



# SLOVENSKI STANDARD SIST EN IEC 61800-3:2024

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## Električni pogonski sistemi z nastavljivo hitrostjo - 3. del: Zahteve za elektromagnetno združljivost in posebne preskusne metode za PDS in strojna orodja (IEC 61800-3:2022)

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

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)

[SIST EN IEC 61800-3:2024](https://standards.iteh.ai/SIST-EN-IEC-61800-3-2024)

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|-----------|--|---|
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| 33.100.01 | Elektromagnetna združljivost na splošno                    | Electromagnetic compatibility in general        |

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

**EN IEC 61800-3:2023 (E)****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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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)     |

**EN IEC 61800-3:2023 (E)**

|                            |      |   |
|----------------------------|------|---|
| IEC 61000-6-2:2016         | NOTE | Approved as EN IEC 61000-6-2:2019 (not modified)                |
| 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)<br>+ 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:— <sup>1</sup>    | NOTE | Approved as EN 55011:— <sup>2</sup>                             |

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

<sup>2</sup> Under preparation. Stage at the time of publication: prEN 55011:2023.

## 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.cencenelec.eu](http://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 $\leq 16$ 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 $\leq 16$ 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 $\leq 75$ 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 $\leq 75$ 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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| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u>      | <u>Year</u> |
|--------------------|-------------|---|-------------------|-------------|
| 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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| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u>     | <u>Year</u> |
|--------------------|-------------|---|------------------|-------------|
| 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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# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Adjustable speed electrical power drive systems –  
Part 3: EMC requirements and specific test methods for PDS and machine tools**

**Entraînements électriques de puissance à vitesse variable –  
Partie 3: Exigences de CEM et méthodes d'essai spécifiques pour les PDS et  
machines-outils**

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