IEC 60947-3

Edition 3.2 2015-07

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colour inside

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

Appareillage à basse tension – Partie 3: Interrupteurs, sectionneurs, interrupteurs-sectionneurs et combinés-fusibles

IEC 60947-3:2008-08+AMD1:2012-02+AMD2:2015-07 CSV(en-fr)

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FOREWORD

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This Consolidated version of IEC 60947-3 bears the edition number 3.2. It consists of the third edition (2008-08) [documents 17B/1601/FDIS and 17B/1608/RVD], its amendment 1 (2012-02) [documents 17B/1758/FDIS and 17B/1763/RVD] and its amendment 2 (2015-07) [documents 121A/42/FDIS and 121A/46/RVD]. The technical content is identical to the base edition and its amendments.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions and deletions are displayed in red, with deletions being struck through. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60947-3 has been prepared by subcommittee 17B: Low-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

The document 17B/1601/FDIS, circulated to the National Committees as amendment 3, led to the publication of the new edition.

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

– alignment with the fifth edition of IEC 60947-1;
– a switching operation without current allowed between making and breaking operation (Table 3);
– increased number of operations for AC-23 allowed with agreement of the manufacturer (Table 3);
– simplified test procedure amended, f) added to 8.3.2.1.3;
– temperature rise test shall be made at the rated operational current I_e instead of the conventional enclosed thermal current I_{the} (8.3.3.1).

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

A list of all parts of the IEC 60947 series can be found, under the general title *Low-voltage switchgear and controlgear*, on the IEC website.

This part is to be used in conjunction with IEC 60947-1.The numbering of the subclauses is sometimes not continuous because it is based on IEC 60947-1.

The committee has decided that the contents of the base publication and its amendments 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.

The contents of the corrigenda 1 (September 2012) and 2 (November 2013) have been included in this copy.

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

1 General

The provisions of the general rules dealt with in IEC 60947-1 are applicable to this part, where specifically called for. Clauses and subclauses, tables, figures and appendices of the general rules thus applicable are identified by reference IEC 60947-1, e.g., 4.3.4.1 of IEC 60947-1, Table 4 of IEC 60947-1, or Annex A of IEC 60947-1.

1.1 Scope and object

This part of IEC 60947 applies to switches, disconnectors, switch-disconnectors and fuse-combination units to be used in distribution circuits and motor circuits of which the rated voltage does not exceed 1 000 V a.c. or 1 500 V d.c.

The manufacturer shall specify the type, ratings and characteristics according to the relevant standard of any incorporated fuses.

This part does not apply to equipment coming within the scope of IEC 60947-2, IEC 60947-4-1 and IEC 60947-5-1; however, when switches and fuse-combination units coming into the scope of this part are normally used to start, accelerate and/or stop an individual motor they shall also comply with the additional requirements given in Annex A.

The requirements for single pole operated three pole switches are included in Annex C.

Auxiliary switches fitted to equipment within the scope of this part shall comply with the requirements of IEC 60947-5-1.

This part does not include the additional requirements necessary for electrical apparatus for explosive gas atmospheres.

NOTE 1 Depending on its design, a switch (or disconnector) can be referred to as "a rotary switch (disconnector)", "cam-operated switch (disconnector)", "knife-switch (disconnector)", etc.

NOTE 2 In this part, the word "switch" also applies to the apparatus referred to in French as "commutateurs", intended to modify the connections between several circuits and *inter alia* to substitute a part of a circuit for another.

NOTE 3 In general, throughout this part switches, disconnectors, switch-disconnectors and fuse-combination units will be referred to as "equipment".

The object of this part is to state

a) the characteristics of the equipment;
b) the conditions with which the equipment shall comply with reference to
    1) operation and behaviour in normal service;
    2) operation and behaviour in case of specified abnormal conditions, e.g. short circuit;
    3) dielectric properties;
c) the tests for confirming that these conditions have been met and the methods to be adopted for these tests;