

BS 7430:2011

Incorporating corrigendum No. 1



BSI Standards Publication

Code of practice for protective earthing of electrical installations

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 December 2011. It was prepared by Technical Committee GEL/600, *Earthing*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 7430:1998, which is withdrawn.

Information about this document

The start and finish of text introduced or altered by Corrigendum No. 1 is indicated in the text by tags C1 and C1.

Relationship with other publications

This revision of BS 7430 takes into account changes in legislation (implementation of the Electricity Safety, Quality and Continuity Regulations 2002 as amended [1]) and changes in and publication of the relevant industry standards such as BS 7671:2008+A1, BS EN IEC 61936-1:2011 and BS EN 50522:2011.

Legislation

In Great Britain earthing of an electricity supply system is governed by the Electricity Safety, Quality and Continuity Regulations 2002 as amended (ESQCR) [1] and the Electricity at Work Regulations 1989 [2]. In Northern Ireland, The Electricity Supply Regulations (Northern Ireland) 1988 as amended [3] apply.

Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type and does not constitute a normative element.

The word "should" is used to express recommendations of this standard. The word "may" is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word "can" is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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

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1 Scope

This British Standard primarily provides recommendations and guidance on meeting the requirements for the earthing of electrical installations, including:

- a) protective earthing of low voltage installations to BS 7671:2008+A1;
- b) the interface between LV and HV substations of 11 000/400 V to BS EN IEC 61936-1:2011 within buildings; and
- c) protective earthing and changeover switch arrangements for generators supplying low voltage installations.

The earthing of a system or installation is generally provided for reasons of safety.

This British Standard applies only to land-based installations in and around buildings. It does not apply to:

- 1) ships, aircraft or offshore installations;
- 2) earthing of medical equipment [see BS EN 60601 (all parts)];
- 3) special problems encountered with solid state electronic components;
- 4) equipment sensitive to static electricity;
- 5) requirements for functional earthing;
- 6) earthing of overhead lines between electrical installations; or
- 7) the internal earthing of equipment.

2 Normative references

The following referenced documents are indispensable for the application 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.

BS 215-2:1970, *Specification for aluminium conductors and aluminium conductors, steel reinforced for overhead power transmission – Aluminium conductors, steel reinforced* (withdrawn)

BS 729, *Specification for hot dip galvanized coatings on iron and steel articles* (withdrawn)

BS 911, *Electrical earthing – Clamps for earthing and bonding – Specification*
BS 1000, *Specification for copper alloy ingots and copper alloy and high conductivity copper castings* (withdrawn)

BS 1449:1991 (all parts), *Steel plate, sheet and strip* (withdrawn)

BS 1473:1972, *Specification for wrought aluminium and aluminium alloys for general engineering purposes – Rivet, bolt and screw stock*

BS 1474:1987, *Specification for wrought aluminium and aluminium alloys for general engineering purposes: bars, extruded round tubes and sections* (withdrawn)

BS 1561:1997, *Founding – Grey cast irons*

BS 1562:1997, *Founding – Malleable cast irons*

BS 1377-3, *Methods of test for soils for civil engineering purposes – Part 3: Chemical and electro-chemical tests*

BS 2754, *Memorandum – Construction of electrical equipment for protection against shock*