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Power transformers - Additional European  
requirements - Part 2-5: Medium power transformer -  
Single phase

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 50708-2-5:2021 sisaldab Euroopa standardi EN 50708-2-5:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 50708-2-5:2021 consists of the English text of the European standard EN 50708-2-5:2021.
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 and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.08.2021.	Date of Availability of the European standard is 20.08.2021.
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English Version

## Power transformers - Additional European requirements - Part 2-5: Medium power transformer - Single phase

Transformateurs de puissance - Exigences européennes supplémentaires - Partie 2-5 : Transformateurs de moyenne puissance monophasés

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## European foreword

This document (EN 50708-2-5:2021) 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) 2022-07-05
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2024-07-05

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Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

## Introduction

This part is a part of EN 50708 series deals with the energy performance of liquid single-phase Medium Power Transformers.

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 sub parts 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.

In the case where new or amended general parts with modified numbering were published after the sub part was issued, the clause numbers referring to a general part in sub parts 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 liquid immersed single-phase 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 50708-2-1, *Power transformers - Additional European requirements: Part 2-1 Medium power transformer - General requirements*

EN 50708 (series), *Power transformers - Additional European requirements*

EN 60076-1, *Power transformers - Part 1: General (IEC 60076-1)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 50708 series apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

## 4 Service conditions

EN 60076-1 applies.

## 5 Rating and general requirements

### 5.1 General

EN 50708-2-1 applies unless otherwise stated in this document.

The following table gives the minimum Peak Efficiency Index of losses for single phase transformers.

The Peak Efficiency Index classes remains the same for all highest voltage for equipment values ( $U_m$ ) regardless of the additional loss corrections specified in EN 50708-2-1.

NOTE 1 Single phase transformers represent a small part of network transformers in European countries with a large diversity of specifications and applications. The possibility of standard components for this kind of transformer is therefore difficult to reach because no common rules to define standard losses existed until now. That is the reason why PEI has been chosen to procure a guidance for the market.

NOTE 2 Commission Regulation (EU) No 548/2014 of 21 May 2014 and its amendment No 2019/1783 of 1 October 2019 doesn't include specific energy performance requirement for liquid immersed single-phase Medium Power Transformers