

**SLOVENSKI STANDARD**  
**SIST EN 60947-4-1:1995/A1:1998**  
**01-junij-1998**

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**Low-voltage switchgear and controlgear assemblies - Part 4: Contactors and motor-starters - Section 1: Electromechanical contactors and motor-starters - Amendment A1 (IEC 60947-4-1:1990/A1:1994)**

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

Niederspannungsschaltgeräte -- Teil 4-1: Schütze und Motorstarter - Elektromechanische Schütze und Motorstarter

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

**Ta slovenski standard je istoveten z: EN 60947-4-1:1992/A1:1995**

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**ICS:**

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear
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**SIST EN 60947-4-1:1995/A1:1998**      **en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60947-4-1/A1**

January 1995

UDC 621.316.5.027.2  
ICS 29.120.60

Descriptors: Electrical switchgear and controlgear, low-voltage switchgear and controlgear, control equipment, contactor, starter, short-circuit protection, overload protection, characteristics, test

English version

**Low-voltage switchgear and controlgear  
Part 4: Contactors and motor-starters  
Section One: Electromechanical contactors  
and motor-starters  
(IEC 947-4-1:1990/A1:1994)**

Appareillage à basse tension

Quatrième partie: Contacteurs et  
démarreurs de moteurs

Section un: Contacteurs et démarreurs  
électromécaniques

(CEI 947-4-1:1990/A1:1994)

Niederspannung-Schaltgeräte

Teil 4: Schütze und Motorstarter  
Hauptabschnitt eins:

Elektromechanische Schütze und  
Motorstarter

(IEC 947-4-1:1990/A1:1994)

(SIST EN 60947-4-1:1995/A1)

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This amendment A1 modifies the European Standard EN 60947-4-1:1992; it was approved by CENELEC on 1994-12-06. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The text of document 17B(CO)224, future amendment 1 to IEC 947-4-1:1990, prepared by SC 17B, Low-voltage switchgear and controlgear, of IEC TC 17, Switchgear and controlgear, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60947-4-1:1992 on 1994-12-06.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1995-12-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 1995-12-01

For products which have complied with EN 60947-4-1:1992 before 1995-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-12-01.

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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Endorsement notice

The text of amendment 1:1994 to the International Standard IEC 947-4-1:1990 was approved by CENELEC as an amendment to the European Standard without any modification.



## ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD  
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

Add:

IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
1095	1992	Electromechanical contactors for household and similar purposes	EN 61095	1993

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NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC  
947-4-1

1990

AMENDEMENT 1  
AMENDMENT 1

1994-11

Amendement 1

Appareillage à basse tension

Quatrième partie:

CONTACTEURS et démarreurs de moteurs  
Section un – Contacteurs et démarreurs  
électromécaniques

SIST EN 60947-4-1:1995/A1:1998

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0f32a197-4-1-1995-a1-1998

Amendment 1

Low-voltage switchgear and controlgear

Part 4:

Contactors and motor-starters

Section One – Electromechanical contactors  
and motor-starters

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## FOREWORD

This amendment has been prepared by sub-committee 17B: Low-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

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

DIS	Report on voting
17B(CO)224	17B(CO)233

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

## PREFACE

Add the following reference to the list of references:

IEC 1095: 1992, *Electromechanical contactors for household and similar purposes*

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4.3.5.5.1 *Starting characteristics of rheostatic rotor starters*

Replace

$$Z_r = \sqrt{\frac{U_{er}}{3 I_{er}}} \quad \text{by} \quad Z_r = \sqrt{\frac{U_{er}}{3 \cdot I_{er}}}$$

Page 55

Table I

Replace in column 2 "AC-7a" by "AC-7a<sup>3)</sup>" and "AC-7b" by "AC-7b<sup>3)</sup>".

Add the following new note under the table:

<sup>3)</sup> For AC-7a and AC-7b, see IEC 1095.



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Subclause 5.1.2

*Replace the existing item m) by the following new item m):*

m) rated conditional short-circuit current (see subclause 4.3.6) and type of co-ordination of the contactor or starter (see subclause 7.2.5.1) and the type, current rating and characteristics of the associated SCPD.

rated conditional short-circuit current (see subclause 4.3.6) of the combination starter or protected starter and type of co-ordination (see subclause 7.2.5.1).

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Table VII

*Replace the text of the line AC-6a by "10)".*

*Delete AC-7a and AC-7b together with the relevant data.*

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*Add, after note <sup>9)</sup>, the following (new note <sup>10)</sup>.*

10) The manufacturer shall verify the AC-6a rating by testing with a transformer or may derive the rating from test values for AC-3 according to table VIIIb.

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Table VIII

*Delete AC-7a and AC-7b together with the relevant data and notes <sup>9)</sup> and <sup>10)</sup>.*

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*Replace the existing subclauses 8.1.3 and 8.1.4 by the following:*

8.1.3 *Routine tests* (subclause 8.3.6)

Subclause 8.1.3 of part 1 applies where sampling tests (see subclause 8.1.4) are not made instead.

Routine tests for contactors and starters comprise:

- operation and operating limits (subclause 8.3.6.2)
- dielectric tests (subclause 8.3.6.3).