



SLOVENSKI STANDARD
SIST EN IEC 62282-3-100:2020

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Nadomešča:

SIST EN 62282-3-100:2012

Tehnologije gorivnih celic - 3-100. del: Nepremični elektroenergetski sistemi z gorivnimi celicami - Varnost (IEC 62282-3-100:2019)

Fuel cell technologies - Part 3-100: Stationary fuel cell power systems - Safety (IEC 62282-3-100:2019)

Brennstoffzellentechnologien - Teil 3-100: Stationäre Brennstoffzellen-Energiesysteme - Sicherheit (IEC 62282-3-100:2019)

Technologies des piles à combustible - Partie 3-100: Systèmes à piles à combustible stationnaires - Sécurité (IEC 62282-3-100:2019)

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ICS:

27.070 Gorilne celice Fuel cells

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EUROPEAN STANDARD

EN IEC 62282-3-100

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2020

ICS 27.070

Supersedes EN 62282-3-100:2012 and all of its
amendments and corrigenda (if any)

English Version

**Fuel cell technologies - Part 3-100: Stationary fuel cell power
systems - Safety
(IEC 62282-3-100:2019)**Technologies des piles à combustible - Partie 3-100:
Systèmes à piles à combustible stationnaires - Sécurité
(IEC 62282-3-100:2019)Brennstoffzellentechnologien - Teil 3-100: Stationäre
Brennstoffzellen-Energiesysteme - Sicherheit
(IEC 62282-3-100:2019)

This European Standard was approved by CENELEC on 2019-03-19. 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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 62282-3-100:2020 (E)**European foreword**

The text of document 105/695/FDIS, future edition 2 of IEC 62282-3-100, prepared by IEC/TC 105 "Fuel cell technologies" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62282-3-100:2020.

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) 2020-10-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-04-10

This document supersedes EN 62282-3-100:2012 and all of its amendments and corrigenda (if any).

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The text of the International Standard IEC 62282-3-100:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60079-20-1	NOTE	Harmonized as EN 60079-20-1
IEC 60812	NOTE	Harmonized as EN IEC 60812
IEC 61025	NOTE	Harmonized as EN 61025

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where 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 60079-2	-	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"	2:EN 60079-2	-
IEC 60079-10-1	-	Explosive atmospheres -- Part 10-1: Classification of areas - Explosive gas atmospheres	10-1:EN 60079-10-1	-
IEC 60079-29-1- (mod)	-	Explosive atmospheres - Part 29-1: detectors - Performance requirements of detectors for flammable gases	EN 60079-29-1	-
IEC 60204-1 (mod)	-	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	-
IEC 60335-1 (mod)	2010	Household and similar electrical appliances - Safety - Part 1: General requirements	EN 60335-1	2012
			+A11	2014
			+A12	2017
			+AC	2014
			+A14	2019
			+A13	2017
			+prA15	
			+prA17	
			+prA16	
IEC 60335-2-51	-		-	-
IEC 60529	-	Classification of degrees of protection provided by enclosures	HD 365 S3	-
IEC 60730-1 (mod)	-	Automatic electrical controls - Part 1: General requirements	EN 60730-1	-
			+prA	
IEC 60730-2-5- (mod)	-	Automatic electrical controls - Part 2-5: Particular requirements for automatic electrical burner control systems	EN 60730-2-5	-
IEC 60730-2-6	-	Automatic electrical controls - Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements	EN 60730-2-6	-
IEC 60730-2-9	-	Automatic electrical controls - Part 2-9: Particular requirements for temperature sensing control	EN IEC 60730-2-9	-

EN IEC 62282-3-100:2020 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60950-1 (mod)	-	Information technology equipment - Safety	EN 60950-1	-
		- Part 1: General requirements	+A12	2011
			+AC	2011
			+prA13	
			+A11	2009
			+AC	
IEC 61000-3-2	-		EN IEC 61000-3-2	-
IEC 61000-3-3	-	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	EN 61000-3-3	-
IEC 61000-3-11	-		EN IEC 61000-3-11	-
IEC 61000-6-1	-	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	EN IEC 61000-6-1	-
			+prA	
IEC 61000-6-2	-	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	EN IEC 61000-6-2	-
			+prA	
IEC 61000-6-2	-	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	EN IEC 61000-6-2	-
IEC 61000-6-4	-		+prA	
IEC 61508	series	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1: General requirements (see http://www.iec.ch/functionalsafety)	EN IEC 61000-6-4 of EN 61508	series
IEC 61511-1	-	Functional safety - Safety instrumented systems for the process industry sector - Part 1: Framework, definitions, system, hardware and application programming requirements	EN 61511-1	-
IEC 62040-1-1	-		EN 62040-1-1	-
			+EN 62040-1-2004	
			1:2003/corrigendum	
			Aug. 2004	
IEC 62061	-	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems	EN 62061	-
			+EN	2010
			62061:2005/corrigendum	
			Feb. 2010	
IEC 62368-1	-	Audio/video, information and communication technology equipment - Part 1: Safety requirements	EN IEC 62368-1	-
			+prAB	
ISO 3864-2	-	Graphical symbols - Safety colours and safety signs - Part 2: Design principles for product safety labels		-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 4413	-	Hydraulic fluid power_ - General rules and safety requirements for systems and their components	EN ISO 4413	-
ISO 4414	-	Pneumatic fluid power_ - General rules and safety requirements for systems and their components	EN ISO 4414	-
ISO 5388	-	Stationary air compressors - Safety rules and code of practice		-
ISO 10439	series		EN ISO 10439	series
ISO 10440-1	-		EN ISO 10440-1	-
ISO 10440-2	-	Petroleum and natural gas industries - Rotary-type positive-displacement compressors -- Part 2: Packaged air compressors (oil-free)	EN ISO 10440-2	-
ISO 10442	-	Petroleum, chemical and gas service industries - Packaged, integrally geared centrifugal air compressors	EN ISO 10442	-
ISO 12499	-	Industrial fans -- Mechanical safety of fans -- Guarding	EN ISO 12499	-
ISO 13631	-	Petroleum and natural gas industries - Packaged reciprocating gas compressors	EN ISO 13631	-
ISO 13707	-	Petroleum and natural gas industries_ - Reciprocating compressors		-
ISO 13709	-	Centrifugal pumps for petroleum, petrochemical and natural gas industries	EN ISO 13709	-
ISO 13849-1	-	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design	EN ISO 13849-1	-
ISO 13850	-	Safety of machinery - Emergency stop function - Principles for design	EN ISO 13850	-
ISO 14847	-	Rotary positive displacement pumps - Technical requirements	EN ISO 14847	-
ISO 15649	-	Petroleum and natural gas industries_ - Piping		-
ISO 16111	-	Transportable gas storage devices --- Hydrogen absorbed in reversible metal hydride		-
ISO 23550	-	Safety and control devices for gas burners and gas-burning appliances_ - General requirements		-
ISO 23551-1	-	Safety and control devices for gas burners and gas-burning appliances_ - Particular requirements_ - Part_1: Automatic valves		-
ISO 23553-1	-		EN ISO 23553-1	-
ISO 26142	-	Hydrogen detection apparatus -- Stationary applications		-
IEC/TS 61000-3-4	-	Electromagnetic compatibility (EMC) - Part-3-4: Limits - Limitation of emission of harmonic currents in low-voltage power supply systems for equipment with rated current greater than 16 A		-
IEC/TS 61000-3-5	-	Electromagnetic compatibility (EMC) - Part-3-5: Limits - Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 75 A		-

EN IEC 62282-3-100:2020 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/IEEE 60079-30-- 1 (mod)		Explosive atmospheres - Part Electrical resistance trace heating - General and testing requirements	30-1:EN 60079-30-1	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



Fuel cell technologies –
Part 3-100: Stationary fuel cell power systems – Safety

Technologies des piles à combustible –
Partie 3-100: Systèmes à piles à combustible stationnaires – Sécurité

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FUEL CELL TECHNOLOGIES –

Part 3-100: Stationary fuel cell power systems – Safety

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 62282-3-100 has been prepared by IEC technical committee 105: Fuel cell technologies.

This second edition cancels and replaces the first edition published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) recognition that fuel carrying components qualified to leakage standards (soundness) need not be considered as potential flammable leak sources;
- b) new Annex C for small power systems; and
- c) clarifications for numerous requirements and tests.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
105/695/FDIS	105/705/RVD

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

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

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

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

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

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