JÕUTRAFOD. TÄIENDAVAD EUROOPA NÕUDED. OSA 1-1: ÜLDOSA. ÜLDNÕUDED

Power transformers - Additional European requirements: Part 1-1: Common part - General requirements

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50708-1-1:2020 sisaldab Euroopa standardi EN 50708-1-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 50708-1-1:2020 consists of the English text of the European standard EN 50708-1-1:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.05.2020.	Date of Availability of the European standard is 22.05.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 29.180

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50708-1-1

May 2020

ICS 29.180

Supersedes EN 50588-1:2017 (PART), EN 50629:2015 (PART) and all of its amendments and corrigenda (if any)

English Version

Power transformers - Additional European requirements: Part 1-1: Common part - General requirements

Transformateurs de puissance - Exigences européennes supplémentaires : Partie 1 - Partie commune

To be completed

This European Standard was approved by CENELEC on 2019-10-09. 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.

This European Standard 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

Ref. No. EN 50708-1-1:2020 E

Contents

Page

European foreword

This document (EN 50708-1-1:2020) has been prepared by CLC/TC 14, “Power transformers”.

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)	2020-11-22
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2023-05-22

This document supersedes EN 50588-1:2017 and EN 50629:2015 and all of their amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC 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 Commission Regulation (EC).

For the relationship with the Commission Regulation (EC) see informative Annex ZZ, which is an integral part of this document.

Introduction

The EN 50708 series, “Power transformers – Additional European requirements” has been prepared by CENELEC TC 14 to address specific European requirements of power transformers related EU Regulations and local practices.

Technical requirements set by the EN 50708 series supplement, modify or replace certain requirements of the other EN standards derived from equivalent IEC international standards.

This series contains general requirements on energy performance, accessories, fittings, tests, mechanical requirements etc. structured as follows:

— Part 1 series - Common requirements;

— Part 2 series - Medium power transformers;

— Part 3 series - Large power transformers.

The EN 50708-X parts with X greater than 1 contain particular requirements for a different category of transformers or transformer applications which are based on the requirements of the general parts of EN 50708-1-1.

The EN 50708-X parts should be considered in conjunction with the requirements of the general part.

The particular requirements of these subparts of EN 50708 supplement, modify or replace certain requirements of the general parts of EN 50708-1-1 and/or EN 50708-1-X being valid at the time of publication of this part. The absence of references to the exclusion of a part or a clause of a general part means that the corresponding clauses of the general part are applicable (undated reference).

Requirements of other -X parts with X greater than 1 being eventually relevant for cases covered by this part also apply. This part may therefore also supplement, modify or replace certain of these requirements valid at the time of publication of this document.

The main clause numbering of each subpart follows the pattern and corresponding references of EN 50708-1-1. The numbers following the particular number of this part are those of the corresponding parts, or clauses of the other parts of the EN 50708 series, valid at the time of publication of this part, as indicated in the normative references of this document (dated reference).

In the case where new or amended general parts with modified numbering were published after the subpart was issued, the clause numbers referring to a general part in subparts might no longer align with the latest edition of the general part. Dated references should be observed.

It is acknowledged that environmental requirements including energy in the use phase are a significant aspect that can be addressed through product design. As the material content increases to improve energy performance, it is advisable to make a proper life cycle assessment including recycling of the extra raw material and the overall energy used to produce and transport transformers. Some guidelines are given in EN 60076-1.

1 Scope

This document is part of the EN 50708 series which applies to transformers in compliance with EN 60076-1.

2 Normative references

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

EN 50329:2003, *Railway applications - Fixed installations - Traction transformers*

EN 50708-2-1:2020, *Power transformers - Additional European requirements: Part 2-1 Medium power transformer - General requirements*

EN 50708-3-1:2020, *Power transformers - Additional European requirements: Part 3-1 Large power transformer - General requirements*

EN 60076 (all parts), *Power transformers (IEC 60076 series)*

EN 60310:2016, *Railway applications - Traction transformers and inductors on board rolling Stock (IEC 60310)*

EN 61378-1:2011, *Convertor transformers - Part 1: Transformers for industrial applications (IEC 61378-1:2011)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 60076-1:2011 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
medium power transformer
MPT
power transformer with all windings having a rated power lower than or equal to 3 150 kVA, and highest voltage for equipment greater than 1,1 kV and lower than or equal to 36 kV

Note 1 to entry: The definitions of power transformer and winding are given in EN 60076-1.

Note 2 to entry: The national practice of the Czech Republic could require the use of the highest voltages for equipment in AC three-phase systems of 38,5 kV instead of 36 kV and 25 kV instead of 24 kV. These units have a rated power lower than or equal to 3 150 kVA:

— with U_m = 38,5 kV are considered as U_m = 36 kV (ref. to EN 50708-2-1:2020);

— with U_m = 25 kV are considered as U_m = 24 kV (ref. to EN 50708-2-1:2020).