

# AUTOMATIC POWER FACTOR CONTROLLER

NIPPEN Model UNO+ 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. Intelligent switching algorithm (Wear leveling) ensures uniform aging of the capacitors used to achieve the Target PF. Alarm function ensures protection of capacitor banks against abnormality in voltage, current and set value of capacitors whenever these are beyond the higher and lower threshold limits.

CT polarity is automatically sensed internally in the event of reverse connection.

## PARAMETERS DISPLAYED

- V, A, P F, kVAr, kW & kVA

## FEATURES

- Upto 4/6/8/10 stages with stage indication.  
(Unique Models UNO+4R, UNO+6R, UNO+8R, UNO+10R)
- CT Polarity Auto detection.
- Auto CAP kVAr detection.
- Target PF Programmable both Lead & Lag
- Password Protection for Set Values.
- Individual CAP can be programmed ON-OFF-AUTO.
- Automatic disconnection of all caps in case of Mains failure.
- CT Primary direct setting from 5A – 5000A.
- Programmable Capacitor Reconnection time.
- Reliable performance at Low Current.
- Potential free contact for driving contactors to switch CAP  
(5A/230V AC Relay With NO Contact)
- Clear History of Capacitor ON Time.

## ALARM CONDITION

- Over Current (>110% IL)
- Over Voltage (>110% VLL)

## PROGRAMMABLE SETTINGS

- Password
- CT Primary
- Target PF (Lead/Lag)
- NO. Of stages(4/6/8/10)
- kVAr of each capacitors (Auto detect using Auto Sense/Manual)
- Reconnection time (upto 999 Sec)
- Auto/Manual ON & OFF Mode for each CAPs
- Clear History(ON time data of each CAPs)

## ELECTRICAL SPECS.

- Operating Voltage: 110–450 V AC 50/60 Hz
- Current: 50mA–6A AC
- Auxillary supply: 230V AC  $\pm$  10% 50/60Hz
- CT Ratio: 5--5,000A AC (only primary to be set)
- Power Consumption:<0.1VA in Current Circuit  
< 1 VA in Voltage
- ON/OFF Relay rating: 5A/250VAC – NO Contact
- PF Setting: 0.5 Lag – 0.8 Lead
- Functions accurately above 3% load

## MECHANICAL SPECS.

- Size: 96x96x82 mm
- Cutout: 91x91 mm
- Protection: IP 54 (Front Option)  
IP–20 Terminal Back
- Mounting: Wedge Clamps
- Casing: UL–94VO G.F. Plastic
- KEY PAD: 4 keys for scrolling through display pages and programming functions.

## ENVIRONMENT

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

## WIRING DIAGRAM OF UNO+10R

