

Residual Current Devices (RCDs)

An **RCD** is an electrical wiring device that disconnects a circuit whenever it detects that the electric current is not balanced between the energised conductor and the return Neutral conductor. Such an imbalance is sometimes caused by current leakage through the body of a person who is grounded and accidentally touching the energised part of the circuit. A lethal shock can result from these conditions. RCDs are designed to disconnect quickly enough to mitigate the harm caused by such shocks although they are not intended to provide protection against overload or short-circuit conditions.

RCDs shall:

- Incorporate the same housing and installation features as MCBs
- Have test button to ensure product is operating correctly
- Be available in two pole or four pole
- Be available to suit currents ranging from 25A to 100A in both 240V and 415V
- Be available to detect leakage currents of either 30mA or 10mA (note 10mA is required for sensitive areas such as hospitals or where young or elderly people are located).
- Be fitted with both cog-rail (for busbar connection) and cable terminals
- Have combination head (Phillips and slotted) screws in each terminal
- RCDs that are two and four modules wide are to measure 36mm and 71mm wide respectively
- Terminals designed to prevent finger access (guard against accidental contact of live terminals).

MCB/RCD Combinations (RCBOs)

An **RCBO** is a single device that offers a combination of both MCB and RCD functions. They are combined together to offer the best form of electrical protection for power and lighting circuits. In essence the RCD protects the user from electric shocks whilst the MCB protects the electrical circuit from overload.

MCB/RCD Combinations (RCBOs) shall:

- Provide both MCB and RCD protection
- Have compliance to AS/NZS61009
- Be available in either one (18mm) or two module (35mm) wide options
- Be top or bottom line and load compatible
- Be rated at 240V, 30mA
- Have either a 6kA or 10kA short-circuit interrupting capacity
- Have combination head (Phillips and slotted) screws in each terminal
- Have test button facility to ensure product is operating correctly
- Ensure terminals are designed to prevent finger access (guard against accidental contact of live terminals).