BS EN 61439-4:2013

BSI Standards Publication

Low-voltage switchgear and controlgear assemblies

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

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National foreword

This British Standard is the UK implementation of EN 61439-4:2013. It is identical to IEC 61439-4:2012. It supersedes BS EN 60439-4:2004 which is withdrawn.

This British Standard applies to low-voltage switchgear and controlgear assemblies. In addition to this standard, users could also consult British Standards BS 7375 and BS 7671 for details of UK national practice in the application and installation of this equipment. Further, the UK committee recommends that the assembly be marked to show whether overcurrent detection has, or has not, been supplied as part of the incomer arrangement.

The UK participation in its preparation was entrusted by Technical Committee PEL/17, Switchgear, controlgear, and HV-LV co-ordination, to Subcommittee PEL/17/3, Low voltage switchgear and controlgear assemblies.

A list of organizations represented on this committee 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.

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

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61439-4

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English version

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

(IEC 61439-4:2012)

Ensembles d'appareillage à basse tension - Partie 4: Exigences particulières pour ensembles de chantiers (EC) (CEI 61439-4:2012)

Niederspannungs-Schaltgerätekombinationen - Teil 4: Besondere Anforderungen für Baustromverteiler (BV) (IEC 61439-4:2012)

This European Standard was approved by CENELEC on 2012-12-20. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of document 17D/460/FDIS, future edition 1 of IEC 61439-4, prepared by SC 17D "Low-voltage switchgear and controlgear assemblies" of IEC/TC17 "Switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61439-4:2013.

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)	2013-09-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-12-20

This document supersedes EN 60439-4:2004.

EN 61439-4:2013 includes the following significant technical changes with respect to EN 60439-4:2004:

- modification of the title as “Part 4: Particular requirements for assemblies for construction sites (ACS);
- alignment on EN 61439-1 regarding the structure and technical content, as applicable;
- to allow comparison with tested ACS.

This standard is to be read in conjunction with EN 61439-1:2011.

The provisions of the general rules dealt with in EN 61439-1 (hereinafter referred to as Part 1) are only applicable to this standard insofar as they are specifically cited. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

Subclauses that are numbered with a 101 (102, 103, etc.) suffix are additional to the same subclause in Part 1.

Tables and figures in this Part 4 that are new are numbered starting with 101.

New annexes in this Part 4 are lettered AA, BB, etc.

In this standard, terms written in small capitals are defined in Clause 3.

The reader’s attention is drawn to the fact that Annex AA lists all of the “in-some-country” clauses on differing practices of a less permanent nature relating to the subject of this standard.

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).

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For the relationship with EU Directive see informative Annex ZZ, which is an integral part of this document.

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Endorsement notice

The text of the International Standard IEC 61439-4:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60309-1	NOTE	Harmonised as EN 60309-1.
IEC 60309-2	NOTE	Harmonised as EN 60309-2.
IEC 60364 Series	NOTE	Harmonised as HD 60364 Series (partly modified).

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

***Addition** to Annex ZA of EN 61439-1:2011:*

Publication	Year	Title	EN/HD	Year
IEC 60068-2-27	2008	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	2009
IEC 60068-2-42	2003	Environmental testing - Part 2-42: Tests - Test Kc: Sulphur dioxide test for contacts and connections	EN 60068-2-42	2003
IEC 60364-7-704 (mod)	2005	Low-voltage electrical installations - Part 7-704: Requirements for special installations or locations - Construction and demolition site installations	HD 60364-7-704 + corr. April	2007 2008
IEC 61140	2001	Protection against electric shock - Common aspects for installation and equipment	EN 61140	2002
IEC 61439-1	2011	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	EN 61439-1	2011
IEC 61558-2-23	-	Safety of transformers, reactors, power supply units and combinations thereof - Part 2-23: Particular requirements and tests for transformers and power supply units for construction sites	EN 61558-2-23	-

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Annex ZB
(normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the European Standard / Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause	Special national condition
Annex AA 6.1	**Norway** In Norway, assemblies shall be additional marked with the minimum ambient temperature applicable for the ACS.
Annex AA 7.1.1.2	**Norway** In Norway, assemblies suitable for normal operation at a lower ambient temperature than -25 ºC shall also comply with the requirements of this publication.
Annex AA 8.2.2	**Spain** In Spain wiring rules (RD 842/2002) require a minimum degree of protection of IP 45 for enclosures, switchgear and controlgear, socket-outlets and other installation elements intended for outdoor construction sites.
Annex AA 10.2.6.1	**Norway** In Norway, the test shall be carried out at an ambient temperature (20 ± 5) ºC immediately after the assembly has been kept at a temperature corresponding to the minimum ambient temperature specified for the ACS, for a period of not less than 12 h.
Annex AA 10.2.6.1	**Sweden** In Sweden National codes and regulations require a minimum operating temperature of -25 °C.

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Annex ZZ
(informative)

Coverage of Essential Requirements of EU Directive 2004/108/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant essential requirements as given in Article 1 of Annex I of the EU Directive 2004/108/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –

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

1 Scope

NOTE Throughout this standard, the abbreviation ACS (ASSEMBLY for construction site, see 3.1.101) is used for a low-voltage switchgear and controlgear assembly intended for use on construction and similar sites.

This part of 61439 defines the specific requirements of ACS as follows:

– ASSEMBLIES for which the rated voltage does not exceed 1 000 V in case of a.c. or 1 500 V in case of d.c.;

– ASSEMBLIES where the nominal primary voltage and the nominal secondary voltage of transformers incorporated in ACS are within the limits specified above;

– ASSEMBLIES intended for use on construction sites, both indoors and outdoors, 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;

– transportable (semi-fixed) or mobile ASSEMBLIES with enclosure.

The manufacture and/or assembly may be carried out other than by the original manufacturer.

This standard does not apply to individual devices and self-contained components, such as motor starters, fuse switches, electronic equipment, etc. which will comply with the relevant product standards.

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.).

Requirements for electrical protection provided by equipment manufactured according to this International Standard are given in IEC 60364-7-704.

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

IEC 60068-2-27:2008, *Environmental testing – Part 2-27: 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 60364-7-704:2005, *Low-voltage electrical installations – Part 7-704: Requirements for special installations or locations – Construction and demolition site installations*

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

IEC 61439-1:2011, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

IEC 61558-2-23, *Safety of transformers, reactors, power supply units and combinations thereof – Part 2-23: Particular requirements and tests for transformers and power supply units for construction sites*

3 Terms and definitions

This clause of Part 1 is applicable except as follows:

Additional terms:

3.1 General terms

3.1.101
low-voltage switchgear and controlgear assembly for construction sites
ACS
combination of one or several transforming or low voltage switching devices with associated control, measuring, signalling, protective and regulating equipment complete with all their internal electrical and mechanical connections and structural parts, designed and built for use on all construction sites, indoors and outdoors

3.2 Constructional units of ASSEMBLIES

3.2.101
metering unit
functional unit equipped with apparatus for metering electrical energy

3.2.102
transformer unit
functional unit consisting mainly of one or several transformers

Modifications:

3.3 External design of ASSEMBLIES

3.3.1
open-type ASSEMBLY

This term of Part 1 does not apply.

3.3.2
dead-front ASSEMBLY

This term of Part 1 does not apply.

Replacements:

3.3.3
enclosed ACS
ACS which is enclosed on all sides with the possible exception of its mounting surface in such a manner as to provide a defined degree of protection

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