



THE FIRST CHOICE OF ENERGY EFFICIENCY

ELCO DIGITAL POWER FACTOR CONTROLLER

PFR5ELCO0006
PFR5ELCO0014

The power factor controller (PFC) serves as the central control unit for automatic capacitor bank systems. Its primary function is to manage the switching of capacitors in order to attain the desired user-defined target power factor (cosφ). By incorporating a power factor controller, it becomes feasible to streamline operations, expedite problem-solving, and lower the expenses associated with supervisory systems.

TECHNICAL SPECIFICATION

- Full Measurement Range Of Cos φ (0.8L - 0.8C)
- Phase to Neutral Voltage and Current
- Reactive Power
- Total Harmonic Distortion (THD) For Voltage and Current
- Harmonic Spectrum Info Up to 19th Order For Voltage And Current
- Capacitor Harmonic Load Factor (CHL)
- Switching Sensitivity From Range of 5 - 1200 Seconds

Power Factor Compensation For Inductive And Capacitive

Programmable Cos φ Desired (0.8 Inductive - 0.8 Capacitive)

Step Switching Operation Mode

- Auto (Rotational, Linear, Four-Quadrant)
- Manual

Automatic Connection Configuration Detection

Automatic Step Power Recognition For Both Capacitor And Choke

Automatic CT Polarity Correction

Two Tariff Settings For Power Import And Export Mode

Control Bandwidth (Anti-Hunting Function)

Programmable Fixed Steps & LED Indication For Individual Step

Programmable Fan, Alarm Relay and Error Message

LED Indication For Individual Step

Able to switch both shunt reactors steps independent from shunt capacitor steps

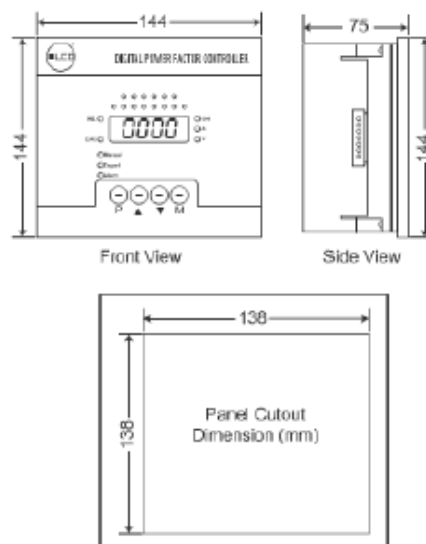
Alarm Trigger Setting

- Over / Under - Voltage & Current, Voltage Failure
- THDi / THDu / CHL higher than limit set
- Number of switching operations exceeded
- Cooling & Heating threshold, Overheated
- Step error, compensation error, export error



PRODUCT DIMENSION

DIMENSION (MM)



PRODUCT INFORMATION - DIGITAL POWER FACTOR CONTROLLER

	Parameters	PFR5ELCO0006	PFR5ELCO0014
Adjustable Parameters	Power Factor Desired	0.80 Inductive - 0.8 Capacitive	
	Connection Time	5 - 1200 seconds	
	Reconnection Delay Time	5 - 1200 seconds	
	Operating Mode	Automatic Mode (Rational, Linear, Four-Quadrant), Manual Mode	
Ranges Accuracy	Power Supply and Voltage Measurement	90 - 275 VAC ; 43 - 67Hz; 7VA	
	Voltage Measurement Accuracy	±1% of Range, ± 1 Digit	
	Measuring Voltage Loss Response Time	≤ 20ms	
	Measurement Current	0.02 - 7A	
	Current Input Serial Impedance	≤ 10mΩ	
	Current Measurement Accuracy	Range 0.5 - 7 A ± 0.02A, ± 1 Digit Range 0.02 - 0.5 A ± 0.002A, ± 1 Digit	
	Maximum Phase Angle Error (Power Factor and Powers Measurement)	± 1° at I > 3% of Range; Otherwise ±3°	
	Voltage and Current Harmonic Measurement	Up to 19th Harmonic	
	Harmonic Components and THD Measurement Accuracy	±5%, ±1 Digit (for U, I > 10% of Range)	
	Temperature Measurement Range and Accuracy	-30 to + 60°C, ±5°C	
	Number of Output Relays	6	14
	Output Relay Load Rating	250 VAC / 4 A	
	Installation Category / Level Of Pollution	In Compliance With Standard : EN61010-1, III-2	
Operating Conditions	Operating Temperature	-40°C to +60°C	
	Relative Humidity	5 - 100%	
In Compliance with Standards	Noise Suppression Level	EN 50081-2 EN 55011 Class A EN 55022 Class A	
	Electromagnetic Compatibility (EMC) - Immunity Test	IEC61000-6-2 : 2016, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11	
	Electromagnetic Compatibility (EMC) - Emission	IEC61000-6-4 : 2018 EN55011 Ed.3:2010 Class A, EN55022 Ed.3:2011 Class A	
	Product Safety Requirement	IEC60255-27 : 2013 Clause 10.6.4.2 & 10.6.4.3	
Physical	Enclosure	Front Panel IP 40 Back Panel IP 20	
	Dimension	Front Panel 144 x 144 (mm) Built-in Depth 75 mm Installation Cutout 138 ⁺¹ x 138 ⁺¹ (mm)	
	Mass	Max 0.7 kg	