

Connectors for analogue telecommunication interfaces —

**Part 2: Sockets for use with plugs
specified in BS 6312-1 —**

**Section 2.2: Particular requirements for
fixed socket-outlets used in permanent
wiring installations**

ICS 31.220.10

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee TCT/2, Analogue telecommunication networks, upon which the following bodies were represented:

- Communications Workers Union
- Department of Trade and Industry
(Communications Information Industries Directorate)
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)
- Electricity Association
- Federation of the Electronics Industry
- Kingston Communications (Hull) plc
- Mercury Communications Ltd.
- National Transcommunications Ltd.
- OFTEL (Office of Telecommunications)
- Society of Cable Telecommunication Engineers
- Telecommunications Industry Association
- Telecommunications Users' Association (TUA)
- Co-opted members

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15632	24 August 2005	Clause 8 replaced, semi-conductor voltage surge protector added in A.1.2, environmental conditioning clause added as A.3.

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Foreword

This Section of BS 6312-2 has been prepared under the direction of the Telecommunications Standards Policy Committee. It forms one of a series of British Standards that are being produced following the commencement of liberalization in October 1981 of the supply of certain telecommunications apparatus within the United Kingdom.

The start and finish of text introduced by Amendment No. 1 is indicated in the text by tags **A1** **A1**.

The series of standards includes product and facility specifications giving particular requirements for individual items of apparatus and facilities, together with standards covering general requirements for the connection of apparatus to the various public telecommunication systems (i.e. any telecommunication system designated as a public telecommunication system by an order made under Section 9 of the Telecommunication Act 1984).

The requirements specified in the standards are intended to ensure that apparatus conforming to them, when connected to public telecommunication systems, will neither adversely affect any such system, nor interfere with the service available to other users of the systems.

The standards include certain safety requirements that are only for the protection of personnel operating the public telecommunication system and others that are for the protection of users from hazards that may arise from the connection of the apparatus to that system.

BS 6312:1985 has been revised and re-numbered as BS 6312-1:1994 and is published with a new Part 2 which comprises two separate Sections.

BS 6312 covers the generic subject of connectors for analogue telecommunication interface purposes.

BS 6312-1 specifies the requirements for plugs. BS 6312-2 specifies the requirements for sockets for use with plugs specified in BS 6312-1.

There are two Sections of Part 2.

Section 2.1 *Specification for sockets — General requirements*

Section 2.2 *Specification for particular requirements for fixed socket-outlets used in permanent wiring installations*

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 does not of itself confer immunity from legal obligation. In particular, attention is drawn to the Telecommunications Act 1984.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 16, an inside back cover and a back cover.

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1 Scope

This Section of BS 6312-2 specifies the requirements and tests necessary to ensure the safety and the dimensional interchangeability of fixed socket-outlets, as defined in 3.2, intended for connection to telecommunications wiring.

Such socket-outlets may be classified both by function, i.e. as being either primary (surge protected or unprotected) or secondary, and according to their method of mounting, i.e. as surface, flush and panel mounted socket-outlets.

This Section does not apply to sockets incorporated in apparatus.

Socket-outlets conforming to this standard are intended to be suitable for use under the following conditions of service unless otherwise specified:

- an ambient temperature in the range -5°C to $+35^{\circ}\text{C}$, the average value over a 24 h period not exceeding 25°C ;
- a situation not subject to direct radiation from the sun or other source of heat likely to raise temperatures above the limits specified above;
- an atmosphere not subject to excessive pollution by smoke, chemical fumes, rain, spray, prolonged or high humidity or other abnormal conditions.

NOTE Socket-outlets conforming to this standard may be suitable for use in other conditions subject to agreement between manufacturer and user. Information given in a manufacturer's catalogue may take the place of such an agreement.

This standard applies in conjunction with BS 6312-2.1 and the requirements are in addition to those in that standard.

Requirements for electromagnetic compatibility are not given as socket-outlets do not in themselves produce extraneous emissions, nor is their functioning affected by external emissions. Therefore no emission or immunity tests are necessary.

2 References

2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to, or revisions of, the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard, the definitions given in BS 6312-2.1 apply, together with the following.

3.1

socket-outlet

a device associated with telecommunications wiring intended to accept a plug conforming to BS 6312-1:1994 and incorporating a socket conforming to BS 6312-2.1:1994

3.2

fixed socket-outlet

a socket-outlet intended to be mounted on a fixed surface and to be connected to fixed telecommunications wiring

3.3

flush mounted socket-outlet

a fixed socket-outlet for mounting behind or integral with a mounting plate, the back of the plate being flush with the mounting surface

3.4

surface mounted socket-outlet

a fixed socket-outlet provided with a seating surface so that when mounted, it projects wholly above the surface on which it is mounted

3.5

panel mounted socket-outlet

a fixed socket-outlet intended for incorporation into equipment panels or trunking and which depends on such incorporation for its enclosure

3.6

primary surge protected socket-outlet

a socket-outlet incorporating certain components for the protection and operation of a telecommunications system

3.7

primary unprotected socket-outlet

a socket-outlet incorporating certain components for the operation of a telecommunications system

3.8

secondary socket-outlet

a socket-outlet that is not a primary socket-outlet

3.9

accessible metal part

a metal part or surface that can be touched by test probe B specified in BS 3042:1992, when the socket-outlet is installed as in normal use

3.10

intermediate metal part

a metal part that is included in the structure or embedded in insulating material such that, as a feature of the design of the socket-outlet, it is not connected to a live part or to an accessible metal part

3.11

live part

an unearthed conductive part that is, or is designed to be, connected to a telecommunications network

4 Classification of fixed socket-outlets

Socket-outlets shall be classified according to their method of mounting, as follows:

- surface;
- flush;
- panel;

and according to their function:

- primary (surge protected) (see Figure 2a);
- primary (unprotected) (see Figure 2b);
- secondary (see Figure 3).

5 General requirements

Socket-outlets within the scope of this standard shall be so designed and constructed that, in normal use, their performance is reliable and without danger to the user or the surroundings.

NOTE Where tolerances are not specified in this standard the values shall be taken to be nominal.

Conformity shall be established by meeting all the requirements of this standard.

6 Testing

6.1 A manufacturer or responsible vendor who claims conformity to this standard for any product, shall submit a representative type test specimen of that product to the relevant tests of this standard in the order specified in **6.2**. The tests shall be made either by the manufacturer, or the responsible vendor, or by any competent testing laboratory or certification authority. The results of such tests shall be recorded and retained for reference and inspection. Where no test method is specified, conformity shall be checked by inspection and, where appropriate, by measurement.

6.2 A total of at least nine specimens of socket-outlet, of any one type, shall be submitted to inspection and tests against the requirements of the following clauses:

- a) three specimens of socket-outlet: Clauses **7, 8, 9, 10** and **12** (visual inspection and manual examination);
- b) three specimens of socket-outlet: Clauses **10, 11, 13** and **14** (general tests);
- c) three specimens of socket-outlet: Clause **15** (material tests).

NOTE If any particular test has to be repeated, as part of the normal sequence, this requirement is specified in the appropriate test clause.

6.3 Unless otherwise specified in this standard, the socket-outlets shall be tested (as delivered by the supplier) under the conditions specified in **4.2** of BS 6312-2.1:1994.

Socket-outlets used for the tests shall be identical to normal production items in respect of all details which may affect the test results.

Socket-outlets shall be deemed to conform if no socket-outlet fails in the complete series of tests given in **6.2**.

If one socket-outlet fails in any group in the complete series of tests specified in **6.2**, socket-outlets of that type shall be deemed to have failed to conform to this standard, unless that socket-outlet can be shown to be unrepresentative of normal production or design, in which case a further set of socket-outlets shall be submitted to the test or tests in that group. If there is no failure in this retest then socket-outlets of that type shall be deemed to conform to this standard.

If more than one socket-outlet fails in the complete series of tests given in **6.2** then socket-outlets of that type shall be deemed to have failed to conform to this standard.

7 Construction

7.1 The minimum size of flush socket-outlet plates constructed either of insulating material or of metal, or a combination of both, and which are intended for mounting on size UA1 boxes as specified in BS 4662, shall be 82.5 mm × 82.5 mm.

7.2 Flush-mounted socket-outlets intended for mounting on size UA1 boxes as specified in BS 4662 shall have provision for two M3.5 fixing screws at centres of (60.3 ± 0.2) mm.

The size and disposition of fixing holes shall be such as to allow satisfactory attachment to boxes having centres and manufactured to a ± 0.8 mm tolerance.

7.3 Surface mounted socket-outlets shall be provided with a box or enclosure to ensure proper seating on a flat surface, the box having a minimum of two holes for mounting which will accept No. 6 wood screws conforming to BS 1210:1963.