

SLOVENSKI STANDARD

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Specified time relays for industrial use - Part 1: Requirements and tests (IEC 61812-1:1996)

Specified time relays for industrial use -- Part 1: Requirements and tests

Relais mit festgelegtem Zeitverhalten (Zeitrelais) für industrielle Anwendungen -- Teil 1: Anforderungen und Prüfungen

Relais à temps spécifié pour applications industrielles -- Partie 1: Prescriptions et essais

Ta slovenski standard je istoveten z: **EN 61812-1:1996**

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English version

**Specified time relays for industrial use
Part 1: Requirements and tests
(IEC 1812-1:1996)**

Relais à temps spécifié pour
applications industrielles
Partie 1: Prescriptions et essais
(CEI 1812-1:1996)

Relais mit festgelegtem Zeitverhalten
(Zeitrelais) für industrielle Anwendungen
Teil 1: Anforderungen und Prüfungen
(IEC 1812-1:1996)

This European Standard was approved by CENELEC on 1996-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard 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.

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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 94/45/FDIS, future edition 1 of IEC 1812-1, prepared by IEC TC 94, All-or-nothing electrical relays, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61812-1 on 1996-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 1997-09-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) -

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.

Endorsement notice

The text of the International Standard IEC 1812-1:1996 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

**Normative references to international publications
with their corresponding 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 (including amendments).

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 50(441)	1984	International electrotechnical vocabulary (IEV) - Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 50(446)	1983	Chapter 446: Electrical relays	-	-
IEC 60-1	1989	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991
IEC 62	1992	Marking codes for resistors and capacitors	EN 60062	1993
IEC 68-1	1988	Environmental testing Part 1: General and guidance	EN 60068-1 ¹⁾	1994
IEC 68-2-3	1969	Part 2: Tests - Test Ca: Damp heat, steady state	HD 323.2.3 S2 ²⁾	1987
IEC 68-2-6	1995	Test Fc: Vibration (sinusoidal)	EN 60068-2-6 ³⁾	1995
IEC 68-2-27	1987	Test Ea and guidance: Shock	EN 60068-2-27	1993
IEC 85	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990
IEC 112	1979	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions	HD 214 S2	1980
IEC 529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993

1) EN 60068-1 includes corrigendum October 1988 + A1:1992 to IEC 68-1.

2) HD 323.2.3 S2 includes A1:1984 to IEC 68-2-3.

3) EN 60068-2-6 includes corrigendum March 1995 to IEC 68-2-6.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 664-1 (mod)	1992	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	HD 625.1 S1 + corr. November 1996	1996
IEC 664-3	1992	Part 3: Use of coatings to achieve insulation coordination of printed board assemblies	-	-
IEC 695-2-1/0	1994	Fire hazard testing Part 2: Test methods -- Section 1/sheet 0: Glow-wire test methods - General	EN 60695-2-1/0	1996
IEC 695-2-1/1	1994	Section 1/sheet 1: Glow-wire end-product test and guidance	EN 60695-2-1/1 ⁴⁾	1996
IEC 695-2-1/2	1994	Section 1/sheet 2: Glow-wire flammability test on materials	EN 60695-2-1/2	1996
IEC 695-2-1/3	1994	Section 1/sheet 3: Glow-wire ignitability test on materials	EN 60695-2-1/3	1996
IEC 721-3-3	1994	Classification of environmental conditions Part 3: Classification of groups of environmental parameters and their severities -- Section 3: Stationary use at weatherprotected locations	EN 60721-3-3	1995
IEC 947-1 (mod)	1988	Low-voltage switchgear and controlgear Part 1: General rules	EN 60947-1 + corr. March 1993 + A11 1994	1991 1993 1994
IEC 947-5-1	1990	Part 5: Control circuit devices and switching elements Section 1: Electromechanical control circuit devices	EN 60947-5-1 + corr. March 1993	1991 1993
IEC 947-5-2 (mod)	1992	Section 2: Proximity switches	EN 60947-5-2 ⁵⁾	1997
IEC 999 (mod)	1990	Connecting devices - Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors	EN 60999	1993
IEC 1000-4-2	1995	Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques -- Section 2: Electrostatic discharge immunity test	EN 61000-4-2	1995
IEC 1000-4-3 (mod)	1995	Section 3: Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	1996

4) EN 60695-2-1/1 includes corrigendum May 1995 to IEC 695-2-1/1.

5) EN 60947-5-2 includes A1:1994 + A2:1995 to IEC 947-5-2.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 1000-4-4	1995	Section 4: Electrical fast transient/burst immunity test	EN 61000-4-4	1995
IEC 1000-4-5	1995	Section 5: Surge immunity test	EN 61000-4-5	1995
CISPR 11 (mod)	1990	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment	EN 55011	1991
CISPR 22	1993	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	EN 55022	1994

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**CEI
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Première édition
First edition
1996-09

**Relais à temps spécifié
pour applications industrielles –**

**Partie 1:
Prescriptions et essais**

**Specified time relays
for industrial use –**

**Part 1:
Requirements and tests**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFIED TIME RELAYS FOR INDUSTRIAL USE –

Part 1: Requirements and tests

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
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- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 1812-1 has been prepared by IEC technical committee 94: All-or-nothing electrical relays.

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

FDIS	Report on voting
94/45/FDIS	94/49/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.

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SPECIFIED TIME RELAYS FOR INDUSTRIAL USE –**Part 1: Requirements and tests****1 General****1.1 Scope**

This part of IEC 1812 applies to specified time relays, such as time delay relays, in accordance with definitions as laid down in IEC 50(446), for use in industrial applications (e.g. control, automation, signal and industrial equipment).

The term "relay" as used in this standard comprises all types of relays, other than measuring relays, with specified time function.

Depending on the field of application of these relays (e.g. for electricity generation, transmission and distribution), further standards may be applicable.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 1812. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 1812 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 50(441): 1984, *International Electrotechnical Vocabulary (IEV) – Chapter 441: Switchgear, controlgear and fuses*

IEC 50(446): 1983, *International Electrotechnical Vocabulary (IEV) – Chapter 446: Electrical relays*

IEC 60-1: 1989, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 62: 1992, *Marking codes for resistors and capacitors*

IEC 68-1: 1988, *Environmental testing – Part 1: General and guidance*

IEC 68-2-3: 1969, *Environmental testing – Part 2: Tests – Test Ca: Damp heat, steady state*

IEC 68-2-6: 1995, *Environmental testing – Part 2: Tests – Test Fc: Vibration (sinusoidal)*

IEC 68-2-27: 1987, *Environmental testing – Part 2: Tests – Test Ea and guidance: Shock*

IEC 85: 1984, *Thermal evaluation and classification of electrical insulation*