

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Low-voltage switchgear and controlgear –
Part 4-1: Contactors and motor-starters – Electromechanical contactors and
motor-starters**

**Appareillage à basse tension –
Partie 4-1: Contacteurs et démarreurs de moteurs – Contacteurs et démarreurs
électromécaniques**

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IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 4-1: Contactors and motor-starters –
Electromechanical contactors and motor-starters**

FOREWORD

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IEC 60947-4-1 has been prepared by subcommittee 121A: Low-voltage switchgear and controlgear, of IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2018. This edition constitutes a technical revision.

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

- a) objective in the scope;
- b) instantaneous only motor protective switching device IMPSD (3.5.33);
- c) kinds of equipment (5.2.1);

- d) methods of overload protection of motors (5.2.6);
- e) adoption of the AC-7d from IEC 61095:2023 (in 5.4.2);
- f) separately mounted overload relay of a starter (in 5.7.3 b));
- g) starter and contactor suitable for use downstream to basic drive module (6.1.2 w));
- h) reference to IEC TS 63058 for environmental aspects (in 6.4);
- i) wiring subject to movement (in 8.1.3);
- j) use of voltage transient limiting device (8.1.18);
- k) accessible parts subject to temperature limits (in 8.2.2.3);
- l) reference to Annex X of IEC 60947-1:2020 for the co-ordination of MPSD with SCPD (8.2.5.4);
- m) reference to IEC TR 63216 with different EMC environments (8.3.1);
- n) reference to IEC TR 63201 for the embedded software design (8.4);
- o) reference to IEC TS 63208 for cybersecurity aspects (8.5);
- p) update and completion of the measurement method of the power consumption of the electromagnet (9.3.3.2.1.2);
- q) update of Annex C including rational about AC-3e;
- r) determination of the critical load current for photovoltaic applications (M.8.7).

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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.

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 document shall be read in conjunction with IEC 60947-1:2020, *Low voltage switchgear and controlgear – Part 1: General rules*. The provisions of the general rules are applicable to this document, where specifically called for.

The provisions of the general rules dealt with IEC 60947-1 are applicable to this part of IEC 60947 series where specifically called for. Clauses and subclauses, tables, figures and annexes of the general rules thus applicable are identified by reference to IEC 60947-1:2020. For example, 5.3.4.1 of IEC 60947-1:2020, Table 4 of IEC 60947-1:2020, or Annex A of IEC 60947-1:2020.

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,
- replaced by a revised edition, or
- amended.

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