

Medium power transformers 50 Hz, with highest voltage for equipment not exceeding 36 kV - Part 3: Transformers with cable boxes on the high-voltage and/or low-voltage side - Cable boxes type 1 for use on transformers meeting the requirements of EN 50588-2

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50588-3:2018 sisaldab Euroopa standardi EN 50588-3:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 50588-3:2018 consists of the English text of the European standard EN 50588-3:2018.
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English Version

Medium power transformers 50 Hz, with highest voltage for equipment not exceeding 36 kV - Part 3: Transformers with cable boxes on the high-voltage and/or low-voltage side - Cable boxes type 1 for use on transformers meeting the requirements of EN 50588-2

Transformateurs 50 Hz de moyenne puissance, de tension la plus élevée pour le matériel ne dépassant pas 36 kV - Partie 3: Transformateurs raccordés par boîtes à câble côté haute tension et/ou côté basse tension - Boîtes à câbles de type 1 pour utilisation pour transformateurs conformes aux exigences de la EN 50588-2

Mittelleistungstransformatoren 50 Hz, mit einer höchsten Spannung für Betriebsmittel nicht über 36 kV - Teil 3: Verteiltransformatoren mit Kabelanschlusskästen auf der Ober- und/oder Unterspannungsseite - Kabelanschlusskästen Typ 1 für Verteiltransformatoren nach EN 50588-2

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 50588-3:2018) has been prepared by CLC/TC 14, "Power Transformers".

The following dates are fixed:

- latest date by which this document has to be (dop) 2018-12-15
implemented at national level by publication of
an identical national standard or by
endorsement
- latest date by which the national standards (dow) 2020-12-15
conflicting with this document have to
be withdrawn

This document supersedes EN 50464-2-2:2007.

The EN 50588 series consists of the following parts, under the general title "Medium power transformers 50 Hz, with highest voltage for equipment not exceeding 36 kV":

- Part 1: General requirements
- Part 2: Transformers with cable boxes on the high-voltage and/or low-voltage side – General requirements for transformers with rated power less than or equal to 3150kVA
- Part 3: Transformers with cable boxes on the high-voltage and/or low-voltage side – Cable boxes type 1 for use on transformers meeting the requirements of EN 50588-2
- Part 4: Transformers with cable boxes on the high-voltage and/or low-voltage side – Cable boxes type 2 for use on transformers meeting the requirements of EN 50588-2

1 Scope

This European Standard specifies the requirements for cable boxes, Type 1, in which the cable cores are terminated. The cable boxes are suitable for use on transformers defined in EN 50588-2, "Transformers with Cable Boxes", for side mounted or cover mounted use. The cable boxes are suitable for operation indoors and outdoors under environmental conditions specified in EN 50588-1. Important design and construction requirements of the cable boxes are given.

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 50180, *Bushings above 1 kV up to 52 kV and from 250 A to 3,15 kA for liquid filled transformers – Part 1: General requirements for bushings*

EN 50387:2002, *Busbar bushings up to 1 kV and from 1,25 kA to 5 kA, for liquid filled transformers*

EN 60076 (series), *Power transformers (IEC 60076 series, partially modified)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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

fully insulated cable box

metallic cable box where those parts of the termination and bushing within the enclosure including live metal parts and cable cores are insulated by oil or compound and allowance made for thermal expansion. The box is suitably sealed to contain the oil or compound and allows for their expansion due to temperature changes

3.2

air filled cable box

metallic cable box designed to protect the ends of the cables and bushings, providing a weatherproof enclosure with a minimum rating of IP54

3.2.1

air insulated termination

air filled cable box within which the cable cores are electrically terminated by stress control appropriate to the cable design and voltage; air being the sole insulation for the terminal connections

3.2.2

shrouded insulation termination

air filled cable box within the cable cores are terminated as in 3.2.1 with additional local insulation enhancement, e.g. phase barrier, bushing protection or taping. Enhancement can be achieved using insulated phase barriers; however, in this case, air bushings with full creepage distance shall be used