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DIN 18014

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Supersedes
DIN 18014:2007-09

Foundation earth electrode – Planning, execution and documentation, English translation of DIN 18014:2014-03

Fundamenterder –
Planung, Ausführung und Dokumentation,
Englische Übersetzung von DIN 18014:2014-03

Prise de terre de fondation –
Planification, exécution et documentation,
Traduction anglaise de DIN 18014:2014-03

Document comprises 29 pages

Translation by DIN-Sprachendienst.
In case of doubt, the German-language original shall be considered authoritative.

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A comma is used as the decimal marker.

Contents

Foreword

This standard has been prepared by Working Committee NA 005-09-85 AA *Elektrische Anlagen in Wohngebäuden* of the *Normenausschuss Bauwesen* (NABau) (Building and Civil Engineering Standards Committee).

Earthing systems for buildings are intended

— to ensure protection against electric shock,

— to enhance the effect of protective equipotential bonding,

— to enhance the effect of functional equipotential bonding,

— to ensure the potential grading within the building,

— to ensure the earthing of lightning protection systems.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights without these having been identified here. DIN [and/or DKE] shall not be held responsible for identifying any or all such patent rights.

Amendments

This standard differs from DIN 18014:2007-09 as follows:

a) the standard has been restructured;

b) requirements regarding foundations made from fibre concrete and those with a higher earthing contact resistance have been specified;

c) where the use of ring earth electrodes is necessary, a functional bonding conductor in the concrete foundation is required;

d) requirements for the mesh size for meshed functional bonding conductors and regarding the connection to any ring earth electrode have been specified;

e) details of the documentation and resistance measurement have been specified.

Previous editions

DIN 18014: 1994-02, 2007-09

1 Scope

This standard applies to the design and construction of foundation earth electrodes. The requirement for the installation of such electrodes is set out in DIN VDE 0100-540 (VDE 0100-540), DIN 18015-1, and in the *Technische Anschlussbedingungen für den Anschluss an das Niederspannungsnetz* (TAB) issued by the electricity suppliers.

Foundation/ring earth electrodes as specified here are designed to serve the following purposes:

— earthing of systems involving protective equipotential bonding via the main earthing busbar, as specified in DIN VDE 0100-540 (VDE-0100-540);

— functional equipotential bonding and functional earthing;

— potential grading in buildings, as specified in DIN VDE 0100-444 (VDE 0100-444) and DIN EN 50310 (VDE 0800-2-310);

— earthing of lightning protection and overvoltage protection systems.

The requirements specified for ring earth electrodes are also applicable in cases where such electrodes are to be installed on sites with existing buildings.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

DIN 1045-2, *Concrete, reinforced and prestressed concrete structures — Part 2: Concrete — Specification, properties, production and conformity — Application rules for DIN EN 206-1*

DIN 18195-9, *Water-proofing of buildings and structures — Part 9: Penetrations, transitions, connections and endings*

DIN 18533, *Water-proofing of below-ground structures*[1)]

DIN EN 206, *Concrete — Part 1: Specification, performance, production and conformity*

DIN EN 50310 (VDE 0800-2-310), *Application of equipotential bonding and earthing in buildings with information technology equipment*

DIN EN 50522 (VDE 0101-2), *Earthing of power installations exceeding 1 kV a.c.*

DIN EN 61557-4 (VDE 0413-4), *Electrical safety in low voltage distribution systems up to 1000 V a.c. and 1500 V d.c. — Equipment for testing, measuring or monitoring protective measures — Part 4: Resistance of earth connection and equipotential bonding*

DIN EN 61936-1 (VDE 0101-1), *Power installations exceeding 1 kV a.c. — Part 1: Common rules*

DIN EN 62305 (VDE 0185-305) series, *Protection against lightning*

DIN EN 62561-1 (VDE 0185-561-1), *Lightning protection system components (LPSC) — Part 1: Requirements for connection components*

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1) In preparation by Technical Committee NA 005-02-13 AA *Abdichtungen für erdberührte Bauteile*.