

Additional testing and verification requirements for RCBOs

RCBO

RCBOs are required to be tested and comply with the requirements of AS/NZS 61009 - Residual current operated circuit-breakers with integral overcurrent protection for household and similar use (RCBOs) - General rules. In addition to these requirements the following tests shall also be conducted.

Test setup

Resistor R1 and R2 value is 0.5 ohm each 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.

After these tests a verification of the operating characteristics under residual current conditions of the RCBOs is performed by the test of clause 9.9.1.2 a, of AS/NZS 61009:2015.

The RCBO is required to comply with clause 9.9.1.2a, of AS/NZS 61009:2015, any damage damage to the test button or its circuits is ignored.

RESULTS and PUBLICATION

The testing and verification results must be submitted to ESV with a new product sample. These results should be posted to:

RCBO Compliance,

Attention Electrical Equipment Safety

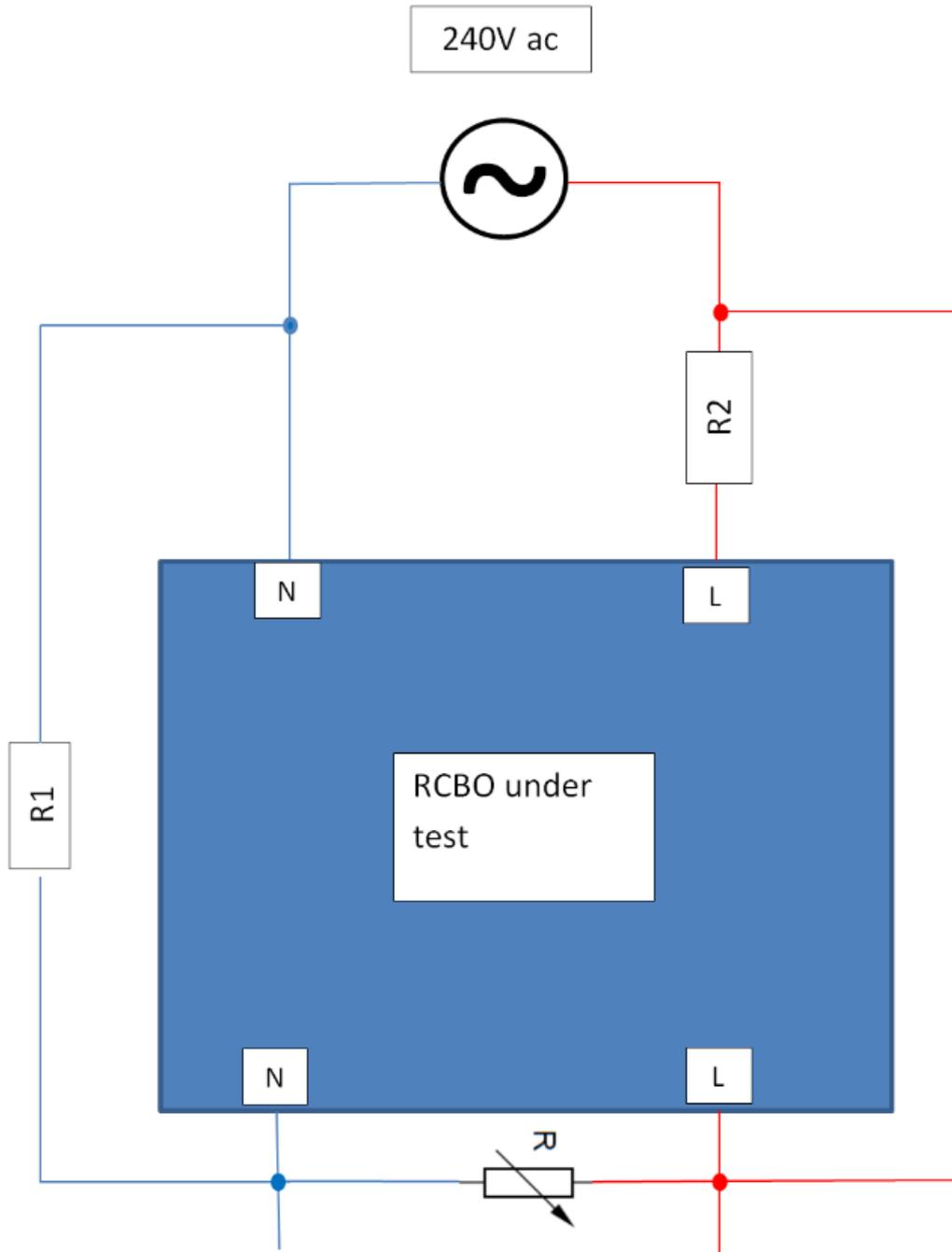
Energy Safe Victoria

Level 5, Building 2, 4 Riverside Quay

Southbank 3006, Victoria

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

Test Diagram



R1 – 0.5 Ohm
R2 – 0.5 Ohm
R – Variable resistor