

# Power Factor Relay

PFR96V7/PFR96P7



## Salient Features

- Microprocessor based intelligent auto switching control.
- Automatic / Manual control mode.
- Automatic C/K and rated step adjustment.
- Automatic CT polarity correction.
- Programmable sensitivity.
- Programmable alarm.
- Last step can be used as alarm/fan output.
- Alarm of Under/over voltage, under/over compensate and step fault.
- Programmable L-L and L-N voltage sensing.
- Displays measured values of  $\cos\phi$ , I, V, W, VA, and VAR.
- Complies with IEC 61000-6-2 standard.

## Application

The BTB Electric PFR96 precisely regulate power factor in industrial and commercial networks. They dynamically control capacitor banks, switching steps ON or OFF to maintain the target  $\cos\phi$  and minimize reactive power. Real-time measurements of voltage, current, active, reactive, and apparent power enable accurate compensation and detailed system monitoring.



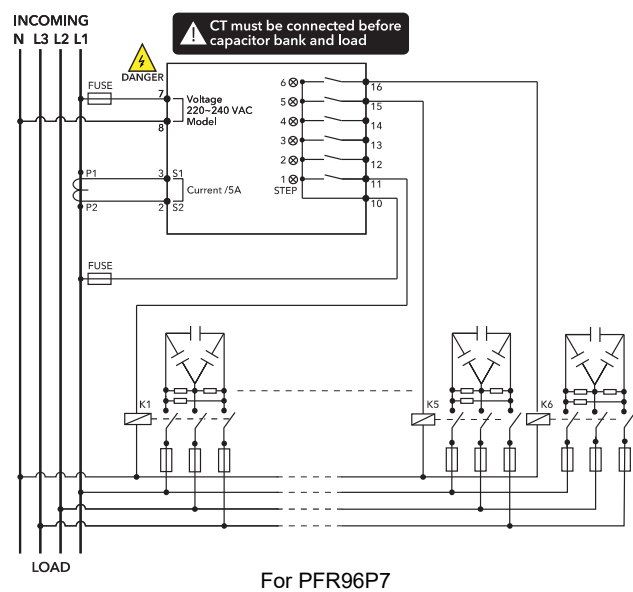
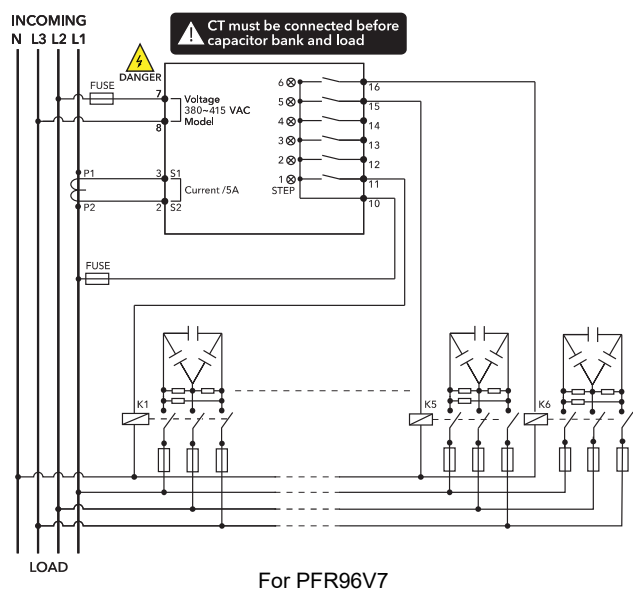
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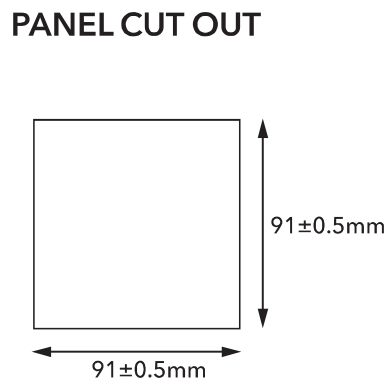
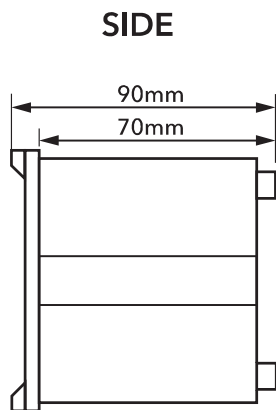
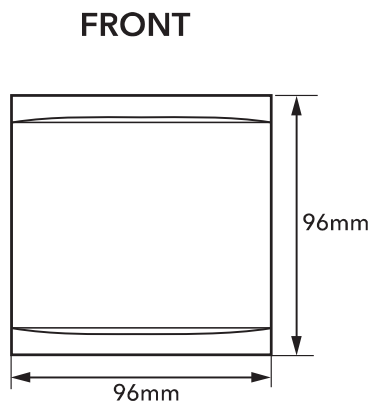
## Technical specifications

Auxiliary Supply	
Supply voltage	380 ~ 415V for PFR96V7 220 ~ 240V for PFR96P7
Operating voltage Range	-15% ~ +10%
Frequency	50Hz or 60Hz
Power consumption	10VA max
Current Input	
Rated current (In)	5A
Operating current range	0.02 ~ 8A
Rated Frequency	50Hz or 60Hz
Power consumption	3VA max
Relay Output	
Numbers of outputs	6
Output contact	5A at 250V
Contact arrangement	NO contact type
Expected electrical life	≥ 100,000 operations at rated current
Expected mechanical life	≥ 5,000,000 operations
Max current for the common terminals	12A continuous
Control Range	
Cosφ setting	0.80 (ind.) ~ -0.80 (cap)
C/k setting	Automatic / 0.02-1.2
Switching Sensitivity	5 ~ 600 s/step
Reconnection Time for Same Step	5 ~ 240s
Switching Program	Off / Automatic / Rotational / Manual / Four-quadrant
Rated Step Coefficient	1 ~ 16 / Fix / Off
Display	
Display screen	LED
Measurement	Cosφ, I, V, W, VA, VAR
Environmental Conditions	
Ambient temperature	-5°C ~ 55°C
Humidity	93% non-condensing
Enclosure protection	IP54 at the panel
Mechanical	
Mounting	Panel mounting
Connections	Socket terminals with screw
Dimension (WxHxD)	96x96x90mm
Switchboard cut-out	91x91mm
Weight	0.6kg

## Typical wiring diagram



## Dimension and structure



## Ordering Information

Product code	Explain
PFR96V7	6 steps, 50 or 60Hz system, auxiliary voltage 380~415V
PFR96P7	6 steps, 50 or 60Hz system, auxiliary voltage 220~240V