

Low-voltage switchgear and controlgear assemblies —

Part 4: Particular requirements for assemblies for construction sites (ACS)

The European Standard EN 60439-4:2004 has the status of a
British Standard

ICS 29.130.20

National foreword

This British Standard is the official English language version of EN 60439-4:2004. It is identical with IEC 60439-4:2004. It supersedes BS EN 60439-4:1991 which will be withdrawn on 2007-09-01.

The UK participation in its preparation was entrusted to Technical Committee PEL/17/3, Low-voltage switchgear and controlgear, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

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Summary of pages

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English version

Low-voltage switchgear and controlgear assemblies
Part 4: Particular requirements for assemblies for construction sites
(ACS)
(IEC 60439-4:2004)

Ensembles d'appareillage à basse tension
Partie 4: Règles particulières
pour ensembles de chantier (EC)
(CEI 60439-4:2004)

Niederspannung-
Schaltgerätekombinationen
Teil 4: Besondere Anforderungen
an Baustromverteiler (BV)
(IEC 60439-4:2004)

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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.

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CENELEC

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Foreword

The text of document 17D/301/FDIS, future edition 2 of IEC 60439-4, prepared by SC 17D, Low-voltage switchgear and controlgear assemblies, of IEC TC 17, Switchgear and controlgear, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60439-4 on 2004-09-01.

This European Standard supersedes EN 60439-4:1991 + A1:1995 + A2:1999 + A11:2004 + corrigendum March 2004.

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) 2005-06-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-09-01

The main changes with respect to EN 60439-4:1991 and its amendments are:

- introduction of the definition for "rated current of ACS";
- replacement of classification based on the rated current of ACS by classification based on the function as assigned by the manufacturer;
- amended requirements for the protection of socket-outlets with reference to the more comprehensive requirements of HD 384.7.704 S1:2000;
- introduction of common requirements for all types of ACS.

Assemblies for construction sites (ACS) shall comply with all requirements of EN 60439-1:1999 if not otherwise indicated hereinafter and shall also comply with the particular requirements contained in this publication.

The clauses of subclauses of this standard supplements, modify or replace the respective clauses and subclauses in EN 60439-1:1999.

In view of the fact that this publication should be read in conjunction with EN 60439-1:1999, the numbering of its clauses and subclauses correspond to the latter.

Where there is no corresponding clause or subclause in this standard, the clause or subclause of the main document applies without modification.

Subclauses and figures which are additional to those in part 1 are numbered starting from 101.

Annexes ZA and ZB have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60439-4:2004 was approved by CENELEC as a European Standard without any modification.

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –

Part 4: Particular requirements for assemblies for construction sites (ACS)

1 General

1.1 Scope and object

Replace the last three paragraphs by the following:

This standard applies to type-tested ASSEMBLIES (TTA) intended for use on construction sites, i.e. temporary places of work to which the public do not generally have access and where building construction, installation, repairs, alteration or demolition of property (buildings) or civil engineering (public works) or excavation or any other similar operations are carried out. These ASSEMBLIES may be transportable (semi-fixed) or mobile.

This standard does not apply to ASSEMBLIES for use in the administrative centres of construction sites (offices, cloakrooms, ASSEMBLY rooms, canteens, restaurants, dormitories, toilets, etc.).

The nominal primary voltage and the nominal secondary voltage of transformers incorporated in ACS shall be within the limits specified in IEC 60439-1.

Requirements for electrical protection provided by equipment manufactured according to this International Standard shall comply with the requirements given in IEC 60364-7-704.

NOTE This standard may be used as a guide to partially type-tested ASSEMBLIES (PTTA) constructed according to agreement between manufacturer and user taking into account the nature of supply and/or distribution network and relevant installation requirements.

1.2 Normative references

This subclause of Part 1 applies with the following additions:

IEC 60068-2-27:1987, *Environmental testing – Part 2: Tests - Test Ea and guidance: Shock*

IEC 60068-2-42:2003, *Environmental testing – Part 2-42: Tests - Test Kc: Sulphur dioxide test for contacts and connections*

IEC 60309-1, *Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements*

IEC 60309-2, *Plugs, socket-outlets and couplers for industrial purposes – Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories*

IEC 60364-4-41:2001, *Electrical installations of buildings – Part 4-41: Protection for safety - Protection against electric shock*

IEC 60364-5-53:2001, *Electrical installations of buildings – Part 5-53: Selection and erection of electrical equipment – Isolation, switching and control*

IEC 60364-7-704:1989, *Electrical installations of buildings – Part 7: Requirements for special installations or locations - Section 704: Construction and demolition site installations*

IEC 60439-1:1999, *Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies*

IEC 61140:2001, *Protection against electric shock – Common aspects for installation and equipment*

IEC 61201:1992, *Extra-low voltage (ELV) – Limit values*

IEC 61558 (all parts), *Safety of power transformers, power supply units and similar devices*

IEC 61558-2-23, *Safety of power transformers, power supply units and similar devices – Part 2-23: Particular requirements for transformers for construction sites*

2 Definitions

The definitions of Part 1 apply with the following additions and modifications:

2.1.1.2

partially type-tested low-voltage switchgear and controlgear assembly (PTTA)

Not applicable

NOTE See also the note under Clause 1 of this standard.

2.1.101

low-voltage switchgear and controlgear assembly for construction sites (ACS)

combination of one or several transforming or switching devices with associated control, measuring, signalling, protective and regulating equipment complete with all their internal electrical and mechanical connections and structural parts (see 2.4), designed and built for use on all construction sites, indoors and outdoors

2.1.102

metering unit

functional unit equipped with apparatus for metering electrical energy

2.1.103

transformer unit

functional unit consisting mainly of one or several transformers

2.3.1

open-type ASSEMBLY

Not applicable

2.3.2

dead-front ASSEMBLY

Not applicable

2.3.3

enclosed ACS

ACS which is enclosed on all sides

2.3.3.4

box-type ACS

enclosed ACS intended

- either to be mounted on a vertical surface;
- or to stand on a horizontal surface supported by feet or legs (articulated or not) or by a mounting not forming part of the ACS (see 2.4.2).

2.3.4

busbar trunking system

Not applicable

2.5.1

ASSEMBLY for indoor installation

Not applicable (see 2.1.101)

2.5.2

ASSEMBLY for outdoor installation

Not applicable (see 2.1.101)

2.5.3

stationary ASSEMBLY

Not applicable

2.5.4

movable ASSEMBLY

Not applicable

2.5.101

transportable (or semi-fixed) ACS

ACS intended for use in a place where it is not permanently fixed; its location may vary during work on the same site. When the equipment is to be moved to another place, it is first disconnected from the supply

2.5.102

mobile ACS

ACS capable of being moved as work advances on the site, without being disconnected from the supply

2.7

gangways within ASSEMBLIES

Not applicable

2.101

function of the ACS

2.101.1

incoming supply function

suitability for connection of the construction site assembly either to electricity public supply network or to the transformer substation or to on-site generator

2.101.2

metering function

suitability for the metering of electrical energy consumed on the site