

AUTOMATIC POWER FACTOR CONTROLLERS

Single Phase Current Transformer Sensing

APFC-414



AUTOMATIC POWER FACTOR CONTROLLERS

NIPPEN Model APFCR-1CT is used for measurement and control of PF using Reactive power compensation. Capacitor banks are suitably switched ON and OFF automatically to provide necessary compensation. An intelligent switching algorithm (Wear leveling) ensures uniform aging of the capacitors used to achieve the target PF.

FEATURES

- 1phase sensing Intelligent POWER FACTOR control algorithm .
- Intelligent POWER FACTOR control from switching of banks, based on time switching history (No of operations) thus improves capacitor life.
- Auto CAPACITOR kVAR detection.
- Target PF User -Programmable for Unity & Lead/ Lag values.
- Provision of 1 relay to set off alarm for PF under compensation.
- Individual CAPACITOR MODE can be programmed ON-OFF-AUTO.
- Reliable performance at Low Current (>5% of load).
- Password Protection for Set Values.
- Potential free contact for driving contactors to switch Capacitor. (5A/250V AC Relay With NO Contact).

ELECTRICAL SPECIFICATION

- Operating Voltage: 110-500 V AC LL 50/60 Hz.
- Current: 50mA-6A AC.
- Auxiliary supply: 80-265V ACDC ($\pm 20\%$) 50/60Hz.
- Power Consumption: <0.1VA in Current Circuit, < 0.1 VA in Voltage.
- CT Ratio: 5-9999A AC (only primary to be set).
- ON/OFF Relay rating: 5A/250VAC - NO Contact.
- PF Setting: 0.5 Lag - 0.8 Lead, 0.5 Lead.
- Functions accurately from above 5% load.
- **KEY PAD:** 4 keys for scrolling through display pages and programming functions.

PARAMETERS DISPLAYED

- Reactive Power (kVAR) Total.
- Power Factor (PF) Average.
- Voltage Line to Line.
- Ampere.

MODELS 96sq & 144sq

- APFC-414 -6R
- APFC-414 -12R
- APFC-414 -16R
- APFC-414-144 -16R
- APFC-414-144 -12R
- APFC-414-144 -16R

PROGRAMMABLE SETTINGS

- CT Ratio, PT Ratio, Password.
- User Programable Target PF Unity, Lead, Lag.
- Number of relays stage selection 4,6,8,10,12,16
- kVAR of each capacitor (Auto detected using Auto Sense).
- Reconnection time (upto 999 Sec).
- Auto/Manual ON & OFF Mode for each CAPACITOR.

DISPLAY

- Single row, 4 digits bright display.
- Auto scaling of KILO, MEGA LED>

ENVIRONMENT

- Ambient: -10° C to 55° C.
- Storage: -20° C to 70° C.
- Humidity: <95% RH Non condensing.

MECHANICAL DIMENSIONS

Front	96 x 96mm (Depth 54 mm)
Panel Cut out	91 x 91mm \pm (0.1mm)
Casing	Flame retardant ABS
Connectors	Terminal block ABS
Protection	IP 52 front/ IP 20 Terminal block

RELEVANT STANDARD

EMC	IEC 61326
Immunity	IEC 61000-4-3
Safety	IEC 61010-1-2007

WIRING DIAGRAM OF APFC-414 -12R with Alarm

