Lightning protection systems
Earthing solutions and components
Power quality and management
Back-up power systems
Service and engineering support

Lighting Protection International - suppliers of energy technology products for buildings and infrastructure in New Zealand and the Pacific
New Zealand’s leading source for power quality systems, advice, supply and installation

LPI NZ’s Lightning protection system solutions protect many of New Zealand’s most prestigious buildings and telecommunication infrastructure.

When we can come on board early with a project, we can add the most value, be it working with consultants, business owners or electrical contractors. Our experience, expertise and range of specialist electrical products means we can provide a range of practical power management solutions.

Our proven record is evident with the supply of equipment to some of New Zealand premier buildings.

**Auckland Sky City - LPI NZ supplied:**
- A new Active Lightning protection systems with HSVC down conductor.
- Inspection and Compliance documents (AS/NZS1768).
- Circutor power factor capacitor banks.

**Lion Brewery - LPI NZ supplied:**
- The Design, equipment and commissioning for the 3 terminal Active lightning protection system.
- Inspection and Compliance documents (AS/NZS1768).

**Vodafone : Auckland and Christchurch - LPI NZ supplied:**
- Active lightning protection systems for Telco tower at Auckland and Christchurch headquarters

**North shore Hospital - LPI NZ supplied:**
- 1750A Surge Filter protection on main switchboard
- Automatic power regulators, active power factor regulators
- Circutor detuned capacitor bank with harmonic blocking reactors
- Active and Conventional Lightning protections system
- Inspection and Compliance documents (AS/NZS1768).

**Manukau Institute of Technology (Manukau City Campus) - LPI NZ supplied:**
- 1750A Surge Filter protection, automatic power regulators
- Active Power factor correction.
- Circutor harmonic filters.
- Conventional Lightning protections system.
- Inspection and Compliance documents (AS/NZS1768).

For a competitive LPI NZ technical solution email info@lpinz.co.nz
Providers of New Zealand’s leading Lightning Protection systems

LPI NZ is New Zealand’s leading supplier of lightning protection systems. We can provide full design, system components and high trust solutions for any application involving lightning protection for buildings and structures.

New Zealand experiences approximately 136,000 grounded lightning strikes to land or seas per year. The risk of property damage is significant and this is why lightning protection is such an important feature for safer buildings and work environments.

Our services for lightning protection:

- System design and specification - systems complaint to NFC 17-102 (2011) or AS/NZS1768
- Risk analysis, soil resistivity testing, mapping & reporting.
- Supply of all components for installing a lightning protection solution.
- Complete turnkey solutions, including installation.
- Specialist design and systems for cellular tower lightning protection.

Active lightning protection system

- LPI terminal
- LPI Upper mast termination
- LPI FPR support mast
- LPI Inline coupling
- LPI High voltage shielded down conductor
- LPI Guy kit, saddles, cable ties etc
- LPI Lower mast assembly

LPI’s Guardian™ system actively reaches out to capture potentially destructive lightning strikes.

- Compliance with NFC 17-102 (2011)
- Tight bending radius is only 360mm
- Cable runs of more than 100m without joining

New HVSC+ downconductor can withstand over 500kV
Conventional lightning protection systems

Conventional lightning systems use an Air Terminal and connect this terminal to earth via copper or aluminum conductors, straps or bar. LPI NZ stocks all the components for this type of earthing system: Using LPI’s integrated components results in a system that when combined with proper design is compliant with AS/NZS1768.

Typical components:
- Air terminals
- Air terminal bases for on building installation
- Connectors, flanges, Tape conductors, strapping and fixing components
- Earth electrodes / rods / inspection pits
- Earth resistance enhancing compounds
- Lightning strike counters

Conventional lightning protection components

With our wide range of conventional lightning protection and earthing products, designing and installing lightning protection is easy.

Air terminals

Lightning strike recorders

Copper range of lightning protection straps, clamps and fittings.

Aluminum range of lightning protection straps, clamps and fittings.

Air terminal bases
Your specialist provider of earthing systems & components

We can provide earthing design, components, hire equipment and even training for effective and compliant protective and equipotential earthing systems on low or high voltage installations.

Earthing components

At LPI NZ we can supply an extensive range of earthing components:
- Mechanical earth clamps and bonds
- Earth terminal bars, spacers and bushes
- Copper bonded earth rods (threaded & un-threaded)
- Chemical earth rods
- Stainless steel earth rods
- Copper earth tape and strap
- Rebar earth clamps
- Flexible earth cables and jumper straps
- Transient earth clamps (prevent earth potential differences)
- Flexible earthing braids
- Soil resistance enhancement compounds
- Earth pits

LPI’s transient earth clamp (TEC100) prevents earth potential differences by operating only under transient conditions to effectively clamp all connected earths together.

We stock a range of earth pits including models fitted with internal earth bars, for quick easy installation.
LPI NZ make rebarcon (wricon) earth ties to order to any length and cable size required.

LPI NZ’s high quality fully CAD welded rebarcons (wricons) are made to order, typically we make and ship within one working day from receipt of order.

Earthing rebarcons

LPI NZ make rebarcon (wricon) earth ties to order to any length and cable size required.

Made to your design

Street light earthing

Our cad welded street light earth electrodes are a cost effective solution for street light installations.

The cad weld ensures a 100% bond and reduces the risk of poor earthing or disconnection associated with earth clamps.

The earth conductor can be specified to any length and size.

6mm² clamp-on domestic reinforcing rebarcons are available ex stock
Exothermic welding is a specialty of LPI NZ. We are a large supplier of equipment and welding consumables to the electrical market.

We really are a one stop shop for cad welding supplies. From training on site to providing customised solutions for earthing and bonding, we can simply do it all.

Earthing - Exothermic (CAD) welding

LPI NZ’s extensive range of exothermic welded equipment has a proven world wide track record with users across all industries. Our products are UL® Listed for all commercial wire sizes and meet or exceed all major international standards.

A wide range of molds are carried in stock

LPI NZ can hire or provide the exact mold needed to undertake exothermic welding on site. We also provide training and supply a complete range of welding consumables.

1. Welding moulds
2. Consumables
3. Copper cables, straps, rods and bars

4 step exothermc welding process

Exothermic welding – One Time shot

Our ONE TIME system is a cost effective solution when only a small number of joints are required. Unlike the graphite mold, the ONE TIME mold are single-use and are disposed of, or buried in place with the joint once completed.

Now electrical contractors can make effective Exothermic welded terminations to earth electrodes.

Mold Options:

- Single cable to electrode
- 2 cable joint to electrode
- Call LPI NZ for any special requirement or cable jointing arrangements.
Surge protection is covered with a range of world leading brands and products.
LPI NZ are specialists in designing and providing surge protection solutions across a broad range of industries and telecommunication infrastructure. Surge diverters and surge filters do different things, so we can design the right system depending on the risk levels and types of downstream connected equipment.

### Surge diverters

- **SURGE Diverters – 1 phase and 3 phase, 50KA:** N-E, with alarm contacts & status indication
- **SURGE Diverters – 1 phase and 3 phase, 100KA:** N-E, with alarm contacts & status indication

### Surge filters

- **SURGE Filters – 1 phase: (20A - 200A)**
- **SURGE Filters – 3 phase (40A – 1750A)**

LPI® Bluetooth Surge Protection Range is now available.
The App based operation allows for maintenance checks to be undertaken remotely by non-technical personnel.

### Power factor correction

- Plug and play controllers allow one touch unit initialisation
- Simple analytical software simulates power savings with improved PF
- Individual components for repair or upgrades available
- Contactor, thyristor and Hybrid switching units available

**Circutor**

**HEAVY DUTY CAPACITORS**

**Robust**

**Reliable**

**Safe**

Higher temperature 65°C - Short time

Longer life 150,000 hrs
Energy management & control

Power analysers and energy monitoring

Power Studio

For an organisation with large energy consumption, understanding the consumption, losses and wastage of electricity is essential for an efficient business. Power Studio is a comprehensive, permanent on line management system that allows sustainable power monitoring.

Power Studio is a simple, powerful and user-friendly software application, enabling the following:

Power Studio, enables complete energy monitoring of power analyzers, meters, earth leakage relays and total control of various magnitudes in the industrial process field.

Power Studio, in conjunction with CIRCUTOR equipment and systems, adapts to your particular needs by providing tools for the supervision and control of your installations.

- Complete energy studies
- Production ratios (energy consumption per unit produced)
- Power quality management
- Arrangement of the information obtained in graphic and table format.

My eBOX®

Connected to efficiency

We know that energy audits are a critical part of improving energy efficiency. With eBOX wireless technologies we can access lots of information and devices from any point. This enables you to undertake energy audits, quickly and efficiently, locally and remotely.

My eBOX® is an intuitive portable power analyser that provides detailed information on all electrical parameters including power quality and transients within an electrical installation. Full access to this information is provided by connecting directly to the eBOX unit via the app from mobile devices or by connecting to the Cloud.
Power analytics for building efficiency is a key factor in being able to manage power costs.

CIRCUTOR has a wide range of metering and power quality analysers than can easily be integrated into switchboards and power control centres. LPI NZ engineers can help with selecting the right products for commercial and industrial applications.

# Smart power metering

CVM-1D Single-phase power analyser

**The smallest and most powerful on the market**

CVM-1D is a power analyzer for single-phase circuits up to 32A. It has an LCD display with a rotating screen system, showing a total of 24 instantaneous, maximum and minimum electrical variables. 1 DIN module (18 mm).

The unit has the Modbus/RTU (RS-485) protocol and is compatible with the PowerStudio management software.

**Variables measured:**


**Features:**

- Panel mount 96X96 mm.
- Measure in Single-phase, and three-phase.
- 4-Quadrant measurement for consumption and generation in the same measurement point.

CVM-C10 single or three phase power analyser

**The best value and easiest to use power analyser on the market**

**Features:**

- 2 built-in digital outputs (SO Interface or alarms)
- 2 built-in digital outputs by relay.
- 2 built-in digital inputs (tariff selection or external alarms).
- Measures harmonics
- Uses common communication protocols
Electric vehicles and EV charging stations are a fast growing facet of the electrical market.

With our leading edge EV charging systems technology, we can provide solutions for domestic single outlet, right through to large scale commercial installations.

LPI NZ offer a wide range of EV chargers; wall/ground mount, slow/quick charging, and single/double socket, suitable for indoor/outdoor facilities.

For domestic installation there is the very affordable eHome range.

For commercial applications there is several models including the slim line 22 kw Raption or 50kw that can fully charge a vehicle in 15 minutes.

To ensure a friendly operation of the chargers by the users and a profitable business model for the parking operator, EVPark solutions use OCPP (Open Charge Point Protocol), widely utilised in the Electro-Mobility business.

The Dynamic Load Management (DLM) system ensures that only the available power of the installation is used, thus maximising its efficiency and avoiding the high cost of its power upgrading.

Circutor equipment helped create the first Australian electric highway from Perth to Augusta.

Parking guidance [management] systems

iPark is one of the most impressive systems on the market for parking building management. With features such as Illuminated guidance display, find your car and counting systems, it becomes a powerful management tool that optimises the traffic in car parks and provides greater user satisfaction.

Parking building operators, have an excellent tool to reduce operating costs while optimising traffic and occupancy. At the same time gaining the loyalty of their customers, through minimising delays and frustration,
A wide range of products enable us to provide leading edge building automation and power management systems.

LPI NZ are experienced in developing and commissioning UPS and emergency power systems. We can supply UPS units and Automatic Transfer Switches (ATS) to electrical contractors or work with clients to provide engineering through to innovative turnkey solutions which provide significant power backup security.

**UPS systems**

**UPS systems from KSTAR**

KSTAR is a high-tech enterprise, and a leading brand manufacturing UPS and PV inverters. They are also a manufacturer of data center infrastructure equipment.

**Uninterpretable power supplies 1-10kVA range:**

- 1, 1.5, 2, 3 kVA models available ex stock
- 19” rack mount or standalone
- True on-line double conversion
- Power shedding on non critical loads
- By-pass switches available for safe disconnection or replacement of a UPS

**UPS range up to 520kVA:**

- Low input current distortion
- 19” rack mount, 3 units high
- Touch screen display
- Local & remote access Power Off
- SNMP alarm relay contact & serial comms

KSTAR is a high-tech enterprise, and a leading brand manufacturing UPS and PV inverters. They are also a manufacturer of data center infrastructure equipment.

**LPI NZ can supply a wide range of UPS systems from world leading suppliers to work in small offices right up to and including Data Centre capable units.**

For a competitive LPI NZ technical solution email info@lpinz.co.nz
Generators for backup or portable power in just about any power rating type and configuration.

From small portables to containerised power plants, we have the capability and capacity to provide competitive generator power systems for all commercial, construction and infrastructure requirements.

Generators

We have direct factory access to a wide range of generators:
- Sizes from 4kVA right up to 1500kVA
- Petrol or Diesel options
- Open or silent type gens sets with canopies
- Containerised gensets
- Lighting towers and portables

Power transfer switching

ASCO power switching systems provide a range of back up power changeover solutions for commercial or industrial facilities of any size.

Buildings and facilities with critical power requirements need the reliability of ASCO power transfer switching when changing over to backup power

LPI NZ have supplied many major installations with ASCO ATS systems up to 4000 Amps in NZ.

We have other options with Transfer Switching from leading manufactures to reach sensitive price points.

ASCO closed transition transfer switches approved by all the major electricity network companies for grid connection in New Zealand.
Specialist high voltage control and power control equipment is backed with industry leading expertise.

LPI NZ can provide specialist HV equipment to distribution network organisations and private HV network owners. Our team can provide proposals and help engineer technical solutions in industrial high power applications across any industry.

Power systems

**THYCON** made in Australia

Thycon magnetic components cover a wide range of isolating and auto transformers, tap-change transformers for manual or automatic voltage regulation, phase-shift and triplen transformers for harmonic attenuation as well as DC filter chokes, surge-limiting chokes and harmonic filter chokes. These products serve the PQ and distribution markets from LV to HV (up to 35kV). Three basic technologies are used, depending on application:

- cast resin types
- dry types
- oil-filled types.

Automatic APR - power regulators:

- 100kVAR - 600kVAR or more in capacity
- Thyristor switching - means no contacts
- Stepless switching with no minimum capacitance

Triplen, phase shifting transformers / frequency converters

The Triplen is a self-contained power conditioning system designed to provide your computer centre with reliable computer grade power, while trapping system harmonic currents that could seriously overload the building cables. Thycon Triplen units have a 30 year design life and use foil wound transformers so they have no moving parts

Thycon Triplen transformers are suitable for applications requiring:

- 3rd harmonic elimination
- Absolute Isolation
- Voltage transformation
The highest quality transformers from a world leading manufacturer.

There is no limit to the size, type and capacity of HV transformers that are available through our relationship with Koncar. We are able to provide fast turn around on quotations, lead times and technical information.

Transformers - HV & instrument

KONČAR

LPI NZ is the New Zealand exclusive agent for the supply of power and instrument transformers up to 765 kV from Koncar, a leading transformer manufacturer in Croatia.

Koncar transformers are approved by Transpower NZ for installations in Network substations.

LPI NZ can provide fast and competitive tender pricing and supply quotations for almost any size and type of power or instrument transformer from Koncar.

Over and above the supply of HV transformers, LPI NZ can provide a range of specialist HV services and specialist HV power products.

Koncar’s history overview

Reference sites in New Zealand, Australia and world wide.

Koncar and JV partner Seimens supplied the Converter Transformer for +/- 350 kV, 700 MW HVDC to Transpower, New Zealand

Example of the large manufacturing and testing capability of Koncar Power Transformers
Cable support solutions at extremely competitive prices.

Our international suppliers of cable tray, cable basket and ladder rack provide high quality products with a fast turnaround from order to delivery.

**cable support systems**

LPI NZ have the capacity to source and supply a wide range of quality cable support systems for commercial and industrial installations.

Supply can be a stand alone purchase or be provided as part of a package with LPI NZ’s products such and lightning protection, UPS’s, transformers or generator installations.

Our full range of FRP cable ladder, lidded cable tray and accessories is manufactured to international standards. This provides a cost effective cable support solution in many hazardous, industrial or marine environments.

Data cable protection

Protection of data cable over radius bends
Eliminates sharp edges
Rapid ease of installations
Can be retro fitted to exiting data cable basket tray
Fits all brands of cable basket.

four colours available:
- Yellow
- Blue
- White
- Almond

For a competitive LPI NZ technical solution email info@lpinz.co.nz
CT & metering devices

Also available is a substantial range of:

- Electricity metering and smart metering devices.
- Maximum demand controllers.
- Current transformers (CT’s)
- Earth leakage relays.
- Voltage & current panel meters.
- Testing equipment.

To support our power management products, we have available a wide range of CT test clamp both in the standard clamp-on and flexible configurations.

Sundry components

LPI NZ carry a wide range of installation components to support our customers as a single source of supply. We are able to supply in bulk quantities to electrical contractors working on large projects.

EPR safety mat

The EPR earth bonded insulated safety mat is only 3.2mm thick constructed with non-slip top layer with a stainless steel fine wire mesh middle layer finished with non-slip bottom layer.

The stainless-steel mesh centre is designed so that any electrical fault is moved away there by creating equipotential safe step area.

With the bonding kit supplied it allows the user to ensure that touch potential issues are mitigated, creating an overall safe working environment.

1 x 1.5 metres includes bonding kit
LPI NZ technical & engineering services

Supporting our products with technical backup and expertise

With our combined 15 years in electrical industries, we have built up a solid reputation of support to consultants, electrical wholesalers and electrical contractors. We continue to find ways we can bring innovative products and technical expertise to the market.

Lightning protection analysis and design
- Risk analysis and Met Service data reports.
- System design and product specification.
- Installation, commissioning & certification.
- Annual servicing and inspections.

Earthing Systems
- Soil resistivity and earth resistance testing.
- Earthing system inspection and performance testing.
- Site advice on using exothermic welding, rebarcons [widely called wricons] and earth electrodes

Building Systems and services
- Energy auditing and monitoring to establish energy usages patterns
- Power quality auditing, monitoring and analysis
- Power factor analysis, performance and reporting
- Inspection of VTHD/ITDH harmonic effects on building power systems
- Advice on solutions for UPS’s, changeover switching, emergency power systems
- Advice on energy management control systems and solutions.

Discuss with us today about our professional seminars, consultant presentations and specialised product training to the electrical industry.

The LPI NZ team can help your employees, your team, or your customers gain a greater understanding of the many different technical issues that can affect the energy efficiency or safety in buildings or infrastructure projects.
LPI’s active lightning protection and earthing systems used on some of New Zealand’s most iconic and important buildings

**LPI NZ’s key project reference**

- Waterview tunnel
- Rocket Labs Launch site
- Sky Tower
- ASB Bank - Greenlane
- Auckland International Airport
- Auckland Museum
- Auckland University of Technology
- Fonterra
- Gisborne WWTP
- Grace Hospital
- Lion Nathan Breweries
- Middlemore Hospital
- MIT Transport Exchange Manukau City
- North Shore Hospital
- Novotel
- NZ Police
- Hutamaki
- Pacific Island Projects in Tonga, Fiji, Samoa and Rarotonga
- Philips Healthcare
- Prime Panels
- Solid Energy Mines
- SRG - Specialist Radiology + MRI
- Student Accommodation building
- Spark
- Two Degrees
- The Warehouse Ltd
- University of Auckland
- VisionStream
- Student Accommodation Building
- Waste Water Treatment Facilities
- Watercare Mangere & Rosedale
- Waikato Hospital
Across New Zealand and the Pacific LPI-NZ provides a wide range of quality power technology products and technical support from a single supplier.