SLOVENSKI STANDARD

SIST EN 61003-1:1998

prva izdaja
november 1998

Industrial-process control systems -Instruments with analogue inputs and two- or multi-state outputs - Part 1: Methods of evaluating the performance (IEC 61003-1:1991)

ICS 25.040.40; 35.240.50

Referenčna številka
SIST EN 61003-1:1998(en)

EUROPEAN STANDARD

NORME EUROPEENNE

EUROPÄISCHE NORM

EN 61003-1

January 1993

UDC 681.527:621.317.7:621.3-51

Descriptors: Industrial-process, process control, instrument with analog inputs, two- or multi-state outputs, performance

ENGLISH VERSION

Industrial-process control systems Instruments with analogue inputs and two- or multi-state outputs Part 1: Methods of evaluating the performance (IEC 1003-1:1991)

Processus industriels Instruments avec entrées analogiques et sorties à deux ou plusiers états Partie 1: Méthodes d'évaluation des performances (CEI 1003-1:1991)

Systeme der industriellen Prozeßtechnik - Geräte mit analogen Eingängen und Zwei- oder Mehrpunktverhalten Teil 1: Methoden der Beurteilung des Betriebsverhaltens (IEC 1003-1:1991)

This European Standard was approved by CENELEC on 1992-12-09. 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

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 1003-1:1991 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 61003-1 on 9 December 1992.

The following dates were fixed:

- latest date of publication of an identical national standard	(dop)	1993-12-01
- latest date of withdrawal of conflicting national standards	(dow)	1993-12-01

For products which have complied with the relevant national standard before 1993-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1998-12-01.

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 1003-1:1991 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

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

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
68-2-1 68-2-1A + A1	1974 1976 1983	Environmental testing Part 2: Tests - Tests A: Cold	HD 323.2.1 S2	1987
68-2-2	1974	Part 2: Tests - Test B: Dry heat	HD 323.2.2 S1*	1988
68-2-3	1969	Part 2: Tests - Test Ca: Damp heat, steady state	HD 323.2.3 S2*	1987
68-2-6	1982	Part 2: Tests - Test Fc and guidance: Vibration (sinusoidal)	HD 323.2.6 S2*	1988
68-2-14	1984	Part 2: Tests - Test N: Change of temperature	HD 323.2.14 S2*	1987
68-2-31	1969	Part 2: Tests - Test Ec: Drop and topple, primarily for equipment-type specimens	HD 323.2.31 S1*	1988
160	1963	Standard atmospheric conditions for test purposes	-	-
278	1968	Documentation to be supplied with electronic measuring apparatus	HD 312 S1*	1977
348	1978	Safety requirements for electronic measuring apparatus	HD 401 S1	1980
381	-	Analogue signals for process control systems	-	-
382	1971	Analogue pneumatic signal for process control systems	-	-
801-3	1984	Electromagnetic compatibility for industrial-process measurement and control equipment - Part 3: Radiated electromagnetic field requirements	HD 481.3 S1	1987

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* HD 323.2.2 S1:1988 includes IEC 68-2-2A:1976
HD 323.2.3 S2:1987 includes A1:1984 to IEC 68-2-3
HD 323.2.6 S2:1988 includes A1:1983 + A2:1985 to IEC 68-2-6
HD 323.2 14 S2:1987 includes A1:1986 to IEC 68-2-14
HD 323.2.31 S1:1988 includes A1:1982 to IEC 68-2-31
HD 312 S1:1977 includes IEC 278A:1974

NORME INTERNATIONALE
INTERNATIONAL STANDARD

CEI
IEC
1003-1

Première édition
First edition
1991-03

Processus industriels - Instruments avec entrées analogiques et sorties à deux ou plusieurs états

Partie 1:
Méthodes d'évaluation des performances

Industrial-process control systems - Instruments with analogue inputs and two- or multi-state outputs

Part 1:
Methods of evaluating the performance

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE U

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL-PROCESS CONTROL SYSTEMS - INSTRUMENTS WITH ANALOGUE INPUTS AND TWO- OR MULTI-STATE OUTPUTS

Part 1: Methods of evaluating the performance

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 1003 has been prepared by Sub-Committee 65B: Elements of systems, of IEC Technical Committee No. 65: Industrial-process measurement and control. It forms the first edition of IEC 1003-1.

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

Six Months' Rule	Report on Voting
65B(CO)64 65B(SEC)112	65B(CO)72

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 is normative.

INTRODUCTION

The methods of evaluation specified in this part of the standard are intended for use by manufacturers to determine the performance of their products and by users, or independent testing establishments, to verify the manufacturer's performance specifications.

The test conditions in this part of the standard, for example the range of ambient temperatures and power supply, represent those which commonly arise in use. Consequently, the values specified herein shall be used where no other values are specified by the manufacturer.

The tests specified in this part of the standard are not necessarily sufficient for instruments specifically designed for unusually arduous duties. Conversely, a restricted series of tests may be suitable for instruments designed to perform within a more limited range of conditions.

It will be appreciated that the closest communication should be maintained between the evaluating body and the manufacturer. Note shall be taken of the manufacturer's specifications for the instrument when the test programme is being decided, and the manufacturer should be invited to comment on both the test programme and the results.

His comments on the results should be included in any report produced by the testing organization.

INDUSTRIAL-PROCESS CONTROL SYSTEMS - INSTRUMENTS WITH ANALOGUE INPUTS AND TWO- OR MULTI-STATE OUTPUTS

Part 1: Methods of evaluating the performance

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1 Scope

This International Standard is applicable to pneumatic and electric industrial-process instruments using measured values that are continuous signals in accordance with current international standards*. The other input value (i.e. the set point value) may be either a mechanical (position, force, etc.) or a standard signal.

It should be noted that while the tests specified herein cover instruments having such measured values, they can be applied in principle to instruments having other continuous measured values.

These instruments may be used as controllers or as switches for alarm and other similar purposes. The following wordings and letter symbols are in accordance with the use as controllers and can be easily adopted for switches.

Instruments with feedback are not covered by this standard.

Considerations other than the performance are listed in annex A (normative).

This part of the standard is intended to specify uniform methods of tests for the evaluation of the performance of industrial-process instruments with analogue measured values and two- or multi-state outputs.

2 Normative references

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

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* IEC 381 and IEC 382.