



PFC 9059 / PFC 9059R



PFC 9055 / PFC 9055R



PFC 9070 / PFC 9070R

## COMMON FEATURES

- Measurement of PF for all 4 quadrants
- True RMS measurement
- 3 phase 4 wire for LT application
- 3 phase 3 wire for HT application
- Displays power factor, actual KVAR, and required KVAR
- PF setting between 0.8 Lag to 0.90 Lead
- Control of capacitor in both auto and manual mode
- Adjustable connection delay for switching ON the capacitors
- Adjustable Re-connection delay to allow sufficient time for discharge of capacitors
- PF, Capacitor banks operation sequence, Delay setting through keypad

- Alarm output provided for over voltage, over current, over compensation and under compensation

### System Input

- Voltage Input : 100 - 525V AC line to line for LT  
30 - 140V AC line to line for HT
- Current Input : 5A / 1A AC
- Frequency range : 40.00 to 60.00Hz
- Operating PF : 0.00 Lag to 0.00 Lead (Full 4 quadrants)
- PF Resolution : 0.01 PF
- Aux. Supply : Self powered/External 110V AC or 230V AC

### PFC 9059 / PFC 9059R

- PFC 9059 - 6 Stage PF Controller with transistor output suitable for switching thyristors
- PFC 9059R- 6 Stage PF Controller with relay output suitable for switching contactors
- 6-digit 0.34" seven segment red LED display
- 96(H) x 96(W) x 80(D) mm

### PFC 9055 / PFC 9055R

- PFC 9055 - 12 Stage PF Controller with transistor output suitable for switching thyristors
- PFC 9055R - 12 Stage PF Controller with relay output suitable for switching contactors
- 7 digit 0.5" seven segment LED display
- External potential free digital input provided to select EB/DG setting (optional)
- RS-485 port for communication with MODBUS RTU protocol (optional)

### PFC 9070/9070R (Enhanced Version)

- PFC 9070 - 12 Stage PF Controller with transistor output suitable for switching thyristors
- PFC 9070R - 12 Stage PF Controller with relay output suitable for switching contactors
- Monitors both grid and panel parameters
- 4 row 16 character LCD display
- Alarm against Over Voltage, Over Current, Over Compensation, Under Compensation & Step Fault
- THD measurement and alarm (optional)
- Disconnection of capacitor bank for excessive harmonics
- Connection of permanent capacitor value in addition to the measured required power E.g. for compensation of a transformer
- External potential free digital input provided to select EB/DG setting (optional)
- RS-485 port for communication with MODBUS RTU Protocol (optional)

### DISPLAY OPTIONS

#### Grid Parameters

Voltage, Current, kW, kVA, kVAR, PF, Energy, Average Power Factor, Harmonics

#### Panel Parameters

Capacitor Current, Capacitor kVAR, kVARh Pumped by the panel

#### Alarm Status

Alr1 - Critical Alarm  
Alr2 - Non-critical Alarm

#### Step History for each Step

Cycle count, Run Hour, Derating Percentage  
First value and Last value of Capacitor Bank

### APPLICATIONS

- Power Factor improvement in main incomers
- Wind turbine generators
- Hi-tech Software Parks, Buildings and Shopping Malls
- Steel Rolling Mills and Process Industries

## HARMONIC INDICATOR HAR 9000



- Display of True RMS voltage and current
- THD in % of voltage
- THD in % of current
- Individual Harmonic Amplitude and in % of voltage spectrum
- Individual Harmonic Amplitude and in % of current spectrum
- Displays upto 31st harmonic
- Total demand distortion (TDD) display
- Continuous harmonic monitoring

- Communication port RS485 with MODBUS-RTU to PC
- Derating of Transformer, cables, breakers can be decided.
- Effects of the mitigating devices / filters can be quantified
- Voltage: 100 - 520V AC L-L for LT 30 - 140V AC L-L for HT
- Current : 5A / 1A AC
- Accuracy : +1% +1 LSD for magnitude  $\pm 2\%$  over full scale for % values (for loads more than 20%)

### APPLICATIONS

- Load distribution centers for PCs, UPS, light loads
- Control panels used in drives rectifiers, power converters.
- VAR compensation panels