# Intelligent POWER FACTOR CONTROLLER

User friendly - Three Phase Sensing - Multifunction Parameters



# The Elmeasure PFC ADVANTAGE

A powerful **micro processor based** power factor controller with built in intelligence. Unlike conventional power factor controllers that sense voltage from one phase and current from another phase, Elmeasure's iPFC is **three phase sensing** thus providing accurate measurement. The built in on board memory provides for **intelligent Power Factor Controlling** based on the capacitor bank switching history (ON/OFF Switches and total ON Hours), thereby increasing the life of each capacitor. Additionally it also functions as a full fledged **Multifunction Meter** that display VLL, VLN, Amps (Average & Phase wise), Frequency, W, PF, VAR (Total & Phase wise). This also comes with optional RS 485 communication port for integration with SCADA/ Energy Management software system.



- Three phase sensing
- Intelligent Power Factor Controlling based on the capacitor bank switching history (No of operations, ON time) improves the capacitor life time
- 6 or 8 or 12 switching relay outputs
- Automatic or manual control (manual control with power backup option)
- User programmable:
  - Star/Delta
  - Lead and lag limits
  - PT and CT ratios
  - CT secondary
  - Minimum switching time (1-99 seconds)
  - Minimum discharge time (1-99 seconds)
  - Minimum capacitor on time (1-99 seconds)
  - Minimum sensing current for controlling operation 100mA 500mA
  - User programmable capacitor value
- Fault detection (Over compensation, Under compensation, Over voltage, Over current, Under voltage, Over harmonics for voltage and current)
- Displays VLL, VLN, Amps (Average and phase wise) Frequency, W, PF, VAR(Total and Phase wise)
- Four quadrant operation
- RS 485 communication interface (Optional)

## **Advantages**

- Three phase sensing gives accurate measurement of PF
- Fault Detection (Over compensation, Under compensation, Over voltage, Over current, Under voltage, Over harmonics for voltage and current)
- Automatic or Manual Control (manual control with power backup option)
- Intelligent operation

## **Applications**

In all Incomers

Unit-II

- Fixed power factor corrections individual (e.g. motor, transformers, lighting, etc.)
- Group fixed power factor correction (several equipments connected in a group)
- Capacitor banks of tuned and detuned
- Harmonic trap applications (e.g. UPS, Frequency Drives and Converters, etc.)



#### **ELECON MEASUREMENTS PVT LTD**

Empowers You to Manage Power

A group of **ELMEASURE INDIA PVT LTD** 

HO & Unit-I #764, 4th Phase, 707, Yelahanka New Town, Bangalore - 560 106. INDIA

T:+91 80 2846 1777/744 F:+91 80 41272461 CS:+91 80 3290 4489 E:contactblr@elmeasure.com

Goutham Garden, No. 4, Veerapandi, Coimbatore - 641019 INDIA

T: 0422 2697200. TF: 0422 2695200 E: contactcbe@elmeasure.com

Unit-III Plot No.: 323/19, Camp Road, Selaqi, Dehradun, UTTARANCHAL

C: 097600 02492, 12492 E: contactddn@elmeasure.com

## **Technical Specification**

Accuracy: Class 1 (Default) IEC 61036, IS 13779, CBIP 88

#### Sensing/Measurement:

True RMS, 1 Sec update time. 4 Quadrant Power & Energy

#### Input voltage:

4 Voltage inputs (VR, VY, VB, VN)

Programmable 110 or 415V LL Nominal

(Range 80 to 550V LL)

Primary Programmable up to 999 kV.

Burden: 0.2VA Max. per phase

#### Input current:

Current inputs (AR, AY, AB) 50mA - 6A

(Field configurable 1A or 5A).

Primary Programmable up to 99 kA.

Overload: 10A max continuous, 50A max for 3 Sec

Burden: 0.2VA Max. per phase.

#### Aux-Supply (Control Power)

150 - 300V AC/DC, 40-70Hz.

Burden: 4VA Max

### **Display Resolution:**

1 row, 6 digits, (Integrated 6digits) 10mm

CT PT Ratio Max: 2000 MVA Programmable

#### Communication - Master to PC

RS485 serial channel connection, Industry standard

Modbus RTU protocol (RS232 optional).

*Baud rate:* 2400 bps to 19200 bps. (Preferred 9600 bps) *Isolation:* 2000 volts AC isolation for 1 minute between communication and other circuits.

Contact rating: SPST, 2A @ 240V

## Weight:

*Unpacked:* 350 gms *Packed:* 450 gms

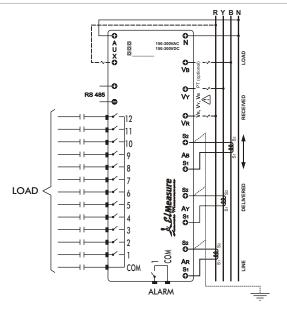
## **Mechanical Specification:**

Dimension Bezel: 96 × 96 mm (Depth 50mm behind bezel)

Panel Cutout: 92,0 x 92,0 mm

**Note:** Additional error of 0.05% of full scale, for meter input current below 500mA

# **Connection Scheme**



PC/PFC/V01 081'