BS EN IEC 61558-2-15:2025

BSI Standards Publication

Safety of transformers, reactors, power supply units and combinations thereof

Part 2-15: Particular requirements and tests for isolating transformers for medical IT systems for the supply of medical locations

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025

National foreword

This British Standard is the UK implementation of EN IEC 61558-2-15:2025. It is identical to IEC 61558-2-15:2022. It supersedes BS EN 61558-2-15:2012, which will be withdrawn on 31 March 2028.

The UK participation in its preparation was entrusted to Technical Committee PEL/96, Small transformers.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 17157 0

ICS 29.180

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2025.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61558-2-15

March 2025

ICS 29.180

Supersedes EN 61558-2-15:2012

English Version

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-15: Particular requirements and tests for isolating transformers for medical IT systems for the supply of medical locations (IEC 61558-2-15:2022)

Sécurité des transformateurs, bobines d'inductance, blocs d'alimentation et des combinaisons de ces éléments - Partie 2-15: Exigences particulières et essais pour les transformateurs de séparation de circuits pour schémas IT médicaux pour l'alimentation des locaux à usages médicaux (IEC 61558-2-15:2022)

Sicherheit von Transformatoren, Drosseln, Netzgeräten und deren Kombinationen - Teil2-15: Besondere Anforderungen und Prüfungen für Trenntransformatoren zur Versorgung medizinischer Räume (IEC 61558-2-15:2022)

This European Standard was approved by CENELEC on 2024-10-16. 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, Türkiye 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

© 2025 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

Ref. No. EN IEC 61558-2-15:2025 E

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025

European foreword

The text of document 96/535/FDIS, future edition 3 of IEC 61558-2-15, prepared by TC 96 "Transformers, reactors, power supply units, and combinations thereof" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61558-2-15:2025.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2026-03-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-03-31

This document supersedes EN 61558-2-15:2012 and all of its 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 is read in conjunction with EN IEC 61558-1:2019.

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.

Endorsement notice

The text of the International Standard IEC 61558-2-15:2022 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 61558 series	NOTE	Approved as EN 61558 series
IEC 60364-1:2005	NOTE	Approved as HD 60364-1:2008 +A11:2017
IEC 60364-4-41:2005	NOTE	Approved as HD 60364-4-41:2017 +A11:2017
IEC 60364-7-710:2021	NOTE	Approved as HD 60364-7-710:— (not modified) +A11:—[1]
IEC 61557-8:2014	NOTE	Approved as EN 61557-8:2015 (not modified)

[1] Under preparation. Stage at the time of publication: FprHD 60364-7-710:2021 and FprHD 60364-7-710:2021/FprA11:2021.

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Annex ZA of EN IEC 61558-1 is applicable, except as follows:

Add:

Publication	Year	Title	EN/HD	Year
IEC 61558-1	2017	Safety of transformers, reactors, power supply units and combinations thereof - Part 1: General requirements and tests	EN IEC 61558-1	2019

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025

CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 8
3 Terms and definitions 8
4 General requirements 9
5 General notes on tests 9
6 Ratings 9
7 Classification 10
8 Marking and other information 10
9 Protection against electric shock 11
10 Change of input voltage setting 11
11 Output voltage and output current under load 11
12 No-load output voltage 11
13 Short-circuit voltage 12
14 Heating 13
15 Short-circuit and overload protection 13
16 Mechanical strength 13
17 Protection against harmful ingress of dust, solid objects and moisture 13
18 Insulation resistance, dielectric strength and leakage current 13
19 Construction 16
20 Components 18
21 Internal wiring 18
22 Supply connection and other external flexible cable or cords 18
23 Terminals for external conductors 18
24 Provisions for protective earthing 19
25 Screws and connections 19
26 Creepage distances, clearances and distances through insulation 19
27 Resistance to heat, fire and tracking 19
28 Resistance to rusting 19
Annexes 20
Annex H (normative) Electronic circuits 20
Annex L (normative) Routine tests (production tests) 20
Bibliography 21

Figure 101 – Required circuit for measuring the leakage current from the output winding to the earthing 15
Figure 102 – Required circuit for measuring the leakage current at the protective earthing conductor 16

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025

Table 101 – Symbols indicating the kind of transformer 11
Table 102 – Additional dielectric strength test voltages 14

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY OF TRANSFORMERS, REACTORS, POWER SUPPLY UNITS AND COMBINATIONS THEREOF –

Part 2-15: Particular requirements and tests for isolating transformers for medical IT systems for the supply of medical locations

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 61558-2-15 has been prepared by IEC technical committee 96: Transformers, reactors, power supply units and combinations thereof. It is an International Standard.

This third edition cancels and replaces the second edition published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Adjustment of structure and references in accordance with IEC 61558-1:2017;

Documents
Document Sharing Hub

Full document details: BS EN IEC 61558-2-15:2025