

Accionamientos eléctricos de potencia de velocidad variable. Parte 5-2: Requisitos de seguridad. Funcional  
(Ratificada por la Asociación Española de Normalización en junio de 2017.)

Accionamientos eléctricos de potencia de velocidad variable. Parte 5-2: Requisitos de seguridad. Funcional (Ratificada por la Asociación Española de Normalización en junio de 2017.)

*Adjustable speed electrical power drive systems - Part 5-2: Safety requirements - Functional (Endorsed by Asociación Española de Normalización in June of 2017.)*

*Entraînements électriques de puissance à vitesse variable - Partie 5-2: Exigences de sécurité - Fonctionnelle (Entérinée par l'Asociación Española de Normalización en juin 2017.)*

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**EUROPEAN STANDARD**  
**NORME EUROPÉENNE**  
**EUROPÄISCHE NORM**

**EN 61800-5-2**

April 2017

ICS 13.110; 29.200

Supersedes EN 61800-5-2:2007

English Version

**Adjustable speed electrical power drive systems - Part 5-2:  
Safety requirements - Functional  
(IEC 61800-5-2:2016)**

Entraînements électriques de puissance à vitesse variable -  
Partie 5-2: Exigences de sécurité - Fonctionnelle  
(IEC 61800-5-2:2016)

Elektrische Leistungsantriebssysteme mit einstellbarer  
Drehzahl - Teil 5-2: Anforderungen an die Sicherheit -  
Funktionale Sicherheit  
(IEC 61800-5-2:2016)

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Ref. No. EN 61800-5-2:2017 E

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## European foreword

The text of document 22G/332/FDIS, future edition 2 of IEC 61800-5-2, prepared by SC 22G "Adjustable speed electric drive systems incorporating semiconductor power converters" of IEC/TC 22 "Power electronic systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61800-5-2:2017.

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) 2017-10-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-04-28

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

IEC 60300-3-1:2003	NOTE	Harmonized as 60300-3-1:2003.
IEC 60664-1:2007	NOTE	Harmonized as EN 60664-1:2007.
IEC 606643	NOTE	Harmonized as EN 60664-3.
IEC 61025	NOTE	Harmonized as EN 61025.
IEC 61078	NOTE	Harmonized as EN 61078.
IEC 61165	NOTE	Harmonized as EN 61165.
IEC 61508-4:2010	NOTE	Harmonized as EN 61508-4:2010.
IEC 61508-5:2010	NOTE	Harmonized as EN 61508-5:2010.
IEC 61511 (series)	NOTE	Harmonized as EN 61511 (series).
IEC 61511-1	NOTE	Harmonized as EN 61511-1.
IEC 61513	NOTE	Harmonized as EN 61513.
IEC 61558 (series)	NOTE	Harmonized as EN 61558 (series).
IEC 61558-1:2005	NOTE	Harmonized as EN 61558-1:2005.
IEC 61558-1:2005/AMD1:2009	NOTE	Harmonized as EN 61558-1:2005/A1:2009.

IEC 61784-3	NOTE	Harmonized as EN 61784-3.
IEC 62061	NOTE	Harmonized as EN 62061.
ISO 13849-2	NOTE	Harmonized as EN ISO 13849-2.

**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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60204-1	-	Safety of machinery - Electrical equipment of machines -- Part 1: General requirements	EN 60204-1	-
IEC 61000-2-4	2002	Electromagnetic compatibility (EMC) -- Part EN 61000-2-4 2-4: Environment - Compatibility levels in industrial plants for low-frequency conducted disturbances	EN 61000-2-4	2002
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) -- Part EN 61000-4-2 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) -- Part EN 61000-4-3 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
+ A1	2007		+ A1	2008
+ A2	2010		+ A2	2010
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) -- Part EN 61000-4-4 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	2014	Electromagnetic compatibility (EMC) - Part EN 61000-4-5 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) -- Part EN 61000-4-6 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
IEC 61000-4-29	2000	Electromagnetic compatibility (EMC) -- Part EN 61000-4-29 4-29: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests	EN 61000-4-29	2000
IEC 61000-4-34	2005	Electromagnetic compatibility (EMC) -- Part EN 61000-4-34 4-34: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current more than 16 A per phase	EN 61000-4-34	2007
IEC 61000-6-7	2014	Electromagnetic compatibility (EMC) - Part EN 61000-6-7 6-7: Generic standards - Immunity requirements for equipment intended to perform functions in a safety-related system (functional safety) in industrial locations	EN 61000-6-7	2015

IEC 61400-21	2008	Wind turbines -- Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines	EN 61400-21	2008
IEC 61508-1	2010	Functional safety of electrical/electronic/programmable electronic safety-related systems -- Part 1: General requirements	EN 61508-1	2010
IEC 61508-2	2010	Functional safety of electrical/electronic/programmable electronic safety-related systems -- Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems	EN 61508-2	2010
IEC 61508-3	2010	Functional safety of electrical/electronic/programmable electronic safety-related systems -- Part 3: Software requirements	EN 61508-3	2010
IEC 61508-6	2010	Functional safety of electrical/electronic/programmable electronic safety-related systems -- Part 6: Guidelines on the application of IEC 61508-2 and IEC 61508-3	EN 61508-6	2010
IEC 61508-7	2010	Functional safety of electrical/electronic/programmable electronic safety-related systems -- Part 7: Overview of techniques and measures	EN 61508-7	2010
IEC 61800-1	-	Adjustable speed electrical power drive systems -- Part 1: General requirements - Rating specifications for low voltage adjustable speed d.c. power drive systems	EN 61800-1	-
IEC 61800-2	2015	Adjustable speed electrical power drive systems -- Part 2: General requirements - Rating specifications for low voltage adjustable speed a.c. power drive systems	EN 61800-2	2015
IEC 61800-3	2004	Adjustable speed electrical power drive systems -- Part 3: EMC requirements and specific test methods	EN 61800-3	2004
IEC 61800-4	-	Adjustable speed electrical power drive systems -- Part 4: General requirements - Rating specifications for a.c. power drive systems above 1 000 V a.c. and not exceeding 35 kV	EN 61800-4	-
IEC 61800-5-1	2007	Adjustable speed electrical power drive systems - Part 5-1: Safety requirements - Electrical, thermal and energy	EN 61800-5-1	2007
ISO 13849-1	2006	Safety of machinery - Safety-related parts of control systems -- Part 1: General principles for design	-	-
ISO 13849-2	2012	Safety of machinery - Safety-related parts of control systems - Part 2: Validation	EN ISO 13849-2	2012



# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Adjustable speed electrical power drive systems –  
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Partie 5-2: Exigences de sécurité – Fonctionnelle**



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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Adjustable speed electrical power drive systems –  
Part 5-2: Safety requirements – Functional**

**Entraînements électriques de puissance à vitesse variable –  
Partie 5-2: Exigences de sécurité – Fonctionnelle**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ELECTROTECHNIQUE  
INTERNATIONALE

ICS 13.110; 29.200

ISBN 978-2-8322-3302-3

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