RCBOs - Explained

What is the fault current rating on the MOD6 RCD/MCB?

6kA

Why does it have a black lead?

This is a neutral lead designed to pick up the line side neutral.
This is a time saving feature, especially when fitting units into load centres.

Why does the unit have a white tail?

This is an earth reference lead. This is a backup in case of loss of neutral.
The RCD function is disabled without a voltage reference if the neutral is lost.

Why is the earth lead white?

This is not an earth. The white lead is only a voltage reference "functional earth" for the operation of the electronics of the RCD which is common in 1 pole width RCBOs.

Do we have to connect the white wire "tail"?

The unit will still operate with the earth reference disconnected. However, if the neutral is lost with the white lead disconnected the unit will not trip on an earth leakage.

Is the product covered under warranty if reference tail is removed?

If the earth reference tail is removed from the device on the product has been altered from the Manufacturer's Specification then warranty is NOT VALID.

Can I fit auxiliary contacts to this unit?

No! The MOD6 family does not have any auxiliary/alarm options. NHP Din-T accessories cannot be fitted to MOD6 devices.

What is the biggest cable I can connect to the terminals?

25mm^2 M6RCBD, M6RCBS and load side MOD6RCBO1 and MOD6RCBO2
35mm^2 line side MOD6RCBO1 and MOD6RCBO2

What overload curve can we get these units in?

The MOD6 range is only manufactured as C curve breakers.

Can I reverse feed RCBO?

If the 1P wide RCBO terminals are marked Line and Load this must be respected.
2P RCBO terminals are not marked Line and Load so it can be feed from top or bottom terminals.

I have a 20A RCBO running at 6A but the unit still trips?

When selecting a RCBO the earth leakage current of the end devices needs to be considered not just the load current. Typically a RCD device should be designed to run at not more than 1/3 of its rating
e.g.: 30mA device normally run at 10mA or less.

Device	Typical leakage current
Computer	1.5mA
Fluorescent light	0.5mA
Printer	0.8mA

Approximate values only, as leakage will vary from device to device, brand to brand.

What is the tripping time for general type 30mA RCDs as per standards AS/NZS 61009 & AS/NZS61008?

Test Leakage Current	Tripping Times
IΔn 30mA	**≤300mS**
IΔn 60mA	**≤150mS**
IΔn 150mA	**≤40ms**

RCCB – Residual Current Circuit Breaker

This device is a mechanical switch with an RCD function added to it.
Its sole function is to provide protection against earth leakages.
There is no over-current or short-circuit protection.

Also known as a Safety Switch

RCBO – Residual Current Breaker with Over-current Protection

This device is an over-current circuit breaker (like a MCB) with a RCD function added to it.

It has two functions;

- To provide protection against earth leakages
- To provide protection against overload currents and short circuits, ie. "normal" circuit breaker

Also known as a MCB/RCD combination units

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