

June 2024 #24-067

General

Standardisation of plugs and sockets is a fundamental electrical safety principle. *AS/NZS 3112 Approval and test specification -Plugs and socket-outlets* provides for standard dimensional requirements for plugs and socket-outlets in Australia and New Zealand. While there are allowances for non-standard plugs for special situations, this standard for household plugs has dimensional requirements as per figure 2.1(a) and figure 2.1(c).

Equipment with integral plug pins, similarly, is intended on meeting these dimensional requirements. It has now become common for equipment types such as power supplies to be supplied with detachable plug portions. AS/NZS 3112 was amended to provide requirements (Types A, B or C) for specific 'plug adaptor' devices with AS/NZS 3112 dimensions plug pins and interconnecting pins to attach to the equipment to make it equipment with AS/NZS 3112 plug pins for direct insertion into socket outlets. The inter-connecting pins from the equipment to a detachable plug portion cannot be dimensionally the same as any internationally defined plug.

This is an existing requirement, however AS/NZS 3112 will be amended to clarify the requirement.

Requirement

The detachable connection between the equipment and the plug portion shall not be via a defined plug in IEC 60083, or a plug tested to IEC 60884.1.

Note: in addition to equipment with integral pins for insertion into a socket outlet, if the equipment is supplied with what is effectively a 'plug adaptor' device that is separate to, but is intended to be placed over and enclose, an international plug on a supply cord of the equipment, and has means to permanently enclose the international plug {screw(s) or clip(s) etc} – so is not 'detachable' - it also does not comply with the above statement. If this device is supplied already permanently enclosing the international plug, then the completed assembly is a plug that is required to be tested to AS/NZS 3112 and be certified as a complete assembly as a plug (see diagram in Background below).

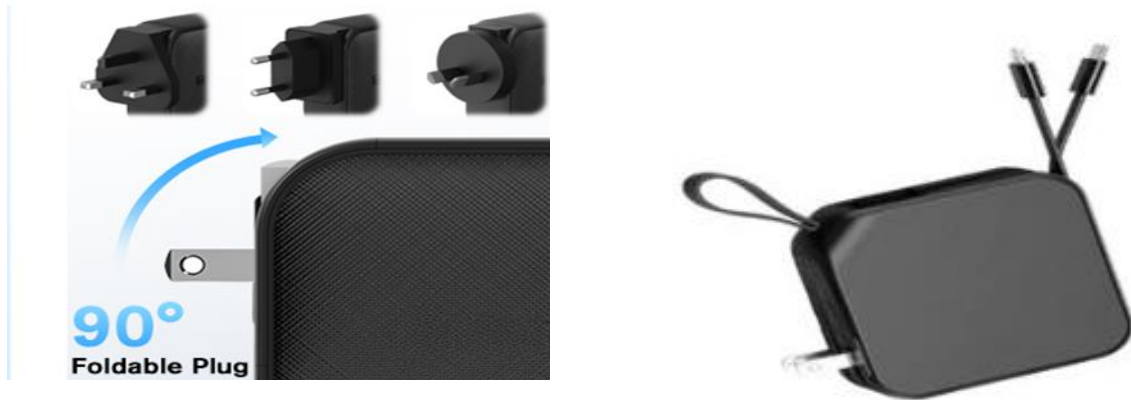
Test reports

Test reports shall:

- Use the proforma template in General Guidance document #20-019 Appendix J Test Report Format: AS/NZS3112_2017_A1_2021_App_J_TRF-v1.01 (or any later edition of that document)
- have detailed colour photographs depicting the equipment:
 - o without any detachable plug portion fitted showing sufficient details of the pins/connection points
 - o all angles of a detachable plug portion (i.e. so the rear of the plug portion has no exposed live parts can be checked, AS/NZS 3112 clause J4.8.1)

Background

The intention of this bulletin is to prevent certification of electrical equipment with integral plug pins from having international plug pins such as US or Japanese style plug pins, or European style plug pins that form a moulded part of the enclosure of the equipment. For example:



US style plug pins integral to the plug portion of this example are not acceptable.

In addition, it also clarifies devices used with international plug configurations on a supply cord, such as the diagram below as a schematic example of a plug portion that encapsulates an international plug and cord:

