

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Low-voltage switchgear and controlgear –
Part 4-2: Contactors and motor-starters – AC semiconductor motor controllers
and starters**

**Appareillage à basse tension –
Partie 4-2: Contacteurs et démarreurs de moteurs – Gradateurs et démarreurs à
semiconducteurs de moteurs à courant alternatif**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 4-2: Contactors and motor-starters –
AC semiconductor motor controllers and starters**

FOREWORD

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International Standard IEC 60947-4-2 has been prepared by subcommittee 17B: Low-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

This third edition replaces the second edition published in 1999 and its Amendments 1 (2001) and 2 (2006). It is a technical revision.

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

- updated EMC normative references and associated requirements,
- new references to IEC 60947-1,
- marking of electronic relays without thermal memory,
- marking of tripping time at 0 °C ambient or below,
- new test requirements for limits of operation of time-delay overload relays,

- new classes of overload current withstand time,
- damp heat, salt mist, vibration and shock tests,
- short-circuit test in the smallest enclosure,
- update of the routine and sampling tests.

This standard shall be read in conjunction with IEC 60947-1:2007, *Low-voltage switchgear and controlgear – Part 1: General rules*. The provisions of the general rules are applicable to this standard, where specifically called for.

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

FDIS	Report on voting
17B/1734/FDIS	17B/1741/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.

A list of all the parts in the IEC 60947 series, under the general title *Low-voltage switchgear and controlgear*, 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.

The contents of the corrigendum of July 2012 have been included in this copy.

INTRODUCTION

This standard covers low-voltage a.c. semiconductor motor controllers and starters that have many capabilities and features beyond the simple starting and stopping of an induction motor, such as controlled starting and stopping, manoeuvring and controlled running.

The generic term “controller” is used in this standard wherever the unique features of the power semiconductor switching elements are the most significant points of interest. The generic term “starter” is used wherever the consequences of operating the power semiconductor switching elements, together with suitable overload protective means, are the most significant points of interest. Specific designations (for example form 1, form HxB, etc.) are used wherever the unique features of various configurations comprise significant points of interest.

Withdrawn