 10 A, 13 A, 15 A and 16 A.

6 Classification

Replacement:

6.1 Adapters are classified:

6.1.1 According to the degree of protection against harmful ingress of water in accordance with EN 60529:

- IPX0 (non-protected);
- IP $\geq$ X4 (protected).

NOTE The degree of protection of the socket-outlets for industrial use, when used in conjunction with an adapter, will revert to the protection rating of the adapter if this is less than that of the socket-outlet.

6.1.2 According to the type of construction:

- serviceable adapters;
- non-serviceable adapters.

7 Marking

Replacement:

7.1 Adapters shall be marked with:

- rated current in amperes;
- rated operating voltage or range in volts;

- symbol for nature of supply;
- either the name or trade mark of the manufacturer or of the responsible vendor;
- type reference, which may be a catalogue number;
- symbol for degree of protection (IP code);
- symbol indicating the position of the earthing contact (plug part side);
- wording “for temporary use only”.

For adapters with degree of protection IPX0 is required a leaflet indicating to be aware in use of it because it reduces the degree of protection of the industrial socket-outlet in which will be inserted and that it shall not be used in environment with an explosion hazards.

NOTE 1 This wording shall be written in the official language of the country of intended use.

Compliance is checked by inspection.

NOTE 2 Marking 10/16 shall be accepted as indication for socket-outlet parts in accordance with standard CEE 7.

The symbol indicating the position of the earthing contact shall be placed before or above the figure indicating the rated operating voltage, and separated from it by a line.

These markings shall be placed after that for rated current, separated from it by a dash, if an oblique line separates the symbol indicating the position of the earthing contact from the figure for the rated operating voltage.

If a symbol for nature of supply is used, it shall be placed next to or below the marking for rated operating voltage.

The marking for rated current, position of the earthing contact, rated operating voltage(s) and the nature of the supply may accordingly be as follows:

16 A – 6 h/250 V~, or 16 – 6 h/250~, or 16 – $\frac{6h}{250\sim}$

7.2 When symbols are used, they shall be as follows:

- A amperes
V volts
~ alternating current
 earth

IPXX degree of protection according to EN 60529

For marking of rated current(s) and rated operating voltage(s) or range(s), figures may be used alone.

Compliance is checked by inspection.

7.3 The marking specified in 7.1 shall be readily visible when the adapter is equipped and ready for use, with the exception of the wording “for temporary use only”, which shall also be visible when the adapter is in use.

NOTE 1 The term “ready for use” does not imply that the adapter is in engagement with its complementary accessory.

NOTE 2 The marking for rated current, nature of supply, rated operating voltage and the name, trade mark of the manufacturer or the responsible vendor, may be repeated on the lid, if any.

Compliance is checked by inspection.