

SS 145-4:2022+C1:2024
BS 1363-4:2016+A1:2018, MOD
(ICS 29.120.30)

SINGAPORE STANDARD

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

– Part 4 : 13 A fused connection units switched and
unswitched

Incorporating Corrigendum No.1

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

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National Foreword

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

This standard resulted from the revision of SS 403:2013, "Specification for 13 A fused connection units switched and unswitched". SS 403 has been renumbered as 145-4:2022. The revised standard is a modified adoption of BS 1363-4:2016+A1:2018, "Specification of 13 A plugs, socket-outlets, adaptors and connection units – Part 4: 13 A fused connection units switched and unswitched" and is implemented with the permission of the British Standards Limited. It incorporates Corrigendum No.1, January 2024 denoted by  .

The following deviations have been made due to national requirements and the particular needs of the local industry:

1. Changed the ambient temperature under conditions for use for 13A fused connection unit from -5°C to $+40^{\circ}\text{C}$, the average value over 24 h not exceeding $+35^{\circ}\text{C}$ to having a peak value not exceeding $+40^{\circ}\text{C}$, the average value over 24 h not exceeding $+35^{\circ}\text{C}$.
2. Changed the ambient temperature of $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ used for test condition for 13A fused connection unit to $27^{\circ}\text{C} \pm 5^{\circ}\text{C}$.
3. In the clause 8.2.4, removed the sleeves of the plug pins as they are not used in Singapore.
4. In the clause 13.1 removal of 2 and 3 gang connection units $120.6 \text{ mm} \pm 0.3 \text{ mm}$ on the horizontal or vertical centrelines for boxes intended to accommodate 2-gang connection units or $180.9 \text{ mm} \pm 0.4 \text{ mm}$ on the horizontal or vertical centrelines for boxes intended to accommodate 3-gang connection units. Requirements are specified for connection units incorporating a fuse-link conforming to SS 167.
5. Added local requirements on Resistance to heat in Clause 22 (see 22.2.2L) and Figure 24L. Where these new requirements are added, they are indicated by 'L' immediately after the clause number, term or table.

To facilitate identifications, the affected texts of the British Standards which were changed within this standard are marked by a margin bar on the left.

NOTE 1 – Where BS EN is an adoption of IEC standard, the IEC standard should be referred to.

NOTE 2 – The numbering of the clauses, tables, figures and annexes follows that of BS 1363-4.

Attention is 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 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.*

Specification for 13 A plugs, socket-outlets, adaptors and connection units – Part 4 : 13 A fused connection units switched and unswitched

1 Scope

This part of SS 145 specifies requirements for 13 A fused fixed connection units for household, commercial and light industrial purposes, with particular reference to safety in normal use. The connection units are suitable for the connection of appliances, in a.c. circuits only, operating at voltages not exceeding 250 V r.m.s. at 50 Hz.

Requirements are specified for connection units incorporating a fuse-link conforming to SS 167.

Requirements are specified for 13 A connection units with or without associated controlling switches, for flush mounting in suitable enclosures, e.g. boxes conforming to BS 4662:2006+A1:2009, or for surface or panel mounting. Connection units are intended for use with cables conforming to BS 6004 : 2012 or SS 358-3 having copper conductors. Connection units with cable outlets are additionally intended for use with flexible cables, conforming to the relevant part of BS EN 50525 (see Annex G) or SS 358-5 on the load (output) side.

This standard does not apply to connection units incorporating screwless terminals for the connection of external conductors of the following types:

- flat quick-connect terminals;
- insulation-piercing connecting devices; and
- twist-on connecting devices.

NOTE 1 – The titles of the publications referred to in this part of SS 145 are listed in the bibliography.

NOTE 2 – Requirements for electromagnetic compatibility are not given for the following reason.

A connection unit is mechanical by nature of construction. A connection unit does not emit intolerable electromagnetic interference and the product is immune from electromagnetic interference.

2 Conditions of use

Fused connection units shall be suitable for use under the following conditions:

- a) an ambient temperature in the range $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$, the average value over 24 h not exceeding $+35\text{ }^{\circ}\text{C}$;

NOTE – Under normal conditions of use, the available cooling air is subject to natural atmospheric variations of temperature and hence the peak temperature occurs only occasionally during the hot season, and on those days when it does occur it does not persist for lengthy periods.

- b) a situation not subject to exposure to direct radiation from the sun or other source of heat likely to raise temperatures above the limits specified in a);
- c) an altitude not exceeding 2 000 m above sea level;
- d) an atmosphere not subject to abnormal pollution by smoke, chemical fumes or other abnormal conditions. This is equivalent to pollution degree 2 (see Annex E) and Overvoltage Category III (see Annex D).