



BSI Standards Publication

Adjustable speed electrical power drive systems

Part 3: EMC requirements and specific test methods for PDS and machine tools

This is a preview of BS EN IEC 61800-3:2023. [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN IEC 61800-3:2023. It is identical to IEC 61800-3:2022, incorporating corrigendum April 2025. It supersedes BS EN IEC 61800-3:2018, which is withdrawn.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by IEC corrigendum April 2025 is indicated in the text by AC1 AC1.

The UK participation in its preparation was entrusted to Technical Committee PEL/22, Power electronics.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Published by BSI Standards Limited 2025

ISBN 978 0 539 36911 3

ICS 29.200; 33.100.01

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2023.

Amendments/corrigenda issued since publication

Date	Text affected
31 May 2025	Implementation of IEC corrigendum April 2025

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EUROPÄISCHE NORM

October 2023

ICS 29.200; 33.100.01

Supersedes EN IEC 61800-3:2018

English Version

Adjustable speed electrical power drive systems - Part 3: EMC
requirements and specific test methods for PDS and machine
tools
(IEC 61800-3:2022)

Entraînements électriques de puissance à vitesse variable -
Partie 3: Exigences de CEM et méthodes d'essai
spécifiques pour les PDS et machines-outils
(IEC 61800-3:2022)

Drehzahlveränderbare elektrische Antriebssysteme - Teil 3:
EMV-Anforderungen einschließlich spezieller Prüfverfahren
für Antriebssysteme und Werkzeugmaschinen mit darin
enthaltenen Antriebssystemen
(IEC 61800-3:2022)

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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

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European foreword

The text of document 22G/461/FDIS, future edition 4 of IEC 61800-3, prepared by SC 22G "Adjustable speed electric power drive systems (PDS)" of IEC/TC 22 "Power electronic systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61800-3:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-05-09 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2026-08-09 document have to be withdrawn

This document supersedes EN IEC 61800-3:2018 and all of its amendments and corrigenda (if any).

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The text of the International Standard IEC 61800-3:2022 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 standard indicated:

IEC 60038:2009	NOTE	Approved as EN 60038:2011
IEC 60146-1-1:2009	NOTE	Approved as EN 60146-1-1:2010 (not modified)
IEC 60146-2:1999	NOTE	Approved as EN 60146-2:2000 (not modified)
IEC 60364-1:2005	NOTE	Approved as HD 60364-1:2008 + A11:2017
IEC 61000-2-2:2002	NOTE	Approved as EN 61000-2-2:2002 (not modified)
IEC 61000-2-2:2002/A1:2017	NOTE	Approved as EN 61000-2-2:2002/A1:2017 (not modified)
IEC 61000-2-2:2002/A2:2018	NOTE	Approved as EN 61000-2-2:2002/A2:2019 (not modified)
IEC 61000-2-12:2003	NOTE	Approved as EN 61000-2-12:2003 (not modified)
IEC 61000-4-7:2002	NOTE	Approved as EN 61000-4-7:2002 (not modified)
IEC 61000-4-8:2009	NOTE	Approved as EN 61000-4-8:2010 (not modified)
IEC 61000-4-9:2016	NOTE	Approved as EN 61000-4-9:2016 (not modified)
IEC 61000-4-10:2016	NOTE	Approved as EN 61000-4-10:2017 (not modified)
IEC 61000-6-1:2016	NOTE	Approved as EN IEC 61000-6-1:2019 (not modified)

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IEC 61000-6-3:2020	NOTE	Approved as EN IEC 61000-6-3:2021 (not modified)
IEC 61000-6-4:2018	NOTE	Approved as EN IEC 61000-6-4:2019 (not modified)
IEC 61000-6-5:2015	NOTE	Approved as EN 61000-6-5:2015 (not modified)
IEC 61000-6-8:2020	NOTE	Approved as EN IEC 61000-6-8:2020 (not modified)
IEC 61140:2016	NOTE	Approved as EN 61140:2016 (not modified)
IEC 61557-8:2014	NOTE	Approved as EN 61557-8:2015 (not modified)
IEC 61400-21-1:2019	NOTE	Approved as EN IEC 61400-21-1:2019 (not modified) + A11:2020
IEC 61557-9:2014	NOTE	Approved as EN 61557-9:2015 (not modified)
IEC 61800-1:2021	NOTE	Approved as EN IEC 61800-1:2021 (not modified)
IEC 61800-2:2021	NOTE	Approved as EN IEC 61800-2:2021 (not modified)
IEC 61800-5-1:2007	NOTE	Approved as EN 61800-5-1:2007 (not modified) + A11:2021
IEC 61800-5-1:2007/A1:2016	NOTE	Approved as EN 61800-5-1:2007/A1:2017 (not modified)
CISPR 14-1:2020	NOTE	Approved as EN IEC 55014-1:2021 (not modified)
CISPR 16-2-1:2014	NOTE	Approved as EN 55016-2-1:2014 (not modified)
CISPR 16-2-1:2014/A1:2017	NOTE	Approved as EN 55016-2-1:2014/A1:2017 (not modified)
CISPR 16-2-3:2016	NOTE	Approved as EN 55016-2-3:2017 (not modified)
CISPR 16-2-3:2016/A1:2019	NOTE	Approved as EN 55016-2-3:2017/A1:2019 (not modified)
IEC 60146-1-1:2009	NOTE	Approved as EN 60146-1-1:2010 (not modified)
CISPR 11:— ¹	NOTE	Approved as EN 55011:— ²

Endorsement notice

The text of the corrigendum IEC 61800-3:2022/COR1:2025 was approved by CENELEC as EN IEC 61800-3:2023/AC:2025-04 without any modification.

¹ Under preparation. Stage at the time of publication: CISPR/NFDIS 11:2022.

² Under preparation. Stage at the time of publication: prEN 55011:2023.

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(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.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-2-4	2002	Electromagnetic compatibility (EMC) - Part 2-4: Environment - Compatibility levels in industrial plants for low-frequency conducted disturbances	EN 61000-2-4	2002
IEC 61000-3-2	2018	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	EN IEC 61000-3-2	2019
+ A1	2020		+ A1	2021
IEC 61000-3-3	2013	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	2013
+ A1	2017		+ A1	2019
+ A2	2021		+ A2	2021
IEC 61000-3-11	2017	Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection	EN IEC 61000-3-11	2019
IEC 61000-3-12	2011	Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤ 75 A per phase	EN 61000-3-12	2011
+ A1	2021		-	-
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009

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IEC 61000-4-3	2020	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN IEC 61000-4-3	2020
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) - Part 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 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
+ A1	2017		+ A1	2017
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
IEC 61000-4-11	2020	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase	EN IEC 61000-4-11	2020
IEC 61000-4-13	2002	Electromagnetic compatibility (EMC) - Part 4-13: Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	EN 61000-4-13	2002
+ A1	2009		+ A1	2009
+ A2	2015		+ A2	2016
IEC 61000-4-28	1999	Electromagnetic compatibility (EMC) - Part 4-28: Testing and measurement techniques - Variation of power frequency, immunity test	EN 61000-4-28	2000
+ A1	2001		+ A1	2004
+ A2	2009		+ A2	2009
IEC 61000-4-34	2005	Electromagnetic compatibility (EMC) - Part 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
+ A1	2009		+ A1	2009
CISPR 11 (mod)	2015	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	EN 55011	2016
+ A1	2016		+ A1	2017
-	-		+ A11	2020
+ A2	2019		+ A2	2021

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CISPR 16-1-2	2014	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2: Radio disturbance and immunity measuring apparatus - Coupling devices for conducted disturbance measurements	EN 55016-1-2	2014
+ A1	2017		+ A1	2018
CISPR 16-1-4	2019	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-4: Radio disturbance and immunity measuring apparatus - Antennas and test sites for radiated disturbance measurements	EN IEC 55016-1-4	2019
+ A1	2020		+ A1	2020
CISPR 32	2015	Electromagnetic compatibility of multimedia equipment - Emission requirements	EN 55032	2015
+ A1	2019		+ A1	2020
-	-		+ A11	2020

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CONTENTS

FOREWORD.....	7
1 Scope.....	9
2 Normative references	10
3 Terms and definitions	11
3.1 Content of the power drive system (PDS) and its installation.....	12
3.2 Content of the machine tool (MT) and its installation	13
3.3 Locations and equipment categories	14
3.4 Ports and interfaces.....	15
3.5 Components of the PDS.....	19
3.6 Test-related definitions	20
3.7 Phenomena-related definitions.....	21
4 Common requirements.....	25
4.1 General conditions	25
4.2 Tests	26
4.2.1 Conditions	26
4.2.2 Test report.....	27
4.3 Documentation for the user	27
5 Immunity requirements	27
5.1 General conditions	27
5.1.1 Performance (acceptance) criteria	27
5.1.2 Conditions during the test.....	29
5.2 Basic immunity requirements – Low-frequency (< 150 kHz) disturbances	30
5.2.1 Harmonics	30
5.2.2 Voltage dips and short interruptions.....	32
5.2.3 Frequency variations	34
5.2.4 Supply influences – Magnetic fields	35
5.3 Basic immunity requirements – High-frequency (≥ 150 kHz) disturbances	36
5.3.1 Conditions	36
5.3.2 Residential, commercial and light industrial environment	36
5.3.3 Industrial environment	37
5.4 Application of immunity requirements – Alternative verification methods	39
5.4.1 General	39
5.4.2 Simulation and calculation of harmonics	40
5.4.3 Alternative verification methods for voltage dips and short interruptions	40
5.4.4 Frequency variations	40
5.4.5 Immunity against electromagnetic fields by subcomponents testing	40
6 Emission.....	41
6.1 General emission requirements.....	41
6.2 General emission requirements for MT.....	41
6.3 Basic low-frequency (< 150 kHz) emission limits.....	41
6.3.1 Harmonics and interharmonics.....	41
6.3.2 Voltage fluctuations and flicker	42
6.3.3 Emissions in the frequency range from 2 kHz to 150 kHz.....	43
6.3.4 Common mode harmonic emission (low-frequency common mode voltage)	43
6.4 Conditions related to high-frequency (≥ 150 kHz) emission measurement	43
6.4.1 General requirements for measurements on a test site	43