

Plugs, socket-outlets and couplers for industrial purposes

**Part 4: Switched socket-outlets and
connectors with or without interlock**
(IEC 60309-4:2006, modified)

ICS 29.120.30

National foreword

This British Standard is the UK implementation of EN 60309-4:2007+A1:2012. It was derived from IEC 60309-4:2006, incorporating amendment 1:2012. It supersedes BS EN 60309-4:2007, which will be withdrawn on 19 April 2015.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags (e.g. [C] [C]).

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by [A1] [A1].

The UK participation in its preparation was entrusted by Technical Committee PEL/23, Electrical accessories, to Subcommittee PEL/23/4, Protected type plugs and sockets.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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Date	Comments
31 October 2012	Implementation of IEC amendment 1:2012 with CENELEC endorsement A1:2012

**Plugs, socket-outlets and couplers for industrial purposes -
Part 4: Switched socket-outlets and connectors with or without interlock
(IEC 60309-4:2006, modified)**

Prises de courant
pour usages industriels -
Partie 4: Prises de courant
et prises mobiles avec interrupteur,
avec ou sans dispositif de verrouillage
(CEI 60309-4:2006, modifiée)

Stecker, Steckdosen und Kupplungen
für industrielle Anwendungen -
Teil 4: Abschaltbare Steckdosen
und Kupplungen
mit oder ohne Verriegelung
(IEC 60309-4:2006, modifiziert)

This European Standard was approved by CENELEC on 2007-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 23H/189/FDIS, future edition 1 of IEC 60309-4, prepared by SC 23H, Industrial plugs and socket-outlets, of IEC TC 23, Electrical accessories, was submitted to the IEC-CENELEC parallel vote.

A draft amendment, containing some common modifications to the future IEC 60309-4, was prepared by CENELEC BTWG 112-1, Improvement of EN 60309-1 and EN 60309-2, and was submitted to formal vote.

The combined texts were approved by CENELEC as EN 60309-4 on 2007-03-01.

This standard is to be read in conjunction with EN 60309-1:1999 + A1:2007 and EN 60309-2:1999 + A1:2007.

Part 1 comprises clauses of a general character and the subsequent parts of the series deal with particular types.

The clauses of the subsequent parts 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.

Clauses, subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101.

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) | 2008-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2010-03-01 |

Annexes ZA and ZB have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60309-4:2006 was approved by CENELEC as a European Standard with agreed common modifications.

Foreword to amendment A1

The text of document 23H/276/FDIS, future edition 1 of IEC 60309-4:2006/A1, prepared by SC 23H, "Industrial plugs and socket-outlets", of IEC TC 23, "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60309-4:2007/A1:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-01-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-19

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60309-4:2006/A1:2012 was approved by CENELEC as a European Standard without any modification.

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PLUGS, SOCKET-OUTLETS AND COUPLERS FOR INDUSTRIAL PURPOSES –

Part 4: Switched socket-outlets and connectors with or without interlock

1 Scope

This clause of Part 1 or Part 2 is applicable except as follows:

Replacement of the first paragraph by the following text:

This part of IEC 60309 applies to self-contained products that combine within a single enclosure, a socket-outlet or connector according to IEC 60309-1 or IEC 60309-2 and a switching device, with a rated operating voltage not exceeding A1 1 000 V A1 d.c. or a.c. and 500 Hz, and a rated current not exceeding A1 800 A A1 , primarily intended for industrial use, either indoors or outdoors.

A1 These accessories are intended to be installed by instructed persons (Amendment 1:2001 of IEC 60050-195:1998, 195-04-02) or skilled persons (Amendment 1:2001 of IEC 60050-195:1998, 195-04-01) only. A1

These products may incorporate an interlock and/or protective devices.

C EN 60309-1 and EN 60309-2 contain common modifications regarding the use in Europe of AWG and MCM cables, voltages and Series II products.

Those common modifications apply also within the scope of the present European Standard as indicated in the relevant Part 1 or Part 2.

See Annex ZB for a list of additional references to AWG/MCM cables, non-European voltages and Series II products which are excluded from this standard. C

2 Definitions

This clause of Part 1 or Part 2 is applicable, except as follows:

Deletion of definitions 2.6 to 2.9.

Addition:

2.101

switched socket-outlet or connector

accessory containing in a single enclosure a switching device and a socket-outlet or connector, intended to be used in combination. It can be either interlocked or non-interlocked

2.102

interlocked socket-outlet or connector

socket-outlet or connector associated with an interlock

2.103

switching device

device designated to make or break the current in one or more electric circuits

[IEV 441-14-01]

2.103.1

mechanical switching device

switching device designed to close and open one or more electric circuits by means of separable contacts

[IEV 441-14-02]

2.103.1.1

switch (mechanical)

mechanical switching device capable of making, carrying and breaking currents under normal circuit conditions, which may include specified operating overload conditions and also carrying, for a specified time, currents under specified abnormal circuit conditions such as those of short-circuit

[IEV 441-14-10]

NOTE A switch may be capable of making, but not breaking short-circuit currents.

2.103.1.1.1

switch-disconnector

switch, which in the open position complies with the requirements specified for the isolating function

[IEV 441-14-12, modified]

NOTE This definition differs from IEV 441-14-05 by referring to isolating function instead of the requirements specified for a disconnector.

2.103.1.2

contactor

mechanical switching device having only one position of rest, operated otherwise than by hand, capable of making, carrying and breaking currents under normal circuit conditions, including operating overload conditions

[IEV 441-14-33]

2.103.2

associated switching device

separate switching device which can be replaced independently

2.103.3

integral switching device

switching device constructed as a part of a socket-outlet or connector covered by this standard, where neither the switching device nor the socket-outlet or connector can be replaced independently

2.104

isolation (isolating function)

function intended to cut off the supply from all or a discrete section of the installation, by separating the installation or section from every source of electrical energy for reasons of safety (see IEC 60947-1 and IEC 61140¹)

2.105

utilization category

⟨switching device⟩ combination of specified requirements related to the conditions in which the switching device fulfils its purpose, selected to represent a characteristic group of practical applications

[IEV 441-17-19, modified]

NOTE The specified requirements may concern e.g. the values of making capacities (if applicable), breaking capacities and other characteristics, the associated circuits under the relevant conditions of use and behaviour.

¹ IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

2.106

interlock or interlocking device

device, either electrical or electronic or mechanical or a combination of these, which makes the operation of a piece of product dependent upon the condition, position or operation of one or more other pieces of product

2.107

control circuit device

electrical device intended for the controlling, signaling, interlocking, etc. of switchgear and controlgear (see IEC 60947-1, 2.1.1)

2.108

pilot contact

auxiliary electric contact for use in a control or monitoring or interlock function

NOTE Pilot contact is not considered to be a pole.

2.109

latching device

part of the interlock mechanism provided to hold a plug or appliance-inlet in the socket-outlet or connector

3 Normative references

This clause of Part 1 or Part 2 is applicable, except as follows:

Addition:

IEC 60073, *Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators*

IEC 60417-DB:2002², *Graphical symbols for use on equipment*

IEC 60617-DB:2001³, *Graphical Symbols for diagrams*

IEC 60947-1:2004, *Low-voltage switchgear and controlgear – Part 1: General rules*

IEC 60947-4-1, *Low-voltage switchgear and controlgear – Part 4-1: Contactors and motor-starters – Electromechanical contactors and motor-starters*

IEC 60947-5-1:2003, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*

IEC 61032, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61058-1, *Switches for appliances – Part 1: General requirements*

4 General

This clause of Part 1 or Part 2 is applicable except as follows:

² "DB" refers to the IEC on-line database.

³ "DB" refers to the IEC on-line database.