



SLOVENSKI STANDARD

SIST EN 62282-3-300:2013

01-marec-2013

Tehnologije gorivnih celic - 3-300. del: Nepremični elektroenergetski sistemi z gorivnimi celicami - Namestitvev

Fuel cell technologies - Part 3-300: Stationary fuel cell power systems - Installation

Brennstoffzellentechnologien - Teil 3-300: Stationäre Brennstoffzellen-Energiesysteme - Errichtung

Technologies des piles à combustible - Partie 3-300: Systèmes à piles à combustible stationnaires - Installation

iTeh STANDARD PREVIEW

(standards.iteh.ai)

[SIST EN 62282-3-300:2013](https://standards.iteh.ai/catalog/standards/sist/046c568f-5cfe-4bb7-8f4e-04b7910cc05c/sist-en-62282-3-300-2013)

Ta slovenski standard je istoveten z: EN 62282-3-300:2012

ICS:

27.070 Gorilne celice Fuel cells

SIST EN 62282-3-300:2013 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62282-3-300:2013

<https://standards.iteh.ai/catalog/standards/sist/04fc568f-5cfe-4bb7-8f4e-04b7910ee65c/sist-en-62282-3-300-2013>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 62282-3-300

October 2012

ICS 27.070

Supersedes EN 62282-3-3:2008

English version

**Fuel cell technologies -
Part 3-300: Stationary fuel cell power systems -
Installation
(IEC 62282-3-300:2012)**

Technologies des piles à combustible -
Partie 3-300: Systèmes à piles à
combustible stationnaires -
Installation
(CEI 62282-3-300:2012)

Brennstoffzellentechnologien -
Teil 3-300: Stationäre-Brennstoffzellen-
Energiesysteme -
Installation
(IEC 62282-3-300:2012)

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

This European Standard was approved by CENELEC on 2012-07-19. 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.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 105/377/FDIS, future edition 1 of IEC 62282-3-300, prepared by IEC/TC 105 "Fuel cell technologies" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62282-3-300:2012.

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) 2013-04-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-07-19

This document supersedes EN 62282-3-3:2008.

EN 62282-3-300:2012 includes the following significant technical changes with respect to EN 62282-3-3:2008:

- addition in the scope to avoid overlapping between EN 62282-3-100 and EN 62282-3-300 concerning safety related requirements;
- updating normative references and definitions;
- requirements applicable to the stationary fuel cell removed, so that the target of this standard focuses on "installation risks";
- level of CO reduced for small fuel cell power systems which exhaust directly into a utility shed where they are installed, and where the shed is to ensure safety;
- requirement for using a combustible gas detection system modified;
- reference to the gas valve standard ISO 23551-1 added.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

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 62282-3-300:2012 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60079-10	Series	Explosive atmospheres - Part 10: Classification of areas	EN 60079-10	Series
IEC 60079-29-1	-	Explosive atmospheres - Part 29-1: Gas detectors - Performance requirements of detectors for flammable gases	EN 60079-29-1	-
IEC 60079-29-2	-	Explosive atmospheres - Part 29-2: Gas detectors - Selection, installation, use and maintenance of detectors for flammable gases and oxygen	EN 60079-29-2	-
IEC 62282-3-100	2012	Fuel cell technologies - Part 3-100: Stationary fuel cell power systems - Safety	EN 62282-3-100	2012
ISO 1182	-	Reaction to fire tests for building products - Non-combustibility test	EN ISO 1182	-
ISO 14121	-	Safety of machinery - Principles of risk assessment	-	-
ISO 23551-1	-	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 1: Automatic valves	-	-

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 62282-3-300:2013](#)

<https://standards.iteh.ai/catalog/standards/sist/04fc568f-5cfe-4bb7-8f4e-04b7910ee65c/sist-en-62282-3-300-2013>



IEC 62282-3-300

Edition 1.0 2012-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fuel cell technologies –
Part 3-300: Stationary fuel cell power systems – Installation

Technologies des piles à combustible –
Partie 3-300: Systèmes à piles à combustible stationnaires – Installation

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

R

ICS 27.070

ISBN 978-2-83220-158-9

Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	8
3 Terms and definitions	9
4 General safety requirements and strategy	10
5 Siting considerations	11
5.1 General siting.....	11
5.2 Outdoor installations	12
5.2.1 Air intakes and vents	12
5.2.2 Air intakes and exhaust	12
5.2.3 Exhaust outlets.....	12
5.2.4 Area around outlets	12
5.2.5 Enclosures	12
5.3 Indoor installations	12
5.3.1 General	12
5.3.2 Small fuel cell power systems.....	13
5.4 Rooftop installation.....	13
6 Ventilation and exhaust	13
6.1 General	13
6.2 Ventilation	13
6.3 Exhaust system	13
6.3.1 General	13
6.3.2 Small fuel cell systems	13
6.4 Purging and venting processes.....	13
7 Fire protection and gas detection.....	14
7.1 Fire protection and detection	14
7.1.1 Site fire protection	14
7.1.2 Combustible gas detection (indoor installations only).....	14
7.2 Fire prevention and emergency planning	14
8 Interconnections with site interfaces	15
8.1 General.....	15
8.2 Connections to fuel supplies – General	15
8.3 Fuel shut-off and piping.....	15
8.4 Connections to auxiliary media supply and media disposal	15
8.4.1 General	15
8.4.2 Combustible auxiliary gases	15
8.4.3 Non-combustible or inert auxiliary gases	15
8.4.4 Water	15
8.4.5 Waste water and condensate disposal	16
8.4.6 Discharge pipe	16
9 Environmental requirements	16
10 Approval tests	16
10.1 Gas leakage	16

10.2 Site specific shut-down devices	16
11 Maintenance tests	16
12 Documentation	17
12.1 Markings and instructions	17
12.2 Inspection checklist	17
12.3 Installation manual	17
12.4 User's information manual	17
12.5 Maintenance manual	17
Figure 1 – Fuel cell power system	8

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 62282-3-300:2013](https://standards.iteh.ai/catalog/standards/sist/04fc568f-5cfe-4bb7-8f4e-04b7910ee65c/sist-en-62282-3-300-2013)

<https://standards.iteh.ai/catalog/standards/sist/04fc568f-5cfe-4bb7-8f4e-04b7910ee65c/sist-en-62282-3-300-2013>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FUEL CELL TECHNOLOGIES –

Part 3-300: Stationary fuel cell power systems –
Installation

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62282-3-300 has been prepared by IEC technical committee 105: Fuel cell technologies.

IEC 62282-3-300 cancels and replaces IEC 62282-3-3, published in 2007, and constitutes a technical revision.

IEC 62282-3-300 includes the following significant technical changes with respect to IEC 62282-3-3:

- addition in the scope to avoid overlapping between IEC 62282-3-100 and IEC 62282-3-300 concerning safety related requirements;
- updating normative references and definitions;
- requirements applicable to the stationary fuel cell removed, so that the target of this standard focuses on "installation risks";

- level of CO reduced for small fuel cell power systems which exhaust directly into a utility shed where they are installed, and where the shed is to ensure safety;
- requirement for using a combustible gas detection system modified;
- reference to the gas valve standard ISO 23551-1 added.

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

FDIS	Report on voting
105/377/FDIS	105/388/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.

A list of all parts of the IEC 62282 series, under the general title *Fuel cell technologies*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62282-3-300:2013

<https://standards.iteh.ai/catalog/standards/sist/04fc568f-5cfe-4bb7-8f4e-04b7910ee65c/sist-en-62282-3-300-2013>