

Industrial-process control - Safety of analyzer houses

This document is a preview generated by EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 61285:2015 sisaldab Euroopa standardi EN 61285:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 61285:2015 consists of the English text of the European standard EN 61285:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 03.04.2015.	Date of Availability of the European standard is 03.04.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.110, 25.040.40

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Aru 10, 10317 Tallinn, Eesti; koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

EN 61285

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2015

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)

This European Standard was approved by CENELEC on 2015-03-31. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

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

Document is a preview generated by EVS

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60079-0 (mod)	2011	Explosive atmospheres -- Part 0: Equipment - General requirements	0:EN 60079-0	2012
-	-		+A11	2013
IEC 60079-10-1	2008	Explosive atmospheres -- Part 10-1: Classification of areas - Explosive gas atmospheres	10-1: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	20-1:EN 60079-20-1	2010

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
4 Location of AHs and connection within the process plant areas	11
4.1 General.....	11
4.2 Response time.....	11
4.3 Utilities	11
4.4 Safety	11
4.4.1 Location	11
4.4.2 Escape	11
4.4.3 Area classification	11
4.4.4 Peripheral hazards	11
4.5 Access.....	11
5 Design, construction and layout of AHs	12
5.1 General.....	12
5.2 General requirements	12
5.3 Dimensions and layout.....	12
5.4 Structural requirements.....	12
5.4.1 Construction materials	12
5.4.2 Walls	13
5.4.3 Floors and foundation.....	13
5.4.4 Doors	13
5.4.5 Windows.....	13
5.4.6 Roof	13
5.5 Equipment	13
5.5.1 Lighting	13
5.5.2 Communications	13
5.5.3 Piping, tubing and valves.....	13
5.5.4 Utilities	14
5.5.5 Fire extinguishers	14
5.5.6 Ventilation	14
5.5.7 Temperature.....	15
5.6 Labelling/instructions/documentation	15
5.6.1 Entrance.....	15
5.6.2 Alarms	15
5.6.3 Safety procedures	15
5.6.4 Additional data.....	16
6 Explosion protection of AHs.....	16
6.1 General.....	16
6.2 General requirements	16
6.3 Protection of AHs against explosion hazards by means of artificial ventilation.....	16
6.3.1 Classification.....	16
6.3.2 Requirements for AHs where the explosion hazard originates externally.....	17

6.3.3	Requirements for AHs where the explosion hazard originates from internal gases or vapours	17
6.3.4	Requirements for AHs where the explosion hazard originates from internal liquids	18
6.3.5	Requirements for AHs where the explosion hazard originates from any combination of the above	19
6.4	Protection of AHs against explosion hazards by means of natural ventilation	19
6.4.1	General	19
6.4.2	Ventilation requirements	19
6.4.3	Heating requirements	20
6.4.4	Gas detectors	20
7	Measures to prevent health hazards to personnel in AHs	20
7.1	General	20
7.2	Guidelines	20
7.3	General requirements	20
7.4	Safety measures	21
7.5	External hazards	22
7.6	Additional measures for abnormal working conditions	22
7.7	Labelling/instructions/documentation	23
Annex A (normative)	Leakage risk of modules in the AH	24
A.1	General	24
A.2	Modules with negligible leakage risk	24
A.3	Modules with limited leakage risk	24
A.3.1	General	24
A.3.2	Guidance for evaluating modules	25
Bibliography	26
Table A.1 – Module evaluation	25

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.

This document is a preview generated by EVS