

# 9.0 Electrical requirements

This section covers electrical requirements for heat pump installations. It is an essential element of the installation that all electrical work is carried out in an appropriate manner to ensure that the installation is safe and complies with legislation.

All electrical wiring must have a Certificate of Compliance (CoC) certificate issued by a registered tradesperson on completion and inspection of the installation. Electrical work must be carried out in accordance with the Electricity Act, electrical wiring regulations and AS/NZS 3000:1997.

Inverter units with a heat output of 5 kW or greater must be connected to a separate circuit. Those under 5 kW may be connected to a power circuit of at least 2.5 mm twin and Earth cabling with a 20 amp lockable RCD, and where sufficient load is safely available (i.e. not a kitchen, laundry or other heavy load circuit).

## 9.1 Installing electrical wiring

- Select a circuit for the main power supply.
- For new work, use a dedicated supply.
- Refer to the manufacturer's specifications for:
  - rated voltage
  - input capacity/fuse size
  - electrical cable size
  - wiring diagram for electrical installation.
- All hard wiring must be carried out by a registered electrician.

## 9.2 Outdoor unit connections

Figure 9.1 Connect power supply cable to terminal block



- Remove service cover from outdoor unit.
- Fix indoor/outdoor connecting cable correctly to the terminal block in the outdoor unit.
- Tighten terminal screws to ensure that wires are firmly secured.
- Connect power supply cable to terminal block in outdoor unit (Figure 9.1).

Figure 9.2 Install lockable isolating switch (A)



- Install a lockable isolating switch with a minimum 3 mm gap when open (Figures 9.2 – 9.4).

Figure 9.3 Install lockable isolating switch (B)



Figure 9.4 Install lockable isolating switch (C)



Figure 9.5 Replace service cover to outdoor unit



- Attach the isolating switch to the house – not to the outdoor unit.
- Provide waterproof protection to the connection as required, such as:
  - cable gland
  - flexible conduit.
- Replace service cover to outdoor unit when all connections are completed (Figure 9.5).

**Do not:**

- **connect the isolating switch to the outdoor unit, which means that the unit cannot be isolated from the power**
- **allow contact between wiring and refrigerant pipework**
- **run the main power cable and heat pump system power cable together**
- **allow work to be carried out by an uncertified tradesperson or to be installed without a completion certificate for the electrical works, which may void future insurance loss claims.**

## 9.3 Nameplate

Attach a nameplate in an accessible location displaying:

- manufacturer's name and/or trademark
- type or model designation and serial number
- rated voltage
- rated frequency
- cooling capacity
- heating capacity
- refrigerant type (designation) and charge.