



Build it



Electrical

Miniature circuit breakers, isolators & earth leakage units:
Part 2





Hi I'm Bra Build it
This week Clint is talking about electrical
miniature circuit breakers, explaining the basic
applications.

Remember to use the correct load rated device
for your application, ensuring the cable &
equipment's protection at all times.



Lets Talk miniature circuit breakers (MCB)



Lets help you understand
MCBs & how they fit into an
electrical installation.

What is a miniature circuit breaker?

A Miniature Circuit Breaker (MCB) is an electromechanical device designed to protect an electric circuit from “over-current” - a term used to describe an electrical fault caused by either overload or short circuit.

How did the MCB evolve?

Back in the day we protected circuits against over-current by using fuse wire in a fuse panel. The principle was fairly simple - an over-current would quite literally 'blow' the fuse wire by rapidly heating and melting it, thus breaking the electrical connection and in doing so, protected the rest of the electrical circuit.

MCBs improve on this functionality as they are usually not destroyed during over-current so are reusable. They are also much easier to use, offering the convenience of 'on/off switching' for circuit isolation and since the conductor is housed within a plastic casing, they are much safer to use and operate.

1- Pole MCB

Used for a single phase circuit



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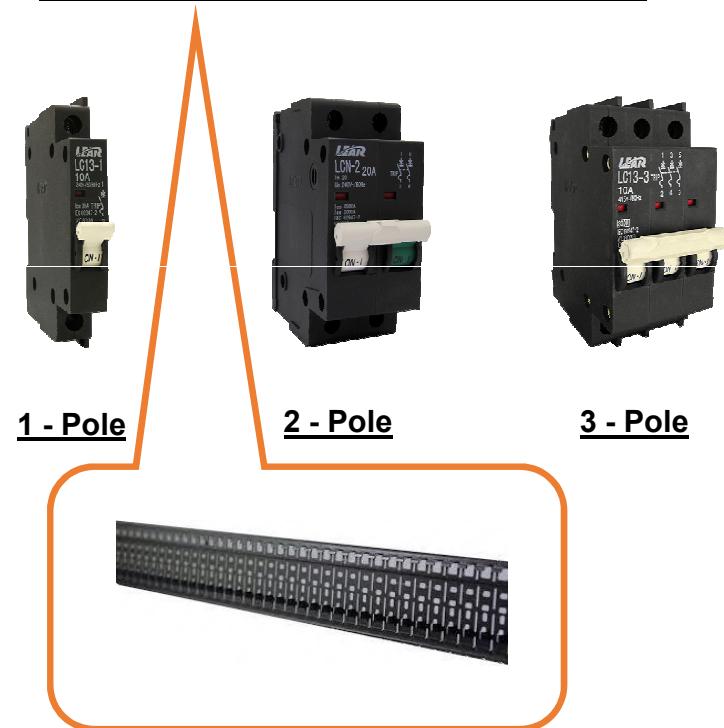
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MCB images

Din rail mount MCBs



Samite/mini rail mount MCBs



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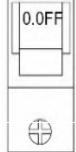
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MCB Applications

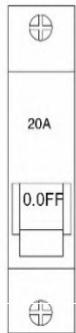


Typical usage:
- Light circuit

10A

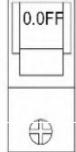


Max Load 10Amps
Minimum wire size: 1.5mm

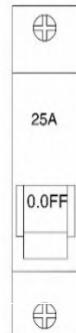


Typical usage:
- Socket outlet circuit (Plugs)
- Geyser circuit
- Small aircon circuit
- Sub DB circuit

20A



Max Load 20Amps
Minimum wire size: 2.5mm

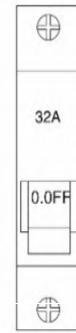


25A

Typical usage:
- Aircon circuit
- Jacuzzi circuit
- Underfloor heating circuit
- Sub DB circuit

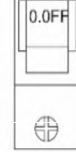


Max Load 25Amps
Minimum wire size: 2.5mm



32A

Typical usage:
- Small domestic stove circuit
- Underfloor heating circuit
- Sub DB circuit

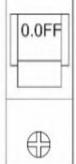


Max Load 32Amps
Minimum wire size: 4.0mm



Typical usage:
- Domestic stove circuit
- General loads
- Sub DB circuit

40A

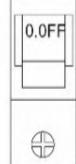


Max Load 40Amps
Minimum wire size: 6.0mm



Typical usage:
- Sub DB circuit
- General loads

50A



Max Load 50Amps
Minimum wire size: 10.0mm



63A

Typical usage:
- General loads



Max Load 63Amps
Minimum wire size: 16.0mm

Din MCBs available through the DC.



Product Code:2943800
CIRCUIT BREAKER 10A 1POLE
3KA CHINT
Barcode: 6007328364870



Product Code:2943815
CIRCUIT BREAKER 16A 1POLE
3KA CHINT
Barcode: 6007328364887



Product Code:2943896
CIRCUIT BREAKER 20A 1POLE
3KA CHINT
Barcode: 6007328364894



Product Code:2943933
CIRCUIT BREAKER 20A 2POLE
3KA CHINT
Barcode: 6007328365020



Product Code:2943910
CIRCUIT BREAKER 25A 1POLE
3KA CHINT
Barcode: 6007328364900



Product Code:2943920
CIRCUIT BREAKER 32A 1POLE
3KA CHINT
Barcode: 6007328364917



Product Code:2943922
CIRCUIT BREAKER 40A 1POLE
3KA CHINT
Barcode: 6007328364924



Product Code:2943924
CIRCUIT BREAKER 50A 1POLE
3KA CHINT
Barcode: 6007328364931



Product Code:2943926
CIRCUIT BREAKER 63A 1POLE
3KA CHINT
Barcode: 6007328364948

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Important reminder!



Any alterations and or repairs to the electrical DB installation will need to be carried out by a qualified electrician, in accordance with the SANS 10142 wiring code.

Did You Know ?



Did you know that Build it only purchases product from accredited & approved suppliers?

MCBs, Isolators & E/L units purchased through the DC are all SABS approved.

Thank You



Thank you for joining me. I hope you enjoyed part 2 of the circuit breaker tutorial.

Until next time, stay safe!