

April 2020 #20-001

This information notice replaces ERAC information notice #0007 and #0024

Part 1 – General

Requirement

For all certification of electrical equipment that has plug portions for insertion into socket outlets the latest requirements of AS/NZS 3112 Appendix J must be applied. That is, irrespective of which version of AS/NZS3112 is applied, the particular equipment safety standard may specify at a minimum, the latest version of AS/NZS3112 in force in AS/NZS 3112 at the time certification is being performed, (taking into account any transition dates listed in AS/NZS3112) must be met.

It is also recommended that any requirements in a transition phase (e.g. listed in AS/NZS 3112 Appendix J standard but have an application date later than the date the certificate is being issued) are also applied and if not, the certificate must be clear as to what was not included in the certification by listing that detail that was not applied in the general comments section.

For certification, AS/NZS 3112:2017 Appendix J requirements in force as at 24 February 2019 supersede the testing requirements of the previously published ERAC #0007 information bulletin.

Note: For equipment that does not require certification (level 2 or level 1 equipment), responsible suppliers should still apply the latest requirements applicable in AS/NZS 3112.

Background

Several equipment standards that reference Appendix J of AS/NZS 3112 have not maintained updated reference to the latest requirements of AS/NZS 3112. Some standards reference outdated editions of AS/NZS 3112 or have no dated reference to AS/NZS 3112 in the clauses where Appendix J was listed (but may have a dated edition reference in the 'referenced standards' section), or had no dated reference at all. This has caused some confusion as to what requirements should be applied to equipment with plug portions for insertion into socket outlets and when those requirements apply.

Part 2 – Additional information for certification of detachable plug portions

Type A or Type B devices as specified in AS/NZS 3112:2017 appendix J are considered as a component part of other equipment and do not require separate certification (if the other equipment requires certification then the Type A or Type B device is tested with the equipment, taking into account the testing requirements of AS/NZS 3112 Appendix J).

Type C devices as specified in AS/NZS 3112:2017 appendix J are considered a Plug (detachable plug portion and adaptor together) and require certification (such certification being conditional and related to the adaptor it is assessed with)

If certification is requested the following applies:

- **Type A** devices fall within the scope of AS/NZS 3105 so can be separately certified as a component part to that standard, however they still require to be tested to all the requirements as specified in AS/NZS 3112:2017 appendix J and certificate must have certification conditions as required below.
- **Type B** devices do not have a separate standard that applies to them, they may be separately certified as a component part to AS/NZS 3112:2017 Appendix J - if there is evidence the requirements for the device and its outlet have been covered by the other equipment standard (i.e. the device has been tested as part of the equipment the device is used with) and certificate must have certification conditions as required below.
- **Type C** devices are certified to AS/NZS 3112:2017 as a combination of the detachable plug portion and the adaptor part connected to the flexible cord (it is permissible to have reference on the certificate to AS/NZS 60320.1 for the outlet of the detachable plug portion and AS/NZS 60320.2.2 for the adaptor).

Certification Conditions for detachable plug portions

If a Type A or Type B device part is to be separately certified the certificate also shall have a condition of certification listed on the certificate. The condition to include that the certification is only valid when the item is used with end product xxxx (where xxxx is a list of all brand/model numbers of end equipment the item has been tested with to show as a combination it complies with the end product relevant safety standard).

Note: This is to cover, for example but not limited to, such aspects as temperature limits of connections, suitability of connection method to the equipment, tumble barrel test, strain on socket –outlets.

The certificate for Type A or Type B device is to also indicate condition the device cannot be sold as a separate part (i.e. it is only sold with the equipment it is certified with). The device can be retained by supplier as a spare part for such equipment supplied only under warranty/repair claims.

A Type C device certificate is to include conditions that the certificate is only valid when the item is used with the adaptor part that it has been assessed with (listing the brand and model of adaptor part), and also indicate condition the device cannot be sold as a separate part (i.e. it is only sold with the adaptor part it is certified with). The device can be retained by supplier as a spare part for such equipment supplied only under warranty/repair claims.

Plug types

Type A

A device that has AS/NZS 3112 flat pin plug pins and an outlet configured for connection to an appliance inlet within scope of AS/NZS 60320 for use with equipment in a direct plug in equipment configuration.

Type A example



Type B

A device that has AS/NZS 3112 flat pin plug pins and an outlet that is not for connection to an appliance inlet within scope of AS/NZS 60320 for use with equipment in a direct plug in equipment configuration.

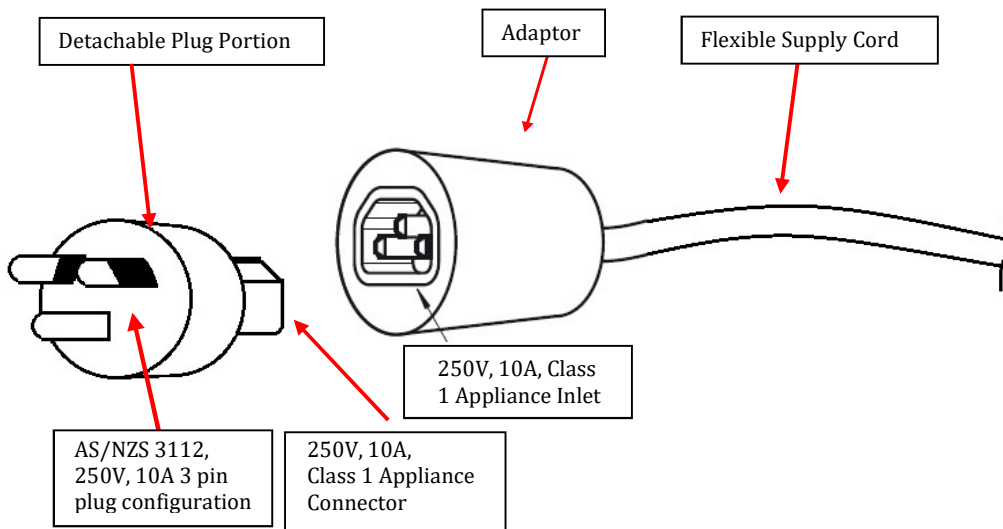
Type B example



Type C

A device that has AS/NZS 3112 flat pin plug pins and an outlet that is configured for connection to an appliance inlet or interconnection coupler (plug connector) within scope of AS/NZS 60320 for use with an adaptor connected to a flexible cord (plug connector) so as to replicate a supply plug and flexible cord configuration.

Type C example



Note: the adaptor part fits within scope of AS/NZS 60320.2.2 as a plug connector

Type A or Type B devices do not fit within definitions that make them declared/prescribed/level 3 equipment in electrical safety legislation in Australia and New Zealand.

However they require assessment to ensure safety in such matters (but not limited to) there is adequate contact between the connection of the detachable plug portion and the equipment it is attached to, that such connections will remain resilient and effective over time, that no fire or electric shock hazard exists, that no access to live parts is possible when the detachable plug portion is detached, that the detachable plug portion will not become partly detached and create a fire hazard.

To remove doubt, clause J.4.8.2 of AS/NZS 3112 is applied to all contacts of type A and B devices. Detachable plug pin assemblies that do not incorporate "flat" pins or do not make contact with "both" sides are not excluded from Clause J.4.8.2. Constructions that rely upon plastic material to provide the electrical contact pressure are not acceptable.

Type C devices, detachable plug portion with their associated adaptor, are classified as a "Plug" under the definition of AS/NZS 4417.2 and must comply with AS/NZS 3112.