

NEWSLETTER

Volume 2, Issue 9

September 2010

Power Factor Correction.

Managing the monthly electric bill has always been an ongoing challenge. However with the ever increasing costs, concerns over Global Warming and the decline in fuel resources, it is both our corporate and personal responsibility to reduce energy wastage as much as possible. This together with the present global economic situation it has never been more critical that companies reduce these avoidable costs.

However it has been proven that by simply reducing the input voltage to a site or the installation of **Power Factor Correction** equipment often in the past over-looked, can produce a significant reduction of the electric bill for many plants.

There are two ways to achieve this voltage reduction either through the installation of voltage optimization equipment or simply reducing the output from your supply transformer. To achieve either of these options an electrical survey would need to be conducted to determine your present voltage levels from which calculations can be made as to the best and most cost effective solution.

Another relatively inexpensive way of reducing your energy costs is the application of power factor correction equipment. The application of this equipment will improve how efficiently the site utilizes the energy supplied leading to financial savings.

I already have Power Factor Correction Equipment installed! In this instance we don't need to convince you of the economical, technical and financial rewards these units provide. However, are you aware that most manufacturers recommend an annual service/inspection is conducted on this equipment to ensure you continue to receive these benefits? When was the last time you checked the operation of your PFC equipment?

We are independent specialists with over thirty years experience in the field of Power Quality/Power Factor Correction and can provide the following non-exhaustive services.

Advice Service – Quiet often it only takes a phone call to quickly identify any potential financial savings to be gained. For free impartial advice please call us on any of the numbers listed.

Power Factor Survey – Using snapshot data to produce a report on the site power factor level. This survey will potentially lead to the identification of poor power factor levels and high supply voltage levels.



First Power & Surge Protection Ltd

*Electronic Lightning & Surge Protection,
Electrical Under-voltage and Over-voltage,
Harmonics, Power Factor Correction and
Voltage Optimisation Specialist*

Power Factor/Load Profile Surveys – Week long, detailed and in-depth report on the site load profile. Used for identifying kW usage, power factor levels, maximum kW and kava demands, harmonic distortion levels and any irregularities with the supply (i.e. high/low voltages). In 90% of cases this survey will lead to the following.

- Identification and correction of poor power factor levels will lead to financial savings by releasing kVA service capacity and removing reactive charges from utility bills.
- Identification and consequent reduction in supply voltage will reduce the kWh consumption of the site leading to a financial saving.
- By improving power factor levels and reducing the power used there is the possibility of negating any intended kVA service capacity increases for future load expansion requirements.
- Calculation of reduced CO₂ emissions in the production of reactive power.

Specialist Power Quality Surveys – As with Power factor/Load profile surveys but harmonic data is used to confirm compliance or non-compliance with ENA G5/4 -1, BS EN50160, P28 flicker etc...

Existing Power Factor Equipment Inspection/Service/Repair – We can service, inspect and repair PFC equipment from all manufacturers.

CPS BLOCK (TVSS) RANGE Modular Surge Protective Panel

CPS Block is a range of TVSS surge protection panels for all-mode protection (L-G, N-G, L-N, L-L) against transient surges according to **UL 1449 3rd Ed.** Surge modules (blocks) are individually replaceable per mode once they reach their end-of-life. A specific model is available for each network configuration and voltage rating.

CPS Block is Cirprotec's range of value-added TVSS protectors which stands out above all other TVSS products thanks to the perfect combination of an innovative and useful approach to diagnostics along with a most robust surge protection performance, meeting even the I_{max} heavy duty test of **IEC-61643**.



All models are equipped with following features: **IAC Intelligent Aging Control** (module remaining % of protection), **MDS Multi-Discharge System** (thermal-mechanical disconnection of each MOV) and **EPM Efficient Preventive Maintenance** (easy replacement of surge modules).

This results into following advantages and benefits:

- Visual diagnostics of remaining % or protection (**IAC**)
- Extended discharge performance (**MDS**)
- Improved MOV over current security (**MDS**)
- Efficient preventive maintenance (**EPM**) with surge modules being replaced per mode, rather than per phase

CPS Block systems do also meet these standards:

UL 1449 2nd Edition
IEC-61643
IEEE C.62.41.1
IEEE C.62.41.2 2002.



First Power & Surge Protection Ltd

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