What are MCBs, RCDs, RCBOs, and SPDs?

What is an MCB?

An MCB (miniature circuit breaker) is a device that protects the wiring to prevent the cable from being overloaded. It's also designed cable, the live and neutral will touch each other creating a short circuit. Each MCB will protect a dedicated circuit. I.E. you will have an MCB protecting the cable that supplies your cooker.

MCB's are the modern equivalent to re-wireable fuses which offer the same style protection.

MCBs do NOT offer protection against electric shock!

What is an RCD?

An RCD (Residual Current Device) is a device designed to save lives. An RCD monitors the amount of current between live and neutral. If there is an imbalance the RCD will trip. Generally, an imbalance will be because the current is leaking down the earth within a circuit, we call this an earth fault. A common occurrence of a tripping RCD is moisture in an outside light.

An RCD will protect a group of MCB's. If there is an earth fault on one of the circuits that causes the RCD to trip, you will also lose power to all the other circuits.

RCD's have a small test button on them which should be pressed every 6 months to ensure the device trips and disconnects. If it doesn't trip, seek professional advice from an electrician.





Above: An example of an MCB

Below: An example of an RCD





What is an RCBO?

Client help sheet

An RCBO (Residual current circuit breaker with overcurrent protection) is both an RCD and an MCB in 1 unit. It's the preferred type of protection for electricians to install as if there is an earth fault on a circuit, ONLY the circuit with the earth fault will be disconnected and your other circuits will not be affected. These, like an RCD, have a test button which should be pressed 6 monthly to ensure the device trips.

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What is an SPD?

An SPD (Surge protective device) is a device that sits within your fuse board and it is designed to protect electrical products from electrical surges that may damage electrical products. They've been around for a long time but have only recently been brought in to the domestic market.

It's recommended you have one installed but they are not mandatory. It would be significantly cheaper to have an SPD installed rather than replacing a TV if there was an electrical surge.

If you have any questions regarding any of the devices please do get in touch.

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