

## CBI handy-guide for Electrical Safety Awareness

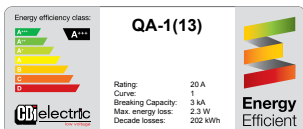


**Only manufacturer of circuit  
breakers on the African continent**



# About Us

- CBI-electric: low voltage is a proudly South Africa company and the only manufacturer of Circuit Breakers on the African continent
- More than 70 years of Service Excellence
- Quality, Energy Efficient Electrical Protection Equipment



- Operating in Residential, Commercial, Industrial, Utility, Mining and OEM sectors

## Outperforming the Test of Time



# Electrical Safety Awareness

- Electricity is **dangerous**
- Misapplication and misuse will put equipment and personal safety at risk
- Correct use of electrical protection equipment will reduce or eliminate accidents and hazards
- Always buy **authentic products** at **authorised distributors**



## Why do we need electrical protection?

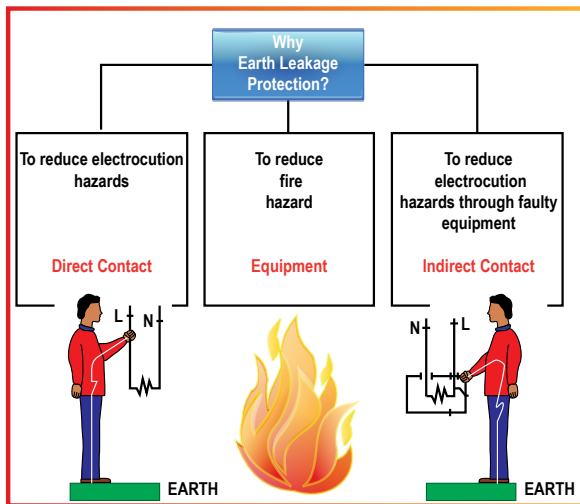
### 1. Circuit Breakers

When you draw too much electrical current for a particular circuit, the wires become overloaded and the circuit breaker will trip to protect the installation. If this did not happen, the wires would get so hot that they would melt and cause a fire or damage to the house. A similar situation applies if there is a short circuit, i.e. when two exposed wires touch each other or when an exposed live wire touches another wire or something metal.

### 2. Earth Leakage Protectors

The earth leakage protector detects a dangerous flow (leak) of electricity to Earth, which presents a situation where someone may be at risk of electrocution. The function of the earth leakage protector is to detect and disconnect current before the amount of electricity flowing through the body is enough to cause serious injury or death.

# Earth Leakage Protection



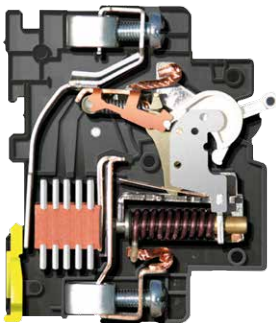
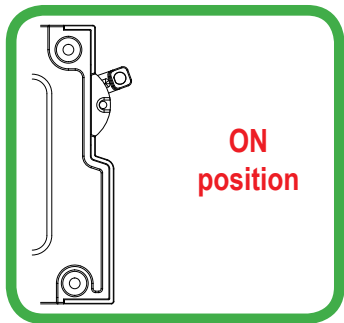
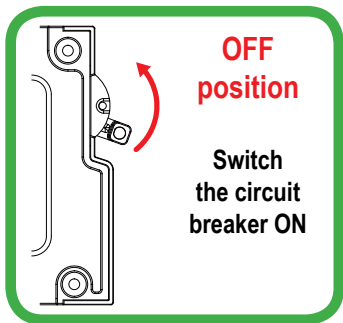
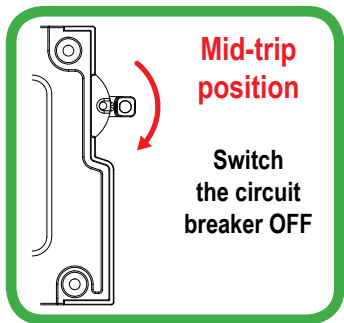
## The physiological effects of an electric shock on humans

Current (mA)		Effect on Body (Hand Path)
1	<b>Safe Zone</b>	First noticeable sensation
2.5		Tingling on palms
5		First signs of cramp
7.5		Hands stiffening – "let go" still possible
10 to 15		Cramp increasing – limit of "let go"
25 to 30		Severe cramp extending to thoracic region. <b>Limit of safe current</b>
30 to 50	<b>Danger Zone</b>	Blood pressure increasing, irregular heart operation
50 to 60		Interference with respiratory system, loss of consciousness
60 to 75		Heart fibrillation

# Mid-trip Indication

The mid-trip position indicates that the circuit breaker or earth leakage has tripped due to a fault. If the circuit breaker is in the OFF position it has been switched off deliberately, possibly for repair or maintenance work - **do not switch on without enquiring the reason.**

## How to reset a circuit breaker or earth leakage after a fault:



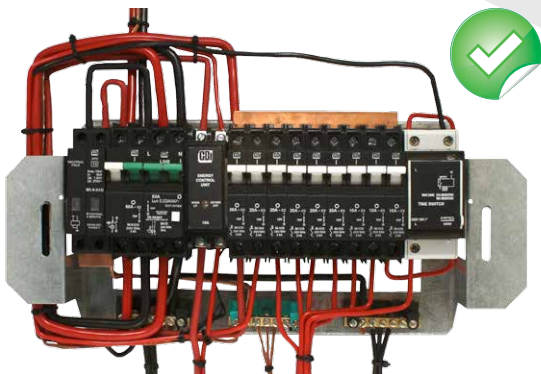
# How to spot **DANGEROUS** installations



Non-compliant installations and inferior products can result in lives and property being endangered and is a highly illegal practice. This also leaves homeowners at personal risk, with the possibility of non-payments on insurance claims.

Non-compliant installations include the absence of an earth leakage device, exposed cables, products not mounted correctly and mixing of different types of circuit breakers, etc.

# Safe Installations



Authentic CBI devices are guaranteed to comply with numerous international standards as well as the local compulsory standards. Authentic CBI devices will protect, **always**.



# Safe Products

Demand safe products, demand safety for your family and property!

**You only live once, there are no second chances!**



**SAFE**





# Do's and Don'ts

- Don't mend damaged electrical wires, replace them
- Do not allow wires to be in a position where they will suffer unnecessary wear - example getting caught in doors or under heaters etc.
- Don't allow water near any electrical points



- Test the earth leakage regularly
- Only install authentic and certified products
- Do routine checks to ensure that extension cords and plugs aren't overheating
- Always switch the socket to the off position before unplugging electrical appliances
- **Always use a qualified electrician** for all electrical installations, maintenance or repairs

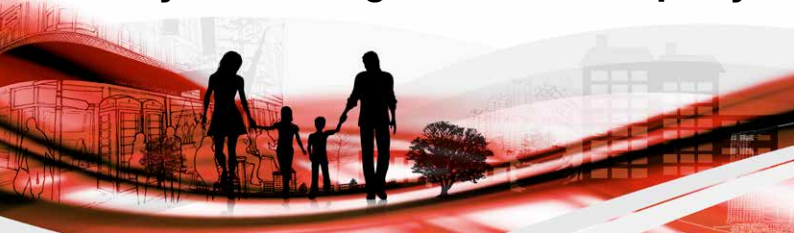
**EXPOSED WIRES ARE DANGEROUS!!!**



**Don't become a statistic...  
Buy local, buy safe!**

**GBi** electric  
low voltage

**Silently Protecting Lives and Property**



# Global Footprint



CBI has taken its product portfolio to a global level and exports majority of its manufactured products. CBI-electric: low voltage has established subsidiaries and distribution channels in North America, Australia, Asia and Europe. CBI is successful in international markets, while maintaining a leadership position on home territory.





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