

## AUTOMATIC POWER FACTOR CONTROL PANEL



### Applications :

**neon** has full-fledged expertise in solving problems related to electrical energy management. **neon** products are dedicated to the betterment of utilization of electrical energy.

We have vast experience in the installation and commissioning of automatic power factor control systems based on our controllers and allied products. We offer our expertise based on this experience to you by way of providing problems of energy management related to power factor improvement.

#### What is Power Factor (P.F.)?

Power Factor (P.F.) is the ratio of active power to apparent power-i.e  $P.F. = KW / KVA$  Power Factor is the - so - to say efficiency of utilization of electrical power. It is obvious that  $KW = KVA \times P.F.$  Thus for a given voltage and active power (KW), the current drawn is inversely proportional to the power factor.

### BENEFITS OF POWER FACTOR IMPROVEMENT

- ⇒ Substantial reduction in kVA demand and avoids penalty for low PF
- ⇒ Considerable reduction of Transformer and line losses
- ⇒ Reduction in voltage drop resulting in better system voltage regulation
- ⇒ Reduction in maintenance and capital cost because distribution equipments like cable, breaker have to carry less current
- ⇒ Reduction of voltage fluctuation and circuit reactance
- ⇒ Reduction in reactive power demand from the supply system since PFC panel itself provides reactive power of inductive loads
- ⇒ Reduced  $I^2R$  losses
- ⇒ Longer life for all Electrical equipments such as Motors, Switchgears, Cables, Busbar, Transformer etc.
- ⇒ Payback for the PF Panel is normally within 12 to 15 months.

### Features :

- ⇒ Switching by Capacitor duty contractors with necessary protection
- ⇒ Wide range available from 10 kVAr to 250 kVAr
- ⇒ Mains ON / OFF Isolators
- ⇒ MCB for each step protection / Isolation
- ⇒ Power ON and Step ON Indication Provided
- ⇒ Series Inductance to prevent high inrush current
- ⇒ Low Loss Dry type Capacitors of Reputed Manufacturers
- ⇒ Micro Controller based PF Controller used for capacitor selection
- ⇒ Built in protections, settings in power factor controller
- ⇒ Auto / Manual operation
- ⇒ Panel construction to suit customer requirement
- ⇒ Optional kVAr / Current meter for High Capacity panels

#### APPLICATIONS

Low Cost Power Factor Improvement in main incomers  
Suitable for Power factor Improvement in slow changing loads

## PRIMARY CURRENT INJECTION SETS

### Applications :

These are low voltage high current A.C. power supplies, output isolated from input. Output may be single range or multi range involving series - parallel connections of secondary windings of loading transformer.

Testing specially if the protective gear is connected to the power line via a current transformer it is advisable to carry out primary injection testing.

These sets has been designed to enable the users of heavy electrical equipment to carry out such tests as have been described above with a maximum efficiency at minimum cost, providing a convenience of delivering, controlling and measuring a heavy current in a comparatively low voltage low impedance circuit.

Ideal for testing circuit breakers, ammeters with or without current transformers and many other applications where a heavy current supply of short duration is required

### Features :

- Current output** : Can Vary from 200A to 4000A
- Capacity** : Can Vary from 1kVA to 10kVA
- Number of Ranges** : Can Vary from 1 to 4
- Input** : 230V Single Phase AC 50Hz 'or'  
415V Three Phase 50Hz (Any one)
- Duty Cycle** : 10 mins ON and 10 Mins OFF (Sets with other duty cycle are available but on request only)
- Accessories** : A digital time Internal Meter with 4 digit LED indication in Auto range 0.001 to 9999 sec.

Please inform the current rating, voltage rating, capacity, number of ranges and auxiliary power supply at the time of placing the order



**Neon Controls**  
Mumbai-400 070.

E-mail : [neoncontrolsindia@gmail.com](mailto:neoncontrolsindia@gmail.com)  
: [info@neoncontrolsindia.com](mailto:info@neoncontrolsindia.com)

Website : [www.neoncontrolsindia.com](http://www.neoncontrolsindia.com)