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EXTENDED VERSION

INTERNATIONAL STANDARD



This extended version of IEC 60669-2-4:2024 includes the content of the references made to IEC 60669-1:2017

Switches for household and similar fixed electrical installations – Part 2-4: Particular requirements – Isolating switches

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-4: Particular requirements – Isolating switches

FOREWORD

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This extended version (EXV) of the official IEC Standard provides the user with the comprehensive content of the Standard.

IEC 60669-2-4:2024 EXV includes the content of IEC 60669-2-4:2024, and the references made to IEC 60669-1:2017.

The specific content of IEC 60669-2-4:2024 is displayed on a **blue background.**

IEC 60669-2-4 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories. It is an International Standard.

This second edition cancels and replaces the first edition published in 2004. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) revision of the present edition with reference to the published IEC 60669-1:2017 Edition 4 with its amendments and references to clauses and tables;
- b) introducing the values for isolating switches with ratings from 6 A to 13 A;
- c) introducing a circuit motor load with a rated current not exceeding 10 A and a power factor not less than 0,6 in the scope;
- d) modification of Table 1 and Table 5.

The text of this International Standard is based on the following documents:

Draft	Report on voting
23B/1460/CDV	23B/1480A/RVC

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

The language used for the development of this International Standard is English

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This part of IEC 60669 is to be used in conjunction with IEC 60669-1:2017. It lists the changes necessary to convert that standard into a specific standard for isolating switches.

When a particular subclause of IEC 60669-1:2017 is not mentioned in this document, that subclause applies as far as reasonable.

In this document,

- the following print types are used:
 - requirements proper: in roman type;
 - *test specifications: in italic type;*
 - notes: in smaller roman type;
- subclauses, figures, tables or notes which are additional to those in IEC 60669-1:2017 are numbered starting from 101. Annexes additional to those in IEC 60669-1:2017 are lettered AA, BB, etc.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
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SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-4: Particular requirements – Isolating switches

1 Scope

This part of IEC 60669 applies to manually operated general purpose isolating switches with a rated voltage not exceeding 440 V and a rated current not exceeding 125 A, intended for household and similar fixed electrical installations, either indoors or outdoors.

For switches provided with screwless terminals, the rated current is limited to 16 A.

NOTE 1 The rated current is limited to 16 A for switches provided with insulation piercing terminals (IPT's) according to Annex D.

Switches covered by this document are, where applicable, intended for the control in normal use of all of the following loads:

- a circuit for a tungsten filament lamp load;
- a circuit for an externally ballasted lamp load (for example LED, CFL, fluorescent lamp load);
- a circuit for a self ballasted lamp load (for example LEDi or CFLi);
- a circuit for a substantially resistive load with a power factor not less than 0,95;
- a monophasic circuit for motor load with a rated current up to 10 A and a power factor not less than 0,6.

NOTE 2 In the following country the suitability of a switch intended to control the inrush current of a motor shall be tested: AU.

This document also applies to boxes for switches, with the exception of mounting boxes for flush-type switches.

NOTE 3 General requirements for boxes for flush-type switches are given in IEC 60670-1.

It also applies to switches such as

- switches incorporating pilot lights;
- electromagnetic remote control switches (particular requirements are given in IEC 60669-2-2);
- switches incorporating a time-delay device (particular requirements are given in IEC 60669-2-3);
- combinations of switches and other functions (with the exception of switches combined with fuses);
- electronic switches (particular requirements are given in IEC 60669-2-1);
- switches having facilities for the outlet and retention of flexible cables (see Annex A);
- isolating switches (particular requirements are given in IEC 60669-2-4);
- switches and related accessories for use in home and building electronic systems (particular requirements are given in IEC 60669-2-5);
- firemen's switches (particular requirements are given in IEC 60669-2-6).

Switches complying with this document are suitable for use at ambient temperatures not normally exceeding +40 °C, but their average over a period of 24 h does not exceed +35 °C, with a lower limit of the ambient air temperature of –5 °C.

NOTE 4 For lower temperatures see Annex E.

Switches complying with this document are suitable only for incorporation in equipment in such a way and in such a place that it is unlikely that the surrounding ambient temperature exceeds +35 °C.

In locations where special conditions prevail, such as in ships, vehicles and the like and in hazardous locations, for example where explosions are liable to occur, special construction and/or additional requirements may be required.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60038:2009, *IEC standard voltages*

IEC 60068-2-75:2014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60112:2009, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60212:2010, *Standard conditions for use prior to and during the testing of solid electrical insulation materials*

IEC 60227-5:2011, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 5: Flexible cables (cords)*

IEC 60228:2004, *Conductors of insulated cables*

IEC 60245-4:2011, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 4: Cords and flexible cables*

IEC 60417, *Graphical symbols for use on equipment* (available from: <http://www.graphical-symbols.info/equipment>)

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*
IEC 60529:1989/AMD1:1999
IEC 60529:1989/AMD2:2013

IEC 60669-1:2017, *Switches for household and similar fixed electrical installations – Part 1: General requirements*

IEC 60669-2-1:2002, *Switches for household and similar fixed electrical installations – Part 2-1: Particular requirements – Electronic switches*

IEC 60669-2-1:2002/AMD1:2008

IEC 60669-2-1:2002/AMD2:2015

IEC 60695-2-10:2000, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

IEC 60695-2-11:2014, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products (GWEPT)*

IEC 60998-1:2002, *Connecting devices for low-voltage circuits for household and similar purposes – Part 1: General requirements*

IEC 60998-2-1, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units*

IEC 60998-2-2, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units*

IEC 60998-2-3, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-3: Particular requirements for connecting devices as separate entities with insulation-piercing clamping units*

IEC 60998-2-4, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-4: Particular requirements for twist-on connecting devices*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61180:2016, *High-voltage test techniques for low-voltage equipment – Definitions, test and procedure requirements, test equipment*

ISO 1456:2009, *Metallic and other inorganic coatings – Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium*

ISO 2081:2008, *Metallic and other inorganic coatings – Electroplated coatings of zinc with supplementary treatments on iron or steel*

ISO 2093:1986, *Electroplated coatings of tin – Specification and test methods*

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Switches for household and similar fixed electrical installations –
Part 2-4: Particular requirements – Isolating switches**

**Interrupteurs pour installations électriques fixes domestiques et analogues –
Partie 2-4: Exigences particulières – Interrupteurs-sectionneurs**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-4: Particular requirements – Isolating switches

FOREWORD

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IEC 60669-2-4 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories. It is an International Standard.

This second edition cancels and replaces the first edition published in 2004. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) revision of the present edition with reference to the published IEC 60669-1:2017 Edition 4 with its amendments and references to clauses and tables;
- b) introducing the values for isolating switches with ratings from 6 A to 13 A;

- c) introducing a circuit motor load with a rated current not exceeding 10 A and a power factor not less than 0,6 in the scope;
- d) modification of Table 1 and Table 5.

The text of this International Standard is based on the following documents:

Draft	Report on voting
23B/1460/CDV	23B/1480A/RVC

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

The language used for the development of this International Standard is English

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This part of IEC 60669 is to be used in conjunction with IEC 60669-1:2017. It lists the changes necessary to convert that standard into a specific standard for isolating switches.

When a particular subclause of IEC 60669-1:2017 is not mentioned in this document, that subclause applies as far as reasonable.

In this document,

- the following print types are used:
 - requirements proper: in roman type;
 - *test specifications: in italic type;*
 - notes: in smaller roman type;
- subclauses, figures, tables or notes which are additional to those in IEC 60669-1:2017 are numbered starting from 101. Annexes additional to those in IEC 60669-1:2017 are lettered AA, BB, etc.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-4: Particular requirements – Isolating switches

1 Scope

Clause 1 of IEC 60669-1:2017 applies except as follows.

Replacement of the first paragraph with the following:

This part of IEC 60669 applies to manually operated general purpose isolating switches with a rated voltage not exceeding 440 V and a rated current not exceeding 125 A, intended for household and similar fixed electrical installations, either indoors or outdoors.

Replacement of the fifth dash of the third paragraph:

- a monophasic circuit for motor load with a rated current up to 10 A and a power factor not less than 0,6.

NOTE 101 Isolating switches are designed for overvoltage category III and used in environment of pollution degree 2 according to IEC 60664-1.

2 Normative references

Clause 2 of IEC 60669-1:2017 applies except as follows.

Addition:

IEC 60669-1:2017, *Switches for household and similar fixed electrical installations – Part 1: General requirements*

IEC 61180:2016, *High-voltage test techniques for low-voltage equipment – Definitions, test and procedure requirements, test equipment*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

INTERRUPTEURS POUR INSTALLATIONS ÉLECTRIQUES FIXES DOMESTIQUES ET ANALOGUES –

Partie 2-4: Exigences particulières – Interrupteurs-sectionneurs

AVANT-PROPOS

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L'IEC 60669-2-4 a été établie par le sous-comité 23B: Prises de courant et interrupteurs, du comité d'études 23 de l'IEC: Petit appareillage. Il s'agit d'une Norme internationale.

Cette deuxième édition annule et remplace la première édition parue en 2004, dont elle constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) Révision de la présente édition par rapport à la norme publiée IEC 60669-1:2017 Édition 4, avec ses amendements et références aux articles et tableaux.
- b) Introduction des valeurs des interrupteurs-sectionneurs dont les caractéristiques assignées sont comprises entre 6 A et 13 A.
- c) Introduction, dans le domaine d'application, d'un circuit de charge par moteur de courant assigné ne dépassant pas 10 A et de facteur de puissance d'au moins 0,6.
- d) Modification du Tableau 1 et du Tableau 5.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
23B/1460/CDV	23B/1480A/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications.

La présente partie de l'IEC 60669 doit être utilisée conjointement avec l'IEC 60669-1:2017. Elle contient les modifications nécessaires pour transformer cette norme en une norme particulière concernant les interrupteurs-sectionneurs.

Lorsqu'un paragraphe particulier de l'IEC 60669-1:2017 n'est pas mentionné dans ce document, ce paragraphe s'applique pour autant que cela soit raisonnable.

Dans le présent document,

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INTERRUPTEURS POUR INSTALLATIONS ÉLECTRIQUES FIXES DOMESTIQUES ET ANALOGUES –

Partie 2-4: Exigences particulières – Interrupteurs-sectionneurs

1 Domaine d'application

L'article 1 de l'IEC 60669-1:2017 s'applique avec les exceptions suivantes.

Remplacement du premier alinéa par le suivant:

La présente partie de l'IEC 60669 s'applique aux interrupteurs-sectionneurs pour usage général manœuvrés manuellement, de tension assignée ne dépassant pas 440 V et de courant assigné ne dépassant pas 125 A, destinés aux installations électriques fixes domestiques et analogues intérieures ou extérieures.

Remplacement du cinquième tiret du troisième alinéa:

- un circuit monophasé de charge par moteur de courant assigné jusqu'à 10 A et de facteur de puissance d'au moins 0,6.

NOTE 101 Les interrupteurs-sectionneurs sont conçus pour des surtensions de catégorie III et sont utilisés dans des environnements de degré de pollution 2 selon l'IEC 60664-1.

2 Références normatives

L'article 2 de l'IEC 60669-1:2017 s'applique avec les exceptions suivantes.

Addition:

IEC 60669-1:2017, *Interrupteurs pour installations électriques fixes domestiques et analogues – Partie 1: Exigences générales*

IEC 61180:2016, *Techniques des essais à haute tension pour matériel à basse tension – Définitions, exigences et modalités relatives aux essais, matériel d'essai*