

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.

Intelligent Features

- 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
- 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.)



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Sales Offices: **BANGALORE | MUMBAI | DELHI | HYDERABAD | USA | DUBAI | MALAYSIA**

Range of Products: EMS, Demand Controller, Multi-Function Meters, Load Manager, Electronic Energy Meters, Dual Energy Meter, Digital Panel Meters, Intelligent Earth Leakage Relay, Power Distribution Unit, Power & Energy Transducers, RS485 to RS232/Ethernet/Optic Fiber Converter, RF Modem and GSM Modem.

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 × 92⁻² mm

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

Connection Scheme

