SVENSK STANDARD SS-EN 61514

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2002-11-06	1	1 (1+44)	SEK Område 65

Svenska Elektriska Kommissionen, SEK

Industriell processtyrning – Bestämning av egenskaper hos ventilinställare med pneumatisk utgång

Industrial-process control systems – Methods of evaluating the performance of valve positioners with pneumatic outputs

Som svensk standard gäller europastandarden EN 61514:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61514:2002.

Nationellt förord

Europastandarden EN 61514:2002

består av:

- **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
- **IEC 61514, First edition, 2000 - Industrial-process control systems - Methods of evaluating the performance of valve positioners with pneumatic outputs**

  utarbetad inom International Electrotechnical Commission, IEC.

ICS 23.060; 25.040.40

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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EUROPEAN STANDARD **EN 61514**

NORME EUROPÉENNE

EUROPÄISCHE NORM April 2002

ICS 23.060;25.040.40

English version

Industrial-process control systems - Methods of evaluating the performance of valve positioners with pneumatic outputs

(IEC 61514:2000, modified)

Systèmes de commande
des processus industriels -
Méthodes d'évaluation des performances
des positionneurs de vannes
à sorties pneumatiques
(CEI 61514:2000, modifiée)

Systeme der industriellen Prozesstechnik -
Methoden der Beurteilung
des Betriebsverhaltens
von Ventilstellungsreglern
mit pneumatischen Ausgängen
(IEC 61514:2000, modifiziert)

This European Standard was approved by CENELEC on 2001-12-01. 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.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, 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

Ref. No. EN 61514:2002 E

Foreword

The text of the International Standard IEC 61514:2000, prepared by SC 65B, Devices, of IEC TC 65, Industrial-process measurement and control, together with the common modifications prepared by SR 65B, was submitted to the formal vote and was approved by CENELEC as EN 61514 on 2001-12-01.

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) 2002-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-12-01

Endorsement notice

The text of the International Standard IEC 61514:2000 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

[redacted]

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.

Publication	Year	Title	EN/HD	Year
IEC 60050-161	1990	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
IEC 60068-2-1	1990	Environmental testing Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993
IEC 60068-2-2	1974	Part 2: Tests - Test B: Dry heat	EN 60068-2-2 [1)]	1993
IEC 60068-2-6 + corr. March	1995 1995	Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	1995
IEC 60068-2-31	1969	Part 2: Tests - Test Ec: Drop and topple, primarily for equipment-type specimens	EN 60068-2-31 [2)]	1993
IEC 60068-2-56	1988	Part 2: Tests - Test Cb: Damp heat, steady state, primarily for equipment	HD 323.2.56 S1	1990
IEC 60381-1	1982	Analogue signals for process control systems Part 1: Direct current signals	HD 452.1 S1	1984
IEC 60382	1991	Analogue pneumatic signal for process control systems	EN 60382	1993
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60902	1987	Industrial-process measurement and control - Terms and definitions	-	-
IEC 61000-4-3 (mod)	1995	Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3 [3)]	1996

[1)] EN 60068-2-2 includes supplement A:1976 to IEC 60068-2-2.
[2)] EN 60068-2-31 includes A1:1982 to IEC 60068-2-31.
[3)] EN 61000-4-3:1996 is superseded by EN 61000-4-3:2002 which is based on IEC 61000-4-3:2002.

Publication	Year	Title	EN/HD	Year
IEC 61000-4-4	1995	Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	1995
IEC 61000-4-5	1995	Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	1995
IEC 61000-4-8	1993	Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	1993
IEC 61010-1 (mod)	1990	Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General requirements	EN 61010-1 [4)]	1993
IEC 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
IEC 61187 (mod)	1993	Electrical and electronic measuring equipment - Documentation	EN 61187 + corr. March	1994 1995
IEC 61298-4	1995	Process measurement and control devices - General methods and procedures for evaluating performance Part 4: Evaluation report content	EN 61298-4	1995

[4)] EN 61010-1:1993 is superseded by EN 61010-1:2001 which is based on IEC 61010-1:2001.

CONTENTS

Page

Clause

Clause Page

INDUSTRIAL-PROCESS CONTROL SYSTEMS –

Methods of evaluating the performance of valve positioners with pneumatic outputs

1 Scope and object

This International Standard specifies tests designed to determine the static and dynamic performance of single-acting or double-acting positioners. The tests may be applied to positioners which receive standard analogue input signals (as specified in IEC 60381 and IEC 60382) and have a pneumatic output.

NOTE For positioners with pulsed or digital input signals, equivalent criteria may be applied. The methods described may not fully apply to positioners with digital controllers or positioners with pulsed outputs.

Testing may be conducted either on a positioner alone, independently of an actuator, or on a positioner mounted and connected to a specific actuator, as a combined unit. The text makes clear where different approaches are required.

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

The closest liaison should be maintained between the evaluating body and the manufacturer. Note should 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.

This standard is intended to provide definitions of positioner elements, actions, and characteristics, to specify uniform methods of measuring performance errors and effects of influence quantities on those characteristics, and to describe methods of reporting and evaluating the results of the measurement data obtained.

The test conditions described in this publication (for example range of ambient temperatures and power supply) relate to conditions which commonly arise in use. Consequently, the values specified shall be used where no other values are specified by the manufacturer or user. If other values are used, they should be stated. It is recognized that the manufacturer's specifications and instructions for installation and operation should apply during all steps.

The tests specified in this standard are not necessarily sufficient for instruments specifically designed for unusually arduous conditions. Conversely, a reduced series of tests may serve adequately for instruments designed to perform within a more limited range of conditions.

When a full evaluation, in accordance with this standard, is not required or possible, those tests which are required should be performed and the results reported in accordance with the relevant parts of this standard. In such cases, the test report should state that it does not cover the full number of tests specified herein.