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STN	**Riadenie priemyselných procesov. Bezpečnosť analyzátorových domčekov.**	**STN EN 61285** 36 6541

Industrial-process control - Safety of analyzer houses

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/15

Obsahuje: EN 61285:2015, IEC 61285:2015

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NORME EUROPÉENNE
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EN 61285

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ICS 13.110; 25.040.40

Supersedes EN 61285:2004

English Version

Industrial-process control - Safety of analyzer houses (IEC 61285:2015)

Commande des processus industriels - Sécurité des bâtiments pour analyseurs (IEC 61285:2015)

Prozessautomatisierung - Sicherheit von Analysengeräteräumen (IEC 61285:2015)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 65B/954/FDIS, future edition 3 of IEC 61285, prepared by SC 65B "Measurement and control devices", of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61285:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-12-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-03-31

This document supersedes EN 61285:2004.

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Endorsement notice

The text of the International Standard IEC 61285:2015 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60079-0 (mod)	2011	Explosive atmospheres -- Part 0: Equipment - General requirements	EN 60079-0	2012
-	-		+A11	2013
IEC 60079-10-1	2008	Explosive atmospheres -- Part 10-1: Classification of areas - Explosive gas atmospheres	EN 60079-10-1	2009
IEC 60079-20-1	2010	Explosive atmospheres - Part 20-1: Material characteristics for gas and vapour classification - Test methods and data	EN 60079-20-1	2010

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Industrial-process control – Safety of analyser houses

Commande des processus industriels – Sécurité des bâtiments pour analyseurs

IEC 61285:2015-02(en-fr)

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INTERNATIONAL STANDARD

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Industrial-process control – Safety of analyser houses

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INDUSTRIAL-PROCESS CONTROL – SAFETY OF ANALYSER HOUSES

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61285 has been prepared by subcommittee 65B: Measurement and control devices, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition published in 2004. This edition constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

a) incorporation of previously issued corrigendum;
b) minor updates to several sections and references.

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

FDIS	RVD
65B/954/FDIS	65B/966/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Process analysers measure the characteristics of a process stream continuously and automatically. The process sample is introduced automatically and the system is designed for unattended operation and minimal maintenance.

The placement of devices for process analysis in analyser houses is beneficial for technical and economic reasons:

– in order to facilitate appropriate environmental conditions;

– to simplify servicing and maintenance issues;

– to enable the use of a common infrastructure (see 3.5).

This document is designed to set forth minimum safety requirements for typical analyser houses (AHs). It is superseded in all cases by national, local, or corporate requirements, if other or more stringent requirements will apply.

INDUSTRIAL-PROCESS CONTROL – SAFETY OF ANALYSER HOUSES

1 Scope

This International Standard describes the physical requirements for the safe operation of the process analyser measuring system installed in an analyser house (AH) in order to ensure its protection against fire, explosion and health hazards. This standard applies for analyser houses with inner and/or external potential explosive atmospheres and it applies to hazards caused by toxic substances or asphyxiant gases. (Refer to national guidelines on toxic hazards.)

This standard does not address facilities where solids (dust, powder, fibres) are the hazard.

This standard does not seek to address all functional safety issues related to analyser houses.

Clause 4 addresses the location of the AH and connection within the process plant areas.

Clause 5 addresses the design, construction and layout of the AH. It does not address parts of the analyser measuring system installed in other locations such as sample conditioning rooms (SCR) or switchgear rooms.

Clause 6 addresses measures for reducing the danger of explosion for AHs while permitting maintenance of equipment with the power on and the case open.

For most fluids, the major constraint is that the concentration of vapours, which are toxic for personnel, is lower than the lower explosive (flammable) limit (LEL) (see Clause 7).

Using n-Pentane as an example, the LEL is 1,4 % or 14 000 × 10^{-6}, the level immediately dangerous to life or health (which is the maximum level from which a worker could escape within 30 min without any escape-impairing symptoms or any irreversible health effects) is only 0,5 % or 5 000 × 10^{-6}.

Clause 7 addresses those measures for protecting personnel from materials in the atmosphere of AHs that are hazardous to health.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60079-0:2011, *Explosive atmospheres – Part 0: General requirements*

IEC 60079-10-1:2008, *Explosive atmospheres – Part 10-1: Classification of areas – Explosive gas atmospheres*

IEC 60079-20-1:2010, *Explosive atmospheres – Part 20-1: Material characteristics for gas and vapour classification – Test methods and data*