



SLOVENSKI STANDARD
SIST EN 61143-1:1999
01-julij-1999

Električni merilni instrumenti – Zapisovalniki X-t – 1. del: Definicije in zahteve (IEC 61143-1:1992)

Electrical measuring instruments - X-t recorders -- Part 1: Definitions and requirements

Elektrische Meßgeräte - X-t-Schreiber -- Teil 1: Definitionen und Anforderungen

Appareils électriques de mesure - Enregistreurs X-t -- Partie 1: Définitions et prescriptions

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Ta slovenski standard je istoveten z: EN 61143-1:1994

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ICS:

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
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ICS 19.080

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Descriptors: Measuring instrument, electrical measurement, recorder,
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ENGLISH VERSION

Electrical measuring instruments - X-t recorders
Part 1: Definitions and requirements
(IEC 1143:1992)

Appareils électriques de mesure
Enregistreurs X-t
Partie 1: Définitions et
prescriptions
(CEI 1143:1992)

Elektrische Meßgeräte
X-t-Schreiber
Teil 1: Begriffe und
Anforderungen
(IEC 1143:1992)

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.

CENELEC

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

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FOREWORD

The CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 1143-1:1992 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 61143-1 on 8 March 1994.

This European Standard replaces HD 301 S1:1977.

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 HD 301 S1:1977 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. In this standard, annexes A and ZA are normative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1143-1:1992 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 ----
27		series Letter symbols to be used in electrical technology	HD 245	series
51-1	1984	Direct acting indicating analogue electrical measuring instruments and their accessories - Part 1: Definitions and general requirements common to all parts	EN 60051-1	1989
51-2	1984	Part 2: Special requirements for ammeters and voltmeters	EN 60051-2	1989
51-3	1984	Part 3: Special requirements for watt meters and varmeters	EN 60051-3	1989
51-4	1984	Part 4: Special requirements for frequency meters	EN 60051-4	1989
51-5	1985	Part 5: Special requirements for phase meters, power factor meters and synchrosopes	EN 60051-5	1989
51-6	1984	Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters	EN 60051-6	1989
51-7	1984	Part 7: Special requirements for multi-function instruments	EN 60051-7	1989
51-8	1984	Part 8: Special requirements for accessories	EN 60051-8	1989
51-9	1988	Part 9: Recommended test methods	EN 60051-9	1989

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IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
68-2-6	1982	Environmental testing - Part 2: Tests Test Fc and guidance: Vibration (sinusoidal)	HD 323.2.6 S2*	1988
68-2-27	1987	Test Ea and guidance: Shock	EN 60068-2-27	1993
160	1963	Standard atmospheric conditions for test purposes	-	-
414 (mod)	1973	Safety requirements for indicating and recording electrical measuring instruments and their accessories	HD 215 S1	1974
417	1973	Graphical symbols for use on equipment Index, survey and compilation of the single sheets	HD 243 S10*	1993
473	1974	Dimensions for panel-mounted indicating and recording electrical measuring instruments	-	-
617-2	1983	Graphical symbols for diagrams - Part 2: Symbol elements, qualifying symbols and other symbols having general application	-	-
1010	series	Safety requirements for electrical equipment for measurement, control and laboratory use	EN 61010	series

* HD 323.2.6 S2 includes A1:1983 + A2:1985 to IEC 68-2-6
HD 243 S10 includes supplements A:1974 to K:1991 to IEC 417

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NORME
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STANDARD

CEI
IEC

61143-1

Première édition
First edition
1992-06

Appareils électriques de mesure –
Enregistreurs X-t

Partie 1:
Définitions et prescriptions

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Electrical measuring instruments –
X-t recorders

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Part 1
Definitions and requirements

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL MEASURING INSTRUMENTS – X-t RECORDERS

Part 1: Definitions and requirements

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.
- 4) The IEC has not laid down any procedure concerning marking as an indication of approval and has no responsibility when an item of equipment is declared to comply with one of its recommendations.

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SIST EN 61143-1:1999
This part of International Standard IEC 1143 has been prepared by IEC Technical Committee No. 85: Measuring equipment for basic electrical quantities.

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

Six Months' Rule	Report on Voting
85(CO)15	85(CO)19

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

Annex A forms an integral part of this part.

ELECTRICAL MEASURING INSTRUMENTS – X-t RECORDERS

Part 1: Definitions and requirements

1 Scope

This part of IEC 1143 applies to X-t recorders used for the measurement of voltage and current which measure and record analogue electrical quantities as a function of time.

It also applies to a recorder whose chart scale lines do not correspond directly to the electrical input quantity, provided that the relationship between them is known.

For the measurement of other electrical quantities, the relevant parts of IEC 51 also apply.

This part also applies to non-interchangeable accessories and accessories of limited interchangeability (e.g. shunts, impedance elements) if they are used with the recorder and the adjustments have been made for the combination. For controllers with electrical outputs and containing electrical recorders, this part applies only to the recorder and does not apply to the control circuit.

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This part does not apply to special purpose recorders or to special purpose devices (when they are used as accessories) which are covered by their own IEC standards.

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This part does not cover safety requirements (for reference, see IEC 1010) and does not contain either requirements for protection against environmental conditions or the relevant tests. However, when necessary, tests under conditions approaching those of use may be selected from IEC 68, to prove protection against environmental conditions.

Further, it does not contain requirements concerning the dimensions of instruments or accessories (for the former, see IEC 473).

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 1143. At the time of publication of this standard, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 1143 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 27, *Letter symbols to be used in electrical technology*.

IEC 51-1: 1984, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 1: Definitions and general requirements common to all parts*.

IEC 51-2: 1984, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 2: Special requirements for ammeters and voltmeters.*

IEC 51-3: 1984, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 3: Special requirements for wattmeters and varmeters.*

IEC 51-4: 1984, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 4: Special requirements for frequency meters.*

IEC 51-5: 1985, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 5: Special requirements for phase meters, power factor meters and synchrosopes.*

IEC 51-6: 1984, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters.*

IEC 51-7: 1984, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 7: Special requirements for multi-function instruments.*

IEC 51-8: 1984, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 8: Special requirements for accessories.*

IEC 51-9: 1988, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 9: Recommended test methods.*

IEC 68-2-6: 1982, *Environmental testing – Part 2: Tests – Test Fc and guidance: Vibration (sinusoidal).*

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

IEC 160: 1963, *Standard atmospheric conditions for test purposes.*

IEC 414: 1973, *Safety requirements for indicating and recording electrical measuring instruments and their accessories.*

IEC 417: 1973, *Graphical symbols for use on equipment – Index, survey and compilation of the single sheets.*

IEC 473: 1974, *Dimensions for panel-mounted indicating and recording electrical measuring instruments.*

IEC 617-2: 1983, *Graphical symbols for diagrams – Part 2: Symbol elements, qualifying symbols and other symbols having general application.*

IEC 1010, *Safety requirements for electrical equipment for measurement, control and laboratory use.*