



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 50310:2016

**Telecommunications bonding
networks for buildings and other
structures**

Telekommunikationstechnische
Potentialausgleichsanlagen für Gebäude
und andere Strukturen

Application de liaison équipotentielle et
de la mise à la terre dans les locaux avec
équipement de technologie de
l'information

05/2016



National Foreword

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EUROPEAN STANDARD ^{ILNAS-EN 50310:2016} **EN 50310**
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EUROPÄISCHE NORM

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English Version

Telecommunications bonding networks for buildings and other structures

Application de liaison équipotentielle et de la mise à la terre
dans les locaux avec équipement de technologie de
l'information

Anwendung von Maßnahmen für Erdung und
Potentialausgleich in Gebäuden mit Einrichtungen der
Informationstechnik

This European Standard was approved by CENELEC on 2016-04-11. 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.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Contents

European foreword.....	4
Introduction.....	6
1 Scope	9
2 Normative references	9
3 Terms, definitions and abbreviations	10
3.1 Terms and definitions	10
3.2 Abbreviations	12
4 Conformance.....	13
5 Overview of bonding networks	13
6 Selection of the telecommunications bonding network approach.....	15
6.1 Assessment of the impact of the telecommunications bonding network on the interconnection of telecommunications equipment	15
6.2 Telecommunications bonding networks	16
6.3 Telecommunications bonding network performance.....	17
7 Common features	19
7.1 General	19
7.2 Protective bonding networks	19
7.3 Telecommunications entrance facility (TEF)	19
7.4 Telecommunications bonding network components	20
7.5 Cabinets, frames and racks.....	21
7.6 Miscellaneous bonding connections.....	24
7.7 Documentation	25
8 Dedicated telecommunications bonding network.....	25
8.1 General	25
8.2 Components	26
8.3 Implementation	30
9 Local telecommunications bonding networks in conjunction with protective bonding networks	33
9.1 Bonding for local distribution	33
9.2 Telecommunications bonding conductors	35
9.3 Bonding for areas of telecommunications equipment concentration	36
10 Local telecommunications bonding networks in conjunction with dedicated telecommunications bonding networks.....	36
10.1 Bonding for areas of telecommunications equipment concentration	36
10.2 Telecommunications equipment bonding conductors (TEBC)	37
11 Mesh bonded networks	38
11.1 General	38
11.2 Mesh bonding alternatives.....	38
11.3 Bonding conductors of a mesh bonding network	41
11.4 Bonding conductors to the mesh bonding network	41
11.5 Supplementary bonding grid (SBG)	42
11.6 System reference potential plane (SRPP).....	42
Annex A (normative) Maintenance of telecommunications bonding network performance	45
A.1 General.....	45
A.2 Periodic activity	45
A.2.1 Schedule.....	45
A.2.2 Implementation	45

A.3 Causes of performance deterioration.....	46
A.3.1 Galvanic corrosion	46
A.3.2 Requirements.....	46
Bibliography.....	47

European foreword

This document (EN 50310:2016) was prepared by the CLC/TC 215, “Electrotechnical aspects of telecommunication equipment”.

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) 2017–04–11
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2019–04–11

This document supersedes EN 50310:2010.

In 2012, EN 50310:2010 had been offered to ISO/IEC JTC 1/SC 25 “Interconnection of information technology equipment” as input to the agreed project to seek global harmonization of the technical requirements for telecommunications bonding networks. This project, ISO/IEC 30129, has been finished successfully. Thus, TC 215 decided to transpose ISO/IEC 30129 into the fourth edition of EN 50310 with minimal editorial changes to fit European needs. In this context, also the title of EN 50310 has been changed to adopt the title of ISO/IEC 30129.

EN 50310 has been produced within the framework of the following considerations.

- a) With the ongoing growth of the liberalised telecommunication market, the increasing advent of private telecommunication network operators, and the flourishing use of networking computers, the amount of Information Technology equipment installed in buildings and the complexity of these Information Technology installations are permanently growing.
- b) Information Technology equipment is generally installed either as stand-alone equipment (e.g. personal or network computers, small PBXs), or held in racks, cabinets or other mechanical structures (e.g. switching systems, transmission systems, mobile base stations).
- c) CENELEC/SC 64B „Electrical installations and protection against electric shock – Protection against thermal effects“ had decided during their meeting in November 1997 not to harmonize IEC 60364-5-548:1996 *“Electrical installations of buildings – Part 5: Selection and erection of electrical equipment – Section 548: Earthing arrangements and equipotential bonding for information technology installations”*.
- d) This European Standard shall give guidance to network operators, equipment providers and building owners to agree on a standardized bonding configuration that facilitates:
 - compliance of the Information Technology Equipment installation with functional requirements including Electromagnetic Compatibility (EMC) aspects of emission and immunity,
 - compatible building installation and equipment provisions,
 - installation of new equipment in buildings as well as expansion or replacement of installations in existing buildings with equipment coming from different suppliers,
 - a structured installation practice,
 - simple maintenance rules,

- contracting on a common basis,
- harmonization in development, manufacturing, installation and operation.

Introduction

This European Standard

- 1) specifies assessment criteria to determine the relevant bonding configurations that are appropriate,
- 2) enables the implementation of any bonding configurations that may be necessary by means of either
 - the provision of a bonding network that utilizes the existing protective bonding network for electrical safety, or
 - the provision of a dedicated bonding network for the telecommunications infrastructure.

This standard is intended for

- building architects, owners and managers,
- designers and installers of electrical and telecommunications cabling installations.

Users of this standard should be familiar with all applicable cabling design and installation standards.

Figure 1 and Table 1 show the schematic and contextual relationships between the standards produced by TC 215 for information technology cabling, namely:

- installation specification, quality assurance, planning and installation practices (EN 50174 series);
- generic cabling design (EN 50173 series);
- application dependent cabling design (e.g. EN 50098 series);
- testing of installed cabling (EN 50346);
- this European Standard (EN 50310).