

CONSOLIDATED VERSION

VERSION CONSOLIDÉE



**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**



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CONTENTS

FOREWORD.....	4
1 General	6
1.1 Scope and object.....	6
1.2 Normative references	7
2 Terms, definitions and index of terms	8
2.1 General	8
2.2 Alphabetical index of terms	8
2.3 Terms and definitions	9
2.4 Summary of the equipment types	12
3 Classification	13
3.1 According to the utilization category	13
3.2 According to the method of operation of manually operated equipment	14
3.3 According to suitability for isolation	14
3.4 According to the degree of protection provided.....	14
4 Characteristics.....	14
4.1 Summary of characteristics.....	14
4.2 Type of equipment.....	14
4.3 Rated and limiting values for the main circuit	14
4.4 Utilization category	16
4.5 Control circuits	17
4.6 Auxiliary circuits	17
4.7 Relays and releases	17
4.8 Co-ordination with short circuit protective devices (SCPD).....	17
5 Product information.....	18
5.1 Nature of information	18
5.2 Marking	18
5.3 Instructions for installation, operation and maintenance.....	19
6 Normal service, mounting and transport conditions.....	19
7 Constructional and performance requirements	19
7.1 Constructional requirements	19
7.2 Performance requirements.....	21
7.3 Electromagnetic compatibility.....	25
8 Tests	27
8.1 Kind of tests	27
8.2 Type tests for constructional requirements	28
8.3 Performance.....	32
8.4 Electromagnetic compatibility tests	49
8.5 Special tests.....	50
Annex A (normative) Equipment for direct switching of a single motor.....	51
Annex B (informative) Items subject to agreement between manufacturer and user.....	57
Annex C (normative) Single pole operated three pole switches	58
Annex D (normative) Switches, disconnectors, switch-disconnectors and fuse-combination units for use in photovoltaic (PV) d.c. applications.....	61
Bibliography	73

Figure 1 – Actuate applied force F	
Figure C.1 – Typical arrangements.....	59
Table 1 – Summary of equipment definitions.....	13
Table 2 – Utilization categories.....	17
Table 3 – Verification of rated making and breaking capacities (see 8.3.3.3) – Conditions for making and breaking corresponding to the various utilization categories.....	23
Table 4 – Verification of operational performance – Number of operating cycles corresponding to the rated operational current.....	24
Table 5 – Test circuit parameters for Table 4.....	24
Table 6 – Immunity tests.....	26
Table 7 – Emission limits.....	27
Table 8 – Actuator test forces	
Table 9 – List of type tests applicable to a given equipment.....	32
Table 10 – Overall scheme of test sequences.....	33
Table 11 – Test sequence I: general performance characteristics.....	37
Table 12 – Temperature-rise limits for terminals and accessible parts.....	40
Table 13 – Test sequence II: operational performance capability.....	40
Table 14 – Test sequence III: short-circuit performance capability.....	42
Table 15 – Test sequence IV: conditional short-circuit current.....	47
Table 16 – Test sequence V: overload performance capability.....	49
Table A.1 – Utilization categories.....	52
Table A.2 – Rated making and breaking capacity conditions corresponding to several utilization categories.....	52
Table A.3 – Relationship between current broken I_C and off-time for the verification of the rated making and breaking capacity.....	53
Table A.4 – Operational performance – Conditions for making and breaking corresponding to several utilization categories.....	53
Table A.5 – Verification of the number of on-load operating cycles – Conditions for making and breaking corresponding to several utilization categories.....	56
Table D.1 – Utilization categories	63
Table D.2 – Service arrangements	63
Table D.3 – Environmental conditions	64
Table D.4 – Rated impulse withstand levels for PV switches, PV disconnectors, PV switch-disconnectors or PV fuse-combination units	65
Table D.5 – Verification of rated making and breaking capacities (see 8.3.3.3) – Conditions for making and breaking corresponding to the DC-PV category	65
Table D.6 – Number of operating cycles	66
Table D.7 – Test circuit parameters for Table D.6	66
Table D.8 – Overall scheme of test sequences (addition)	67
Table D.9 – Number of operating cycles corresponding to the critical load current	70
Table D.10 – Test circuit parameters for Table D.9	70

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

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

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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_c 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 this basic 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 in 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;