

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Low-voltage switchgear and controlgear assemblies –
Part 2: Power switchgear and controlgear assemblies**

**Ensembles d'appareillage à basse tension –
Partie 2: Ensembles d'appareillage de puissance**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**LOW-VOLTAGE SWITCHGEAR AND
CONTROLGEAR ASSEMBLIES –****Part 2: Power switchgear and controlgear assemblies**

FOREWORD

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International Standard IEC 61439-2 has been prepared by subcommittee 17D: Low-voltage switchgear and controlgear assemblies, of IEC technical committee 17: Switchgear and controlgear.

This second edition cancels and replaces the first edition published in 2009. It constitutes a technical revision.

This second edition includes the following significant technical changes with respect to the last edition of IEC 61439-2:

- clarification of the scope;
- revision of requirements for withdrawable and removable parts;
- revision of mechanical impact test (10.2.6);
- extension of Table 101;

- review of Table BB.1 to reflect modified requirements and verifications;
- general editorial review.

The text of this standard is based on the following documents:

FDIS	Report on voting
17D/440/FDIS	17D/445/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This standard is to be read in conjunction with IEC 61439-1. The provisions of the general rules dealt with in IEC 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 2 that are new are numbered starting with 101.

New annexes in this Part 2 are lettered AA, BB, etc.

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

NOTE Throughout the IEC 61439 series of standards, the term ASSEMBLY (see 3.1.1 of Part 1) is used for a low-voltage switchgear and controlgear assembly.

A list of all parts of the IEC 61439 series, under the general title *Low-voltage switchgear and controlgear assemblies* can be found on the IEC website.

The committee has decided that the contents of this publication 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.

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –

Part 2: Power switchgear and controlgear assemblies

1 Scope

NOTE 1 Throughout this part, the abbreviation PSC-ASSEMBLY (see 3.1.101) is used for a power switchgear and controlgear ASSEMBLY.

This part of IEC 61439 defines the specific requirements of power switchgear and controlgear assemblies (PSC-ASSEMBLIES) 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.;
- stationary or movable ASSEMBLIES with or without enclosure;
- ASSEMBLIES intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment;
- ASSEMBLIES designed for use under special service conditions, for example in ships and in rail vehicles provided that the other relevant specific requirements are complied with;

NOTE 2 Supplementary requirements for ASSEMBLIES in ships are covered by IEC 60092-302.

- ASSEMBLIES designed for electrical equipment of machines. Supplementary requirements for ASSEMBLIES forming part of a machine are covered by the IEC 60204 series.

This standard applies to all ASSEMBLIES whether they are designed, manufactured and verified on a one-off basis or fully standardised and manufactured in quantity.

The manufacture and/or assembly may be carried out other than by the original manufacturer (see 3.10.1).

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 the specific types of ASSEMBLIES covered by other parts of IEC 61439. For ASSEMBLIES not covered by other parts this part applies.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60947-3:2008, *Low-voltage switchgear and controlgear – Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units*

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

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

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1 General terms

Additional definitions:

3.1.101

power switchgear and controlgear assembly

PSC-ASSEMBLY

low-voltage switchgear and controlgear assembly used to distribute and control energy for all types of loads, intended for industrial, commercial and similar applications where operation by ordinary persons is not intended

NOTE It is not excluded for a PSC-ASSEMBLY to be located in an area accessible to ordinary persons.

3.1.102

test situation

condition of a PSC-ASSEMBLY or part of it in which the relevant main circuits are open on its supply side but not necessarily isolated whilst the associated auxiliary circuits are connected, allowing operation tests of the incorporated devices

3.1.103

form of internal separation

classification of physical separation within a PSC-ASSEMBLY

3.2 Constructional units of ASSEMBLIES

Replacement of the title:

3.2 Constructional units of PSC-ASSEMBLIES

Additional definitions:

3.2.101

withdrawable part

removable part intended to be moved from the connected position to the isolated position and to a test position, if any, whilst remaining mechanically attached to the PSC-ASSEMBLY

3.2.102

test position

position of a withdrawable part in which the relevant main circuits are open on its supply side but not necessarily isolated and in which the auxiliary circuits are connected allowing operation tests of the incorporated devices, the withdrawable part remaining mechanically attached to the PSC-ASSEMBLY

NOTE The opening may also be achieved without any mechanical movement of the withdrawable part by operation of a suitable device.

¹ To be published.