

WIRING OF SPLIT SYSTEM AIR-CONDITIONERS

Energy Safe Victoria has become aware of a technical issue with the installation of wiring between the (compressor) outside unit and the (head) indoor unit on various split system air-conditioners.

The photo depicts the connection of the wiring installed between the outdoor unit and the indoor unit that has been connected / terminated incorrectly and does not comply with the conductor insulation colour identification requirements of Clause 3.8 of AS/NZS 3000:2007.

The technical issue is with the interconnecting cable terminals of both the indoor and outdoor units; these terminals are labelled S1, S2 & S3 but are also distinguished by use of colour;

Terminal	Colour	Technical issue
S1	Black	connects directly to the incoming active conductor (L ~)
S2	White	connects directly to the incoming neutral conductor (N ~)
S3	Red	Communication – no issue



Electricians are incorrectly connecting the wiring installed between the indoor and outdoor units to the terminal colour coding, resulting in the **black conductor becoming an active conductor**, the **white conductor becoming a neutral conductor** and the **red conductor being communication**.

The wiring installed between the outside unit and the indoor unit is classified as installation wiring and shall comply with the conductor insulation colours as specified in Table 3.4 of AS/NZS 3000:2007.

Should an electrician encounter this situation, immediate rectification is required.

It is most important to isolate supply, test before you touch and Lock out Tag out (LOTO) before starting work.