

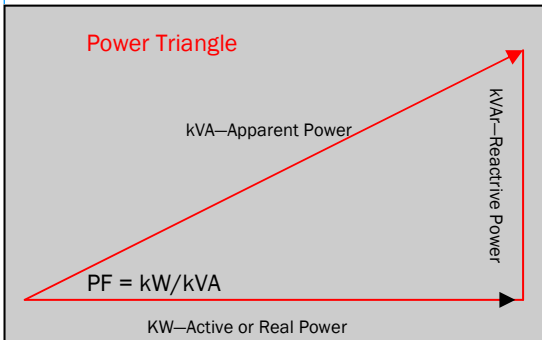


Power Factor Correction

What You Need to Know to Ensure Savings!

Why you Need Power Factor Correction

The power factor of an electrical installation is a ratio between the power that is actually **used (KW)** and the power that is actually **supplied (KVA)**. It is a measure of how **efficiently** an installation uses electrical energy. **Reactive power (kVAr)** is shown at right angles to real power, because it is out of phase and does no useful work. A power factor of 0.75 means the installation is only using 75% of the power being supplied to it.



Reactive power (kVAr) can be interpreted as wattless, **magnetising** or wasted power and it represents an extra burden on the electricity supply system.

Most electricity suppliers charge on the basis of the energy that is supplied (KVA) to a customer installation and therefore it makes good sense to pay for the electricity you use rather than the energy you are supplied.

Poor Power Factor results in:

- **More** kVA required of the network
- **Larger** distribution infrastructure
- **Higher electricity costs**
- **More** greenhouse gas emissions

A power factor of 0.9 or less should be corrected because considerable savings are available. The payback on equipment used to correct power factor is usually **less than 24 months**.

What you Need

An analysis of the power demand of your installation can be performed by skilled personnel using modern testing or can be obtained from your electricity supplier.

The maximum kVA (or kW) and Power Factor are required to enable determination of the required capacitance (in kVAr) to correct the installation.

How is Power Factor Improved?

Power factor correction is achieved by the addition of capacitors which generate reactive power (kVAr) within your premises.

This compensates for the reactive power demand of the inductive load and thus reduces the amount of KVA which must be supplied by the distribution network. The cost of PFC equipment will be offset by these savings in network charges.

Power factor improvements reduce the currents through your site transformers and switchboards and hence can reduce the costs of electrical supply upgrades. Sites who improve power factor often report the disappearance of many niggling faults, which were unknowingly being triggered by electrical hotspots or high currents.

Typically the corrected power factor will be between 0.95 and 0.98.

What Should I Do?

Either:

- **Call** our office on 03 5674 2133
- **Email** us sales@kvarconnect.com.au
- **Download** authority form/application from our web-site and fax to (03) 5674 2166.



“Pay for the electricity you use rather than the electricity you are supplied”

Contact

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