SS 145:Part 2:2018+C1:2019
BS 1363-2:2016+A1:2018, MOD
(ICS 29.120.30)

SINGAPORE STANDARD

Specification for 13 A plugs, socket-outlets, adaptors and connection units

– Part 2 : 13 A switched and unswitched socket-outlets

Incorporating Corrigendum No. 1

Singapore Standards Council

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The organisation in which the experts of the Working Group are involved are:

ABB Pte Ltd
Ace Approvals Consultancy
Energy Market Authority
Enterprise Singapore
Hager Electro Systems Pte Ltd
Housing & Development Board
Intertek Testing Services (S) Pte Ltd
Land Transport Authority
MK Electric (S) Pte Ltd
SP Group
Singapore Electrical Testing Services
Singapore Manufacturing Federation
TUV SUD PSB Pte Ltd

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National Foreword

This Singapore Standard was prepared by the Working Group on Plugs, Socket-outlets and Switches appointed by the Technical Committee on Electrical and Electronic Products under the direction of the Electrical and Electronic Standards Committee.

This standard is a revision of SS 145 : Part 2 : 2010 'Specification for 13 A plugs and socket-outlets, Part 2 : 13 A switched and unswitched socket-outlets'. It is a modified adoption on BS 1363-2:2016+ A1:2018 '13 A plugs, socket-outlets, adaptors and connection units, Part 2 : Specification for 13 A switched and unswitched socket-outlets' and is reproduced with permission from the BSI Standards Limited.

The following modifications have been made to suit local conditions, practices and regulations:

- Added a sentence in the scope that explicitly states that the standard does not cover socket-outlet incorporating the remote control switching function.

As amended Oct 2019

- Changed the ambient temperature under conditions for use for socket-outlets from -5°C to +40°C, the average value over 24 h not exceeding +35°C to having a peak value not exceeding +40°C, the average value over 24 h not exceeding +35°C.

- Changed the ambient temperature of 20°C ± 5°C used for test condition for socket-outlets to 27°C ± 5°C.

- For Table 1:

  - Added a new reference 19.7L in Sequence 1.

  - Shifted Annex C from Sequence 7 to Sequence 8.

  - Deleted Sequence 11 and 12 on electrical vehicle charging as it is preceded by the local requirements on electric vehicle charging system.

- For Table 2, deleted the 1 mm^2 testing parameters.

– For 11.4, amended the nominal conductor cross-sectional area of flexible cable from 1 mm^2 to 1.25 mm^2.

- Deleted the point on rewirable plug fitted with 2-core 0.5mm^2 flexible cable in 14.3.2 and 14.3.3 to align with local requirements.

- Under 22.2.1, amended the test temperature for parts of insulating material related to fixed and portable socket-outlets to be the same at 125^{o}C ± 5^{o}C to align with local requirements.

- Added local requirements in Clauses 13, 19, 22, Annex I.6 and Figure 24. Where these new requirements are added, they are indicated by 'L' immediately after the clause number, term or table.

- Deleted Clauses 1, 6.2.8, 17.2, 17.2.1, 18.2, 18.2.1 and 26 on electrical vehicle charging as it is preceded by the local requirements on electric vehicle charging system.

To facilitate identification, the affected text of the British Standard (BS) which was changed within this standard is indicated by a left marginal bar adjacent to it.

Attention is drawn to the following:

- Where applicable, the references to BS or BS EN standards have been replaced with the equivalent Singapore Standards.

- Where BS EN is an adoption of the IEC standard, the IEC standard should be referred to.

- The numbering of the clauses, tables, figures and annexes follows that of BS 1363-2.

Attention is also drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions. Where SSs are deemed to be stable, i.e. no foreseeable changes in them, they will be classified as "Mature standards". Mature Standards will not be subject to further review, unless there are requests to review such standards.*

2. *An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore and the Singapore Standards Council shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR. Although care has been taken to draft this standard, users are also advised to ensure that they apply the information after due diligence.*

3. *Compliance with a SS or TR does not exempt users from any legal obligations*

As amended Oct 2019

Specification for 13 A plugs, socket-outlets, adaptors and connection units – Part 2 : 13 A switched and unswitched socket-outlets

1 Scope

This part of SS 145 specifies requirements for 13 A switched and unswitched shuttered socket-outlets for household, commercial and light industrial purposes, with particular reference to safety in normal use. The socket-outlets are suitable for the connection of appliances, sound-vision equipment, luminaires, etc. in a.c. circuits only, operating at voltages not exceeding 250 V r.m.s. at 50 Hz using plugs in accordance with SS 145-1.

Requirements are specified for 13 A shuttered socket-outlets in single or multiple arrangements, with or without associated controlling switches, for flush mounting in suitable boxes, e.g. conforming to BS 4662:2006+A1:2009, or for surface or panel mounting or for portable use. Fixed socket-outlets are intended for use with cables conforming to SS 358-3 and cables to the relevant part of BS EN 50525 (see Annex H), having copper conductors. Portable socket-outlets are intended for use with flexible cables, conforming to SS 358-5. Socket-outlets incorporating fuse links, switches and indicator lamps are included within the scope of this part of SS 145. Socket-outlets incorporating electronic components as detailed in Annex I are included within the scope of this part of SS 145.

Socket-outlets conforming to this standard are shuttered and therefore do not require the use of additional means to shield the current-carrying contacts when no plug is present in the socket-outlet.

This standard does not cover socket-outlet incorporating remote control switching function.

NOTE 1 – The titles of the publications referred to in this part of SS145 are listed in the bibliography.

NOTE 2 – In order to maintain safety and interchangeability with plugs and socket-outlets it is necessary that these products conform to the requirements of Clause 9 and Clause 13 of this part of SS145, however their body outline need not be limited at a distance of 6.35 mm from the plug engagement surface.

NOTE 3 – Requirements for electromagnetic compatibility for socket-outlets that incorporate electronic devices are given in Annex I.

A socket-outlet that does not incorporate electronic devices does not emit intolerable electromagnetic interference since significant electromagnetic disturbances are only generated during insertion and withdrawal which are not continuous.

A socket-outlet that does not incorporate electronic devices is mechanical by nature of construction. The product is therefore immune from electromagnetic interference.