

# THE NEW WIRING RULES (AS/NZS 3000:2018)

## Important information for builders

Please be advised that the 2018 edition of AS/NZS 3000:2018, Electrical Installations (known as the Wiring Rules) has been published. All electrical work carried out from **1 January 2019** onwards will need to comply with the new rules.

**The new Wiring Rules may result in some pricing increases. Please speak with your electrical contractor for further information regarding these changes.**

The key changes affecting residential installations are as follows:

### GENERAL ARRANGEMENT, CONTROL AND PROTECTION

1. The manufacturer’s instruction for installation of their equipment has now been mandated. This may affect cable sizes and installation methods.
2. Wiring requirements for electric vehicles and their related charging units have been added to the Wiring Rules mandating installation requirements.
3. Gas appliances have now been added in the Wiring Rules to the list of equipment requiring isolation.
4. The obligation to fit RCD’s on residential installations has extensively changed, requiring RCD’s to be now fitted to all final sub-circuits. This includes oven, hotplate, air-conditioning and hot water system circuits as well as light and power circuits.

Switchboard replacements and circuit alterations also require RCD’s to be installed.

5. The previously allowed practice of twisting neutral conductors at switchboards to loop connections has now been banned. Suitable links or other connections methods, not reliant on the twisting of conductors are required.

### SELECTION AND INSTALLATION OF WIRING SYSTEMS

1. Cable colour identification has now been extended so that green/yellow sleeving is required where alterations occur to existing earth and bonding conductors. Sleeving of existing yellow active conductors is also required where existing circuits are extended.

### SELECTION AND INSTALLATION OF APPLIANCES AND ACCESSORIES

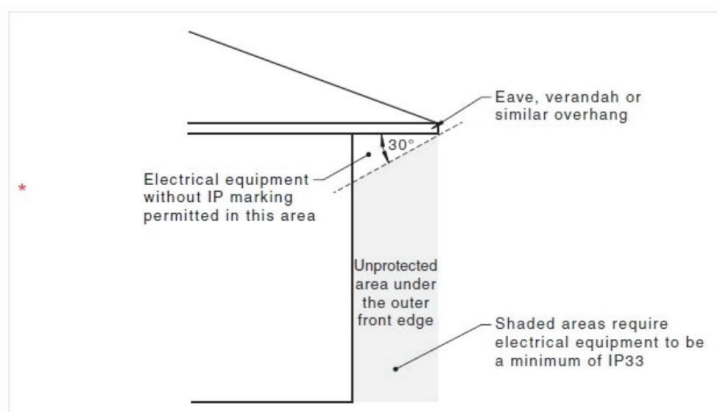


FIGURE 4.1 AREA UNDER AN OVERHANG REQUIRING ACCESSORIES TO BE A MINIMUM OF IP33 (SIDE VIEW)

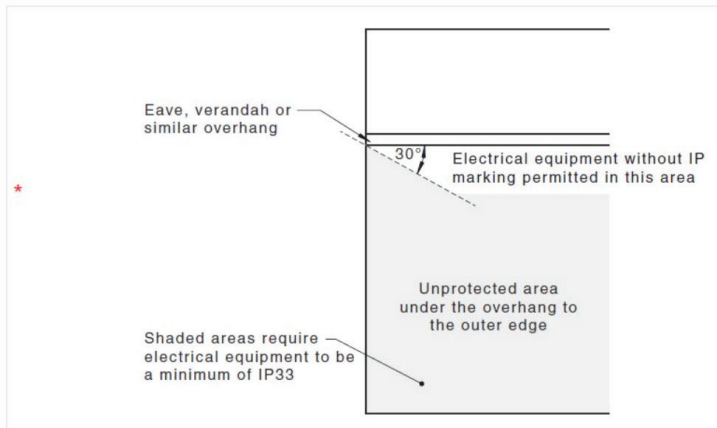


FIGURE 4.2 AREA UNDER AN OVERHANG REQUIRING ACCESSORIES TO BE A MINIMUM OF IP33 (FRONT VIEW)

1. Weatherproof protection requirements for outlets and fittings mounted under eaves has changed with the introduction of a 30° rule. Apparatus now mounted outside of this zone will require to be weatherproofed (suitably IP rated).
2. A new clause has been added requiring wiring installed within or passing through a luminaire to be protected from heat and UV effects.
3. Recessed luminaires must have an international symbol thereon stating that they can be installed in, or covered in insulation. Where no symbol exists a suitable barrier must be installed.

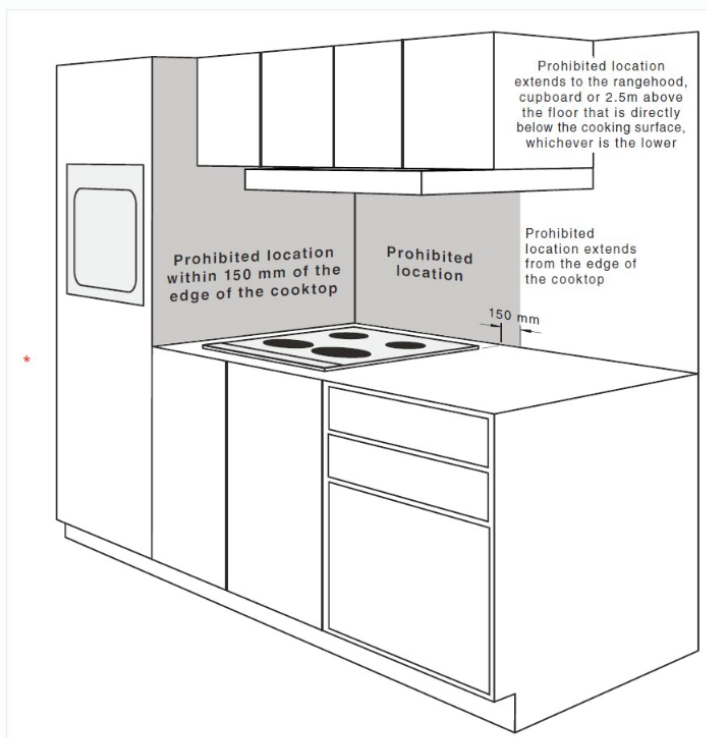


FIGURE 4.17 PROHIBITED LOCATION FOR SOCKET-OUTLETS AND SWITCHES INSTALLED NEAR OPEN COOKING SURFACES (GAS OR ELECTRIC)

4. Mandated clearances from open cooking surfaces (cook-tops) have been added to the Wiring Rules. Clearances have been extended from the previous local requirements.

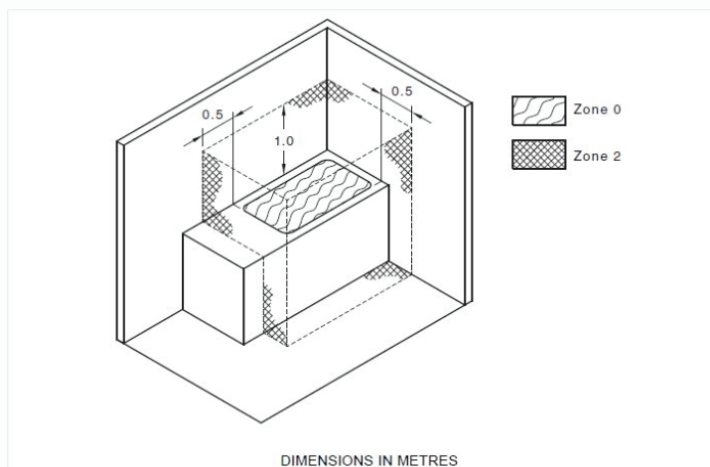
5. Water heaters isolation switch requirements have been expanded. All water heaters **including solar** now require an isolation switch to be installed adjacent to, but not mounted, on the unit.
6. Isolation requirements for gas appliances and equipment have now been added to the rules.
7. Air conditioners and heat pump systems now prohibit their isolating switch to be mounted on the unit. An additional warning sign is also required where multiple supplies exist at the isolation switch.

## EARTHING ARRANGEMENTS AND EARTHING CONDUCTORS

1. All structural steelwork on buildings containing electrical installation are now required to be to be earthed, including shed frames.
2. The bonding requirements for swimming and spa pools have changed.
  - Concrete pools require the pool mesh to be bonded to earth as well as all metal apparatus, including the pool ladder, pool fencing and window frames located within arm's reach (1.25 metres) of the pools edge.
  - This requirement also applies to fibreglass pools where there are exposed conductive parts of electrical equipment (pool motor or metal light fittings) installed within the pool zones (3.5 metres from the edge of the pool).
  - An earth bonding connection point is required where the above equipment is to be earthed.

## DAMP SITUATIONS

1. Electricity distribution equipment (pillars) and generating systems including solar system inverters are not to be installed within the pool zones (3.5 metres from the pools edge).



\* FIGURE 6.14 ZONE DIMENSIONS FOR OTHER FIXED WATER CONTAINERS WITH FIXED WATER OUTLETS WHERE NO CONTAINER HAS A CAPACITY EXCEEDING 40 L