

**SLOVENSKI
STANDARD**

SIST EN 61131-2:1998

prva izdaja
september 1998

Programmable controllers - Part 2: Equipment requirements and tests (IEC 61131-2:1992)

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EUROPEAN STANDARD

EN 61131-2

NORME EUROPEENNE

EUROPÄISCHE NORM

August 1994

ICS 35.060;35.240.50

Descriptors: Industrial-process, process control, programmable controller, equipment requirements, equipment tests

ENGLISH VERSION

Programmable controllers
Part 2: Equipment requirements and test
(IEC 1131-2:1992)

Automates programmables
Partie 2: Spécifications et
essais des équipements
(CEI 1131-2:1992)

Speicherprogrammierbare Steuerungen
Teil 2: Betriebsmittelanforderungen
Prüfungen
(IEC 1131-2:1992)

This European Standard was approved by CENELEC on 1994-03-08. 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.

This European Standard 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.

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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 CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 1131-2:1992 could be accepted without textual changes, has shown that no common modifications were necessary for the acceptance as European Standard.

The reference document was submitted to the CENELEC members for formal vote and was approved by CENELEC as EN 61131-2 on 8 March 1994.

NOTE: Finland has no obligation to implement this European Standard.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1995-03-15
- latest date of withdrawal of conflicting national standards (dow) 1995-03-15

For products which have complied with the relevant national standard before 1995-03-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-03-15.

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard, annexes A, B, D and ZA are normative and annexes C and E are informative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1131-2:1992 was approved by CENELEC as a European Standard without any modification.

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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.

IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
38, mod	1983	IEC Standard voltages*	HD 472 S1	1989
50(151)	1978	International Electrotechnical Vocabulary (IEV) - Chapter 151: Electrical and magnetic devices	-	-
50(441)	1984	Chapter 441: Switchgear, controlgear and fuses	-	-
60-1	1989	High-voltage test techniques - Part 1: General definitions and test requirements (corrigendum March 1990 and March 1992)	HD 588.1 S1	1991
68-2-1	1990	Environmental testing - Part 2: Tests Tests A: Cold	EN 60068-2-1	1993
68-2-2	1974	Basic environmental testing procedures Tests B: Dry heat	EN 60068-2-2*	1993
68-2-3	1969	Test Ca: Damp heat, steady state	HD 323.2.3 S2*	1987
68-2-6	1982	Test Fc and guidance (sinusoidal)	HD 323.2.6 S2*	1988
68-2-14	1984	Test N: Change of temperature	HD 323.2.14 S2*	1987

* The title of HD 472 S1 is: Nominal voltages for low voltage public electricity supply systems
EN 60068-2-2 includes supplement A:1976 to IEC 68-2-2
HD 323.2.3 S2 includes A1:1984 to IEC 68-2-3
HD 323.2.6 S2 includes A1:1983 + A2:1985 to IEC 68-2-6
HD 323.2.14 S2 includes A1: 1986 to IEC 68-2-14

IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
68-2-27	1987	Test Ea and guidance: Shock	EN 60068-2-27	1993
68-2-30	1980	Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)	HD 323.2.30 S3*	1988
68-2-31	1969	Test Ec: Drop and topple, primarily for equipment-type specimens	EN 60068-2-31*	1993
68-2-32	1975	Test Ed: Free fall	EN 60068-2-32*	1993
85	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990
112	1979	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions	HD 214 S2	1980
255-4	1976	Electrical relays - Part 4: Single input energizing quantity measuring relays with dependent specified time	-	-
364-4-443	1990	Electrical installations of buildings Part 4: Protection for safety Chapter 44: Protection against overvoltages - Section 443: Protection against overvoltages of atmospheric origin or due to switching (corrigendum February 1991)	-	-
417	1973	Graphical symbols for use on equipment Index, survey and compilation of the single sheets	HD 243 S10*	1993
445	1988	Identification of equipment terminals and of terminations of certain designated conductors, including general rules for an alphanumeric system	EN 60445	1990
529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
664	1980	Insulation coordination for equipment within low-voltage systems	-	-

* HD 323.2.30 S3 includes A1:1985 to IEC 68-2-30
EN 60068-2-31 includes A1:1982 to IEC 68-2-31
EN 60068-2-32 includes A1:1982 + A2:1990 to IEC 68-2-32
HD 243 S10 includes supplements A:1974 to K:1991 to IEC 417

IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
695-2-1	1980	Fire hazard testing - Part 2: Test methods - Section 1: Glow-wire test and guidance	HD 444.2.1 S1	1983
707	1981	Methods of test for the determination of the flammability of solid electrical insulating materials when exposed to an igniting source	HD 441 S1	1983
801-2	1991	Electromagnetic compatibility for industrial-process measurement and control equipment - Part 2: Electrostatic discharge requirements	EN 60801-2	1993
801-3	1984	Part 3: Radiated electromagnetic field requirements	HD 481.3 S1	1987
801-4	1988	Part 4: Electrical fast transient/burst requirements	-	-
801-5	199X	Part 5: Surge immunity requirements (under consideration)	-	-
947-1, mod	1988	Low-voltage switchgear and controlgear Part 1: General rules (corrigendum January 1992 and corrigendum March 1994)	EN 60947-1 + corr. March 1993	1991
947-5-1	1990	Part 5: Control circuit devices and switching elements - Section One: Electromechanical control circuit devices (corrigendum November 1991)	EN 60947-5-1 + corr. March 1993	1991
947-5-2	1992	Part 5: Control circuit devices and switching elements - Section 2: Proximity switches	-	-
950, mod	1991	Safety of information technology equipment, including electrical business equipment	EN 60950	1992

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Other publications:

ISO/IEC 9506-1:1990 - Industrial automation systems - Manufacturing message specification - Part 1: Service definition

ISO/IEC 9506-2:1990 - Industrial automation systems - Manufacturing message specification - Part 2: Protocol specification

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INTERNATIONAL STANDARD

IEC 1131-2

First edition
1992-10

Programmable controllers –

Part 2: Equipment requirements and tests

Automates programmables –

Partie 2: Spécifications et essais des équipements

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PROGRAMMABLE CONTROLLERS –

Part 2: Equipment requirements and tests

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

This part of International Standard IEC 1131 has been prepared by sub-committee 65A: Devices, of IEC technical committee No. 65: Industrial-process measurement and control.

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

Six Months' Rule	Report on Voting
65A(CO)22	65A(CO)27

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

Annexes A, B and D form an integral part of this part of IEC 1131.

Annex C and E are for information only.

IEC 1131 will consist of the following parts, of which this is the second, under the general title: Programmable controllers:

- Part 1: 1992, General information.
- Part 2: 1992, Equipment requirements and tests.
- Part 3: Programming languages (*being printed*).
- Part 4: User guidelines (*under consideration*).
- Part 5: Messaging service specification (*under consideration*).