

**JÕUTRAFOD. TÄIENDAVALD EUROOPA NÕUDED.
OSA 2-1: KESKMISED JÕUTRAFOD. ÜLDNÕUDED**

**Power transformers - Additional European
requirements: Part 2-1 Medium power transformer -
General requirements**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50708-2-1:2020 sisaldab Euroopa standardi EN 50708-2-1:2020 ja selle paranduse AC:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 50708-2-1:2020 consists of the English text of the European standard EN 50708-2-1:2020 and its corrigendum AC:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.05.2020.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 22.05.2020.
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English Version

**Power transformers - Additional European requirements: Part 2-
1 Medium power transformer - General requirements**

Transformateurs de puissance - Exigences européennes
supplémentaires : Partie 2-1 Transformateurs de moyenne
puissance

To be completed

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50708-2-1:2020) has been prepared by CLC/TC 14 "Power transformers".

The following dates are fixed:

- latest date by which this document has (dop) 2020-11-22
to be implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2023-05-22
standards conflicting with this document
have to be withdrawn

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

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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.

Introduction

For the purpose of this document, the requirements of the general EN 50708-1-1:2020 apply.

This document contains particular requirements for specific transformers or transformer applications, which are based on the requirements of the general EN 50708-1-1:2020.

This document should be considered in conjunction with the requirements of the general parts.

The particular requirements of the different subparts of EN 50708 supplement, modify or replace certain requirements of the general parts of EN 50708-1 and/or EN 50708-1-X being valid at the time of publication of this document. 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 document also apply. This document could 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 part follows the pattern and corresponding references of EN 50708-1-1:2020. The numbers following the particular number of this document 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 document, 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.

1 Scope

The scope of this document is to define the energy performance of Medium Power Transformers in compliance with EN 50708-1-1:2020.

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 50708-1-1:2020, *Power transformers - Additional European requirements: Part 1-1: Common part - General requirements*

EN 60076-1:2011, *Power transformers - Part 1: General*

EN 60076-3:2013, *Power transformers - Part 3: Insulation levels, dielectric tests and external clearances in air*

EN IEC 60076-11:2018, *Power transformers - Part 11: Dry-type transformers*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 50708-1-1:2020 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>

4 Service conditions

See EN 60076-1:2011.

5 Rating and general requirements

5.1 General

5.1.1 Highest voltages for equipment for winding with $U_m > 1,1$ kV

Insulation levels and dielectric test shall be in accordance with the requirements of EN 60076-3:2013 and for dry type transformers in accordance with EN IEC 60076-11:2018.

 The preferred values of the highest voltage U_m for equipment are: 

3,6 kV – 7,2 kV – 12 kV – 17,5 kV – 24 kV – 36 kV

NOTE National practices might require the use of highest voltages for equipment up to (but not including) 52 kV, when the rated voltage is less than 36 kV (such as $U_m = 38,5$ kV or $U_m = 40,5$ kV).

5.1.2 Rated voltage for winding with $U_m \leq 1,1$ kV

For $U_m \leq 1,1$ kV, the preferred rated voltage value shall be chosen in the hereunder list:

400 V – 410 V – 415 V – 420 V – 433 V – 690 V