

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Low-voltage switchgear and controlgear assemblies –  
Part 3: Distribution boards intended to be operated by ordinary persons (DBO)**

**Ensembles d'appareillage à basse tension –  
Partie 3: Tableaux de répartition destinés à être utilisés par des personnes  
ordinaires (DBO)**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –****Part 3: Distribution boards intended to be operated  
by ordinary persons (DBO)**

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International Standard IEC 61439-3 has been prepared by subcommittee 17D: Low-voltage switchgear and controlgear assemblies, of IEC technical committee 17: Switchgear and controlgear.

This first edition cancels and replaces the first edition of IEC 60439-3 (1990), Amendment 1 (1993) and Amendment 2 (2001). It constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 60439-3 (including the amendments):

- alignment with IEC 61439-1:2011.

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

FDIS	Report on voting
17D/448/FDIS	17D/450/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 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 applicable to this standard where 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 3 that are new are numbered starting with 101.

New annexes in this Part 3 are lettered AA, BB, etc.

The “in some countries” notes regarding differing national practices are contained in the following subclauses:

3.1.102

6.1

8.2.1

8.5.3

8.6.1

8.8

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.

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

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 3: Distribution boards intended to be operated by ordinary persons (DBO)

#### 1 Scope

This part of IEC 61439 defines the specific requirements for distribution boards intended to be operated by ordinary persons (DBO).

DBOs have the following criteria:

- intended to be operated by ordinary persons (e.g. switching operations and replacing fuse-links), e.g. in domestic (household) applications;
- outgoing circuits contain protective devices, intended to be operated by ordinary persons, complying e.g. with IEC 60898-1, IEC 61008, IEC 61009, IEC 62423 and IEC 60269-3;
- rated voltage to earth does not exceed 300 V a.c.;
- rated current ( $I_{nc}$ ) of the outgoing circuits does not exceed 125 A and the rated current ( $I_{nA}$ ) of the DBO does not exceed 250 A;
- intended for the distribution of electrical energy;
- enclosed, stationary;
- for indoor or outdoor use.

DBOs may also include control and/or signaling devices associated with the distribution of electrical energy.

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

DBOs may be assembled outside the factory of the original manufacturer.

This standard does not apply to individual devices and self-contained components, such as circuit breakers, 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.

#### 2 Normative references

This clause of Part 1 applies except as follows.

*Addition:*

IEC 60068-2-75, *Environmental testing – Part 2: Tests – Test Eh: Hammer tests*

IEC 60269-3, *Low-voltage fuses – Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) – Examples of standardized systems of fuses A to F*

IEC 60898-1:2010, *Electrical accessories – Circuit-breakers for overcurrent protection for household and similar installations – Part 1: Circuit-breakers for a.c. operation*

IEC 61008 (all parts), *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)*

IEC 61009 (all parts), *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)*

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

IEC 62423:2009, *Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses*

### 3 Terms and definitions

This clause of Part 1 applies except as follows.

#### 3.1 General terms

*Additional terms:*

##### 3.1.101

**distribution board intended to be operated by ordinary persons**

**DBO**

ASSEMBLY used to distribute electrical energy in domestic (household) applications and other places where operation is intended by ordinary persons

Note 1 to entry Switching operations and replacing fuse-links are examples of operations intended to be carried out by normal persons.

##### 3.1.102

**type A DBO**

DBO designed to accept single pole devices

Note 1 to entry In the UK, a type A DBO used principally for domestic (household) installations and having a maximum incoming unit rating of 100 A and a maximum outgoing circuit rating of 63 A, is known as a "consumer unit" or "customer distribution board".

##### 3.1.103

**type B DBO**

DBO designed to accept multi-pole and/or single pole devices

### 4 Symbols and abbreviations

This clause of Part 1 applies.

### 5 Interface characteristics

This clause of Part 1 applies except as follows.

#### 5.1 General

*Addition:*