



SLOVENSKI STANDARD

SIST EN 61207-6:1998

01-november-1998

Expression of performance of gas analyzers - Part 6: Photometric analyzers (IEC 61207-6:1994)

Expression of performance of gas analyzers -- Part 6: Photometric analyzers

Angabe zum Betriebsverhalten von Gasanalysatoren -- Teil 6: Fotometrische Analysatoren

Expression des qualités de fonctionnement des analyseurs de gaz -- Partie 6: Analyseurs photométriques

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Ta slovenski standard je istoveten z: EN 61207-6:1994

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ICS:

71.040.40 Kemijska analiza Chemical analysis

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Descriptors: Gaseous mixtures, constituents in gaseous mixtures, gas analyzers, performance of gas analyzers, photometric gas analyzers

ENGLISH VERSION

Expression of performance of gas analyzers
Part 6: Photometric analyzers
(IEC 1207-6:1994)

Expression des qualités de
fonctionnement des analyseurs de
de gaz
Partie 6: Analyseurs
photométriques
(CEI 1207-6:1994)

Angabe zum Betriebsverhalten von
Gasanalysatoren
Teil 6: Fotometrische
Analysatoren
(IEC 1207-6:1994)

This European Standard was approved by CENELEC on 1994-05-15. 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

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FOREWORD

The text of document 65D(CO)2, as prepared by Sub-Committee 65D: Analyzing equipment, of IEC Technical Committee 65: Industrial-process measurement and control, was submitted to the IEC-CENELEC parallel vote in September 1993.

The reference document was approved by CENELEC as EN 61207-6 on 15 May 1994.

The following dates were fixed:

- latest date of publication of
an identical national standard (dop) 1995-05-15
- latest date of withdrawal of
conflicting national standards (dow) 1995-05-15

For products which have complied with the relevant national standard before 1995-05-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-05-15.

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

ENDORSEMENT NOTICE

The text of the International Standard IEC 1207-6:1994 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
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654	series	Industrial-process measurement and series control equipment - Operating conditions	EN 60654 HD 413	series series
1207-1	1994	Expression of performance of gas analyzers - Part 1: General	EN 61207-1	1994

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC
1207-6**

Première édition
First edition
1994-02

**Expression des qualités de fonctionnement
des analyseurs de gaz –**

**Partie 6:
Analyseurs photométriques**

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Expression of performance of gas analyzers –

**Part 6:
Photometric analyzers**

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International Electrotechnical Commission
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For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

EXPRESSION OF PERFORMANCE OF GAS ANALYZERS -

Part 6: Photometric analyzers

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 cooperation 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, 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.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 1207-6 has been prepared by sub-committee 65D: Analyzing equipment, of IEC technical committee 65 Industrial-process measurement and control.

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

DIS	Report on voting
65D(CO)2	65D(CO)7

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

IEC 1207-6 constitutes part 6 of the 1207 series of publications under the general title: *Expression of performance of gas analyzers*.

Part 1: General

Part 2: Oxygen in gas

Part 6: Photometric analyzers

Parts 3, 4 and 5 are under consideration.

Annex A forms an integral part of this standard.

Annex B is for information only.

INTRODUCTION

Photometric analyzers utilize detectors which respond to wavelengths in the ultraviolet, visible and infrared part of the electromagnetic spectrum (wavelengths 180 nm to 20 μm). Within this range of wavelengths many gases have absorption/emission bands. Analyzers designed to utilize these bands employ several techniques, including sensing of absorbed radiation, and sensing of emitted radiation from artificially excited molecules, and sensing of the radiation intensity/wavelength derivative. The volume of gas measured may be contained within a sample cell, this sample may or may not be conditioned, or the concentration may be directly measured within the sample gas.

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EXPRESSION OF PERFORMANCE OF GAS ANALYZERS –

Part 6: Photometric analyzers

1 Scope and object

This part of IEC 1207 applies to all aspects of analyzers using photometric techniques for the measurement of concentration of one or more components in a mixture of gases or vapours. It should be used in conjunction with IEC 1207-1.

It applies to analyzers using non-dispersive and dispersive wavelength selection and using absorption, emission, or wavelength derivative techniques.

It applies to analyzers which receive either a conditioned or unconditioned sample of gas either under vacuum, at ambient pressure or pressurized.

It applies to analyzers which measure gas concentrations directly within the sample gas.

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The object of this part is:

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- to specify the terminology and definitions related to the functional performance of gas analyzers, utilizing a photometric analyzer, for the continuous measurement of gas or vapour concentration in a source gas;
- to unify methods used in making and verifying statements on the functional performance of such analyzers;
- to specify what tests should be performed to determine the functional performance and how such tests should be carried out;
- to provide basic documents to support the application of standards of quality assurance ISO 9001, ISO 9002 and ISO 9003.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 1207. 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 1207 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 654: *Operating conditions for industrial-process measurement and control equipment*

IEC 1207-1: 1994, *Expression of performance of gas analyzers – Part 1: General*