

We give you peace of mind that your business, staff and customers are safe.



We Test & Tag your electrical appliances for Safety.

As required by Electrical Regulations and OSH for ALL NZ businesses.

- **Free friendly advice** – Trained and experienced local technicians.
- **No disruption** – unobtrusive service at any time that suits you.
- **Security** – Police certified technicians and a strong privacy policy.
- **Our guarantee** – To give you the best service available and if you are not completely satisfied, we'll put it right for free or money back.

For Free Friendly advice or an economic quote email

bruce@3760.co.nz

Or phone

0800 66 99 99

www.3760.co.nz

LIMITED TIME OFFER:
12% Discount
Conditions Apply

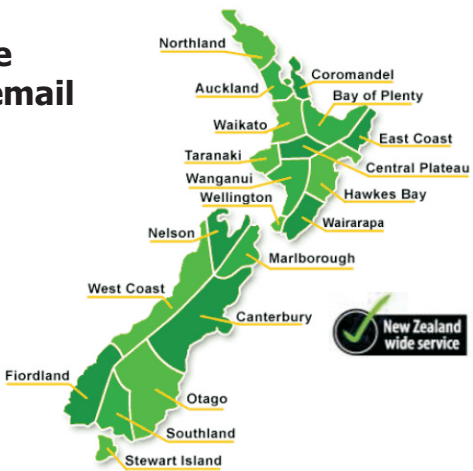
We are members of



and



A New Zealand owned and operated company.



Electrical safety

Wherever there is electricity there is always a danger of electric shock or fire. This can occur when any electric current gets out of a cable, appliance or lead through a fault or through a conductive material such as water to any other surface.

Fire

Any electric current flow always causes heat and in an uncontrolled flow, the heating can happen so quick that there is an explosion of super heated air and any other material close by. Even a small flow will cause heat and many fires are caused by a small current leakage which is not enough to blow a fuse or trip a circuit breaker.

Shock

A very small current passing through any part of your body will give you an electric shock that can cause burns, muscle contraction and heart attack. The higher the current and the longer it flows the more severe the shock.

Power points

The current that can come out of a normal power point has to be enough to power our appliances. This is normally up to 10 amps (the measure of electric current) but during a fault can be several hundred amps until the overload circuit breaker turns off.

Small current danger

A current flow of only 30 milliamps (thousandth part of 1 amp) flowing for 40 milliseconds (thousandth part of 1 second) through your body is enough to give a dangerous shock and only slightly more current can cause a fire. The normal fuse or circuit breaker will not turn the current off at these low currents as they are for overload only and typically go off at 20 to 40 amps for a 10 amp power point. What is needed to reduce the risk is a circuit breaker

that will quickly turn the current off when a small leakage is detected.

Residual Current Device RCD

The current that makes our appliances work flows through the phase wire within a flex to the appliance and exactly the same amount of current returns through the neutral wire to the power point. Any leakage current (say through a person getting a shock from a faulty appliance) will cause a difference in the current in the phase wire to the neutral wire and it is this imbalance that a RCD detects and turns off the current. RCD's for personal protection turn off the current within 40 milliseconds when the leakage current (called residual current) reaches 30 milliamps. This is the level of shock that most people will survive.

Testing

RCD's have a test button on them as an easy basic test that they will turn off. This does not test the current or time it takes for the RCD to trip. They require regular testing with a dedicated RCD tester that shows that the current and time to trip is giving you some protection.

Still a danger

Although the use of RCD's reducing the danger of electricity during some types of fault, they do not eliminate it and anyone may be susceptible to electric shock at levels below 30 ma for less than 40 ms. RCD's sometimes fail and are only a backup to proper wiring and regular electrical appliance testing as required under the electrical and OSH regulations. All business managers are personally liable to take all practicable steps for safety including having their appliances tested and tagged.

More information on this and appliance testing is at www.3760.co.nz or phone 0800 66 99 99.

Bruce Gordon is the Managing director of Appliance Testing 3760 Ltd. He has 20 years experience in all aspects of electrical safety and has specialised in appliance testing since 2005

