

RCBO prohibition

Additional testing and verification requirements for RCBOs

1 July 2019

RCBO

RCBOs are classified as level 3 in-scope electrical equipment and are required to be certified and registered before they are offered for supply. In addition to these requirements the following tests shall also be conducted and the results verified.

Test Setup

In the circuit diagram below resistor values R1 and R2 is 0.5 ohm each and need to be of the appropriate power rating so that they are not damaged during the testing. The variable resistor R value range is selected so that adequate residual current is passed through the circuit to trip the RCBO under test.

Test Method

1. The RCBO in the closed position is to be set up as per the circuit diagram below to have 240V applied on both L and N terminals. The link between the terminals shall be as short as practicable. The variable resistor R value is reduced so that adequate residual current is passed through the circuit until the RCBO trips. This current is applied for 60 seconds.
2. If the RCBO can be reset, the RCBO is setup as per test (1), however the variable resistor is disconnected from the circuit. The RCBO is closed and the test button is pressed and released.
3. If the RCBO can be reset, step 2 is repeated but the test button is held down for 10 seconds.
4. If the RCBO trips then step 2 is repeated.

Verification requirements

After these tests a verification of the operating characteristics under residual current conditions of the RCBOs is to be performed by the test set out in clause 9.9.1.2 a), of AS/NZS 61009:2015. The RCBO is required to comply with clause 9.9.1.2 a), of AS/NZS 61009:2015, any damage to the test button or its circuits is ignored.

Results and publication

Submissions for a RCBO to be considered for listing on the ESV's website must include the testing and verification results with a new product sample. The product sample and these results should be posted to:

Attention Electrical Equipment Safety RCBO Compliance
Energy Safe Victoria
Level 22, 2 Southbank Boulevard
Southbank VIC 3006

For further information, please email info@energysafe.vic.gov.au.

Test circuit diagram

