SLOVENSKI STANDARD
SIST EN 50598-2:2015/A1:2016

01-oktober-2016

Okoljsko primerna zasnova motornih pogonskih sistemov, motornih zaganjalnikov, močnostne elektronike in njihove aplikacije, ki jih ti poganjajo - 2. del: Kazalniki energijske učinkovitosti motorno gnanih sistemov in motornih zaganjalnikov - Dopolnilo A1

Ecodesign for power drive systems, motor starters, power electronics & their driven applications - Part 2: Energy efficiency indicators for power drive systems and motor starters

Ökodesign für Antriebssysteme, Motorstarter, Leistungselektronik und deren angetriebene Einrichtungen - Teil 2: Indikatoren für die Energieeffizienz von Antriebssystemen und Motorstartern

Ecoconception des entraînements électriques de puissance, des démarreurs de moteur, de l'électronique de puissance et de leurs applications entraînées - Partie 2: Indicateurs d'efficacité énergétique pour les entraînements électriques de puissance (PDS) et les démarreurs de moteur

Ta slovenski standard je istoveten z: **EN 50598-2:2014/A1:2016**

ICS:

13.020.99	Drugi standardi v zvezi z varstvom okolja	Other standards related to environmental protection
29.160.30	Motorji	Motors
31.020	Elektronske komponente na splošno	Electronic components in general

SIST EN 50598-2:2015/A1:2016 **en**

EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN 50598-2:2014/A1

August 2016

ICS 29.160.30

English Version

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This amendment A1 modifies the European Standard EN 50598-2:2014; it was approved by CENELEC on 2016-06-28. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN 50598-2:2014/A1:2016) has been prepared by CLC/TC 22X "Power electronics".

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2017-06-28
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2019-06-28

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.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

***Add** the following Annex ZZ:*

Annex ZZ
(informative)

Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EC) No 640/2009 aimed to be covered

This European standard has been prepared under a Commission's standardisation request, M/476 'Mandate to CEN, CENELEC and ETSI for Standardisation in the field of variable speed drives and/or Power Drive System products', to provide one voluntary means of conforming to ecodesign requirements of Commission Regulation (EC) No 640/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for electric motors [OJ L 191/26].

Once this standard is cited in the Official Journal of the European Union under that Regulation, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding ecodesign requirements of that Regulation, and associated EFTA Regulations.

Table ZZ.1 – Correspondence between this European Standard and Commission Regulation (EC) No 640/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for electric motors [OJ L 191/26] and Commission's standardisation request M/476 'Mandate to CEN, CENELEC and ETSI for Standardisation in the field of variable speed drives and/or Power Drive System products'

Ecodesign requirements of Regulation (EC) No 640/2009 [OJ L 191/26]	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Article 3.2.: from 1 January 2015: motors with a rated output of 7,5-375 kW shall not be less efficient than the IE3 efficiency level, as defined in Annex I, point 1, or meet the IE2 efficiency level, as defined in Annex I, point 1, and be equipped with a variable speed drive. Article 3.3.: from 1 January 2017: motors with a rated output of 0,75-375 kW shall not be less efficient than the IE3 efficiency level, as defined in Annex I, point 1, or meet the IE2 efficiency level, as defined in Annex I, point 1, and be equipped with a variable speed drive.	Clause 4.1 and 4.2 set the definitions for the concept of reference losses and for the optional relevant "torque versus speed operating points (including part load conditions)". Clause 4.3 set the workflow requirements to analyse the variable speed drive in combination with driven equipment. The clauses 4.4. - 4.8 set the IE and the IES classification system for converters and variable speed drives. Clause 9 sets the requirements for determination and type testing to verify the efficiency classes.	The option to use an IE2 motor in a variable speed application instead of an IE3 motor depends mainly on the torque versus speed characteristic of the driven equipment and how it is applied. In order to do the right optional decision for maximum energy savings, EN 50598-2 gives the fundamental requirements, the workflows and the classification system for variable speed drives to do the fundamental assessment in the power range of 0,12 kW up to 1000 kW.

Annex I, point 2: Information on the mandatory requirement to equip motors, which do not meet the IE3 efficiency level with a variable speed drive, shall be visibly displayed on the rating plate, technical documentation of the motor	Clause 8 sets the requirements for the documentation that shall be provided by the manufacturers of the electronic frequency converters and the variable speed drives.	All energy efficiency related equipment labels (IE as well as IES classes) are addressed, in order to ensure a classification of the CDM, PDS. Also the provisions of sufficient information are fixed, to recognize this classification for the final application and/or system, where the converters or variable speed drives are used as components.
Annex I, point 2: Manufacturers shall provide information in the technical documentation on any specific precautions that must be taken when motors are assembled, installed, maintained or used with variable speed drives, including information on how to minimise electrical and magnetic fields from variable speed drives.	Clause 8.4 sets requirements for the determination of additional energy losses and part load conditions depending on the BDM/CDM/PDS architecture and the possible use of options for compliance to other performance or environmental requirements. Clause 2 sets the relevant information how to minimise electrical and magnetic fields from variable speed drives and the specific information by a reference to EN 61800-3 "Electromagnetic Compatibility Requirements and specific test methods". Annexes B 3.1 and B 3.2 describe the use of high frequency electromagnetic interference filters and low frequency line harmonics filters to minimise electrical and magnetic fields from variable speed drive systems.	Electromagnetic compatibility (EMC) requirements are specific items for variable speed drives and are provided by the dedicated product standard EN 61800-3. Following those requirements leads to a fully compliant operation of variable speed drives since decades.

WARNING 1: Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2: Other Union legislation may be applicable to the motor systems falling within the scope of this standard.