

MCB's, RCD's or RCBO's tripping

Information

First you need to know what is tripping as that will often point to a possible cause. So I think it best to identify what you have first.

Main switch. This controls the power coming into the consumer unit or fuse box. If that is turned off then all power is cut.

RCD means Residual Current Device. This is a safety device that will trip in certain fault conditions. It often controls more than one circuit that are connected to it.

MCB means Miniature Circuit Breaker. Each controls one circuit such as lights or sockets and will trip if it is overloaded. They have different ratings depending upon their intended use – a cooker need more power than the lights for example.

RCBO means Residual current operated Circuit Breaker and this combines the RCD and MCB items above into one unit.

Main Switch

If you turn this OFF then all circuits will be off

RCD

MCB's – one for each circuit. Each should be labelled to show what it controls what so one may be Downstairs Lights, one sockets, one cooker etc.



RCD is also identifiable by the TEST button that causes it to trip.

The RCD is reset by this lever. If it feels 'floppy' push it down before pushing it back up.

In this case the RCD controls the 7 MCB's to its right. If the RCD trips or goes off then those 7 circuits will also be off.

A RCBO look very similar to a MCB as above but it also has a test button like the RCD shown. It combines the RCD and the MCB in one unit.

The format above is probably the most common setup but you may find that your consumer unit or fuse box **does not** have a RCD and one of the MCB's has tripped. See MCB's below.

Faults

RCD tripped.

The majority of things that cause RCD's to trip are what are plugged in rather than the a fault in the house wiring. You may also find some external influences can cause problem. For example, water dripping from the heating system onto an electrical point. So the first point in fault finding is to unplug everything. So nothing turned on nothing plugged in – no extension leads, no phone chargers/USB adaptor, none of those square adaptors that have a plug hole on each side etc just a plain socket. All lights in the off position if they are covered by the tripped RCD.

A tripped RCD is probably the most common fault. You may well find that it will not reset. That could be for two reasons; 1. you are not following the correct procedure that some RCD's require to reset them or 2. the fault that caused it to trip is still present.

When some RCD's trip the lever switch may not go all the way down – they almost look half way down. That is by design. You may find that the lever feels a bit floppy as if it is not connected to anything. In that case firmly push the lever all the way down and then try to push it back up.

If that works – fine, but if this keeps happening there may be a fault that needs investigating.

That did not work! Turn each of the MCB's off. Try to reset the RCD as above.

If the RCD resets then re-energise each MCB one at a time and see if the RCD trips. Should you identify what circuit is causing the problem. That may be going beyond the scope of this note.

In any case, once RCD back on then re-introduce each circuit and plug things back into see if you can identify any cause.

If the RCD does not reset and EVERYTHING is unplugged then again we may be going beyond the scope of this note.

MCB's

Should you not have a RCD and one of the MCB's has tripped then that would normally be because something has overloaded that circuit and as a safety measure the circuit has disconnected itself. In that case, again it is important that items are turned off/unplugged. Try to reset the MCB. If it will not and EVERYTHING is unplugged and off then we are beyond the scope of this note. Should it reset then turn things back on/plug in one at a time. Something as simple as a bulb blowing can cause these to trip so you may identify the problem by finding something that is not working.

Peter Croft
P Croft & Sons

07766 331155
01483 772172