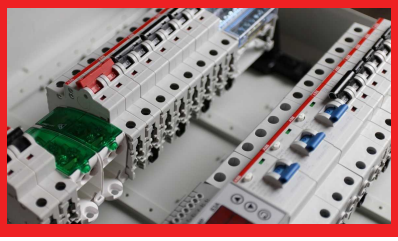
Information Sheet

Electrical Distribution Board Safety Management



MAIN DISTRIBUTION BOARD (MDB)

The power comes from the street to your switchboard, which directs the current through the various circuits in and around your establishment. It is important that your establishment is electrically sound and it all starts here, at your Electrical Distribution Board.

The electrical wiring is carried out to distribute current from a single source of supply to various circuits, such arrangement of circuits is made inside an enclosure called Distribution Board.

The Distribution Board is not merely an enclosure but a comprehensive system in itself, comprising of copper bus bars, brass neutral links, earth links to facilitate effective distribution of current. It incorporates safety devices such as MCBs, ELCBs and Isolators, which serves to protect the installation.
A wide range of compact, elegant & economical DBs with unique features, designed & engineered to provide user safety, convenience and operational / maintenance.

ELECTRICAL SAFETY MANAGEMENT

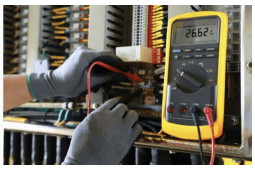
TEST TIMER FACILITY MANAGEMENT TESTING

Test Timer Facility Management are used to safely discharge exit and emergency lighting systems without having to open a electrical distribution board as these units are normally installed and amounted externally adjacent to the electrical distribution boards. There are two aspects for the test timer facility.

Firstly it prevents exit / emergency lighting from accidentally being lest in test mode by automatically reinstated the lighting system back to 240v mains powers after the desired discharge test time is complete.

Secondly it prevents unlicensed persons from opening the electrical distribution boards.

LOAD LEVEL & THERMOGRAPHY TESTING



Load Level & thermography testing is carried out on distribution boards to ascertain if the boards are being overloaded at their peak electrical distribution times. This will expose if there is any risks of a fire being started with in the distribution boards to overloading and heat stress.

RCD TESTING

RCD testing is the process of safely "tripping" your RCD to ensure it will operate quickly should there be an electrical incident. This is also known as safety switch testing. Your RCD is designed to trip, or switch off all the power to that circuit. Australian and New Zealand standards detail the maximum "trip times" for various RCD's and the competent technician testing your RCD will be able to determine whether your RCD is tripping quickly enough. The quicker a RCD trips, the smaller the electric shock sustained by an individual.

Contact

FIRE SYSTEM SERVICES

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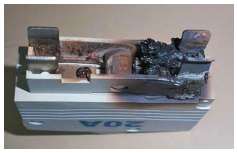
Information Sheet

DISTRBUTION BOARD UPGRADES

Why Are Ceramic Fuses Not Safe?
Ceramic/porcelain fuses were designed as a safety feature for homes & offices many years ago. Fuses, like circuit breakers, only protect the cables integrity (when connected and wired properly). They will only disconnect the power when there is an overload (too much current being pulled on one individual circuit) or, a short circuit (when the electricity flows down an undesired path. e.g. when the Active (red) and Neutral (black) cables touch).

What many people don't realise is that the wire is a certain size for a very important reason! This fuse wire is a specified size because the cable providing power to that circuit is a certain size. This certain sized cable can only safely handle a certain amount of current before it begins to overheat. If the current exceeds the current capability of that fuse wire, it will break, cutting out the power supply.

CABLE PROTECTION



A porcelain fuse will generally have a wire rated to handle a maximum of 8A.
If someone replaced the fuse wire with a larger wire that didn't break before the current reaches 10A, this will become an serious electrical hazard. If this circuit continues to pull more than the 10A this cable can handle; the cables will overheat, melt, short out and possibly even cause a fire.
If that wire wasn't to break and the current output kept increasing, due to load demand the cables can quickly overheat causing an electrical fire internally.

What Is An RCD?
An RCD is a sensitive safety device that is designed to prevent people from getting an electrical shock. It also protects the cables integrity (like a circuit breaker or fuse), which in turn protects you. RCD's offer personal protection that the old school fuses and simple circuit breakers don't (as they purely protect the cable). A Residual Current Device will monitor the flow of electricity through one or, more of your household circuits. An RCD will near instantly cut your power if it detects electricity flowing down an unintended path, like a person who has touched a live component. This will significantly reduce the risk of death or serious injury.

Fuse Vs Circuit Breaker Vs RCD
A Fuse is wired with a certain sized wire which will break if the current flowing through is too large. This is when you 'blow a fuse'.

A circuit breaker is designed to 'trip'/disconnect when a current that is too big flows through. There's an electromagnet in it that pulls to break contact, disrupting the supply when there is too much current.

A Residual Current Device (RCD) is designed to 'trip'/disconnect when the difference in current between the outgoing current on the Active and the returning current on the Neutral is too big. This difference happens when a person touches an exposed cable or live element.

CONTACTING US

Fire System Services can undertake a review of your site electrical distribution boards and advise on the safety of your current distribution boards and if any improvements can be made.

If you require further information please contact Fire System Services on free call 1300 88 3473.

Contact

FIRE SYSTEM SERVICES

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