ELCO PFCC / PFCT

In most Countries, Power Factor Surcharge is applied for poor or inefficient use of electricity either in the form of Low Power Factor Penalty as in Malaysia or as a KVA Loading Charge. ELCO's PFCT / PFCC is an efficient and cost effective means of helping customers achieve this objective.

What is Power Factor?
Power Factor is an index used to measure the effient use of electricity. This index is measured on a range of 0 -1 and it is computed as = Kwh/Kvah

In Malaysia for Low Voltage Consumers TNB Impose a Penalty of Power Factor Surcharge for any Low Power Factor below 0.85.

For Medium Voltage loads, TNB's Low Power Factor Penalty is stated at 0.9. In this case, please refer to ELCO for their medium voltage solutions.

Why you need to maintain a high Power Factor?
A high Power Factor index gives the following benefits:

- No additional charges in monthly electricity bill as there is no Power Factor Surcharge for Clients.
- Extends the lifespan of electrical appliances for Clients.
- Reduces electricity wastage for electrical installations at customers' premises for Clients.
- Conserves the environment by lowering fuel usage and helps the country reduce carbon dioxide (CO2) emissions for Utility.
- Improves Voltage Regulation for Clients.

For Load Centers with high Harmonic problems, ELCO can customise its fundamental Power Factor Solution or PFCC to come with detuned or tuned filters.

In the latter, there is even a possibility of energy reduction especially in combination active filters. Please contact ELCO for this specialised Solution.

PFCT
(Timer Control / 1 Step with CT)

PFCC
(Automated)

No.	Specifications	Data	
		PFCC	PFCT
1	Construction	Epoxy Powder Coated Mild Steel Plate Metal Box	
2	Incoming Rated Voltage (Un)	415V Three Phase	
3	Rated Capacitor Voltage	440V Three Phase	
4	Rated Frequency (fn)	50Hz	
5	Temperature Category	-40°C to +55°C	
6	Power Factor Correction Range	From 0.50 to Max. 0.99	Varies
7	Power Factor Regulator		N/A
	- Model / Type	PFR2 – 4 Steps / PFR3 -12 Steps	Single Step
	- Country of Origin	EU / Malaysia	-
	- Standard of Compliance	2006/95/EC-Low Voltage Diective: 2004/108/EC-EMC	-
	- Programmable switching mode	Circular / FIFO / Multistep	-
	- Re-closing time delay	Adjustable – Factory setting min 45 sec	-
	- Power Factor Display	LED Type	-
	- Low PF alarm contact & Display	Yes	-
	- Anti Hunting Function	Yes	-
	- Fixed-Step Programmable	Yes	-
	- Fan Relay Programmable	Yes	-
	- Ambient Temperature Measurement	Yes	-
	- Series Interface	RJ11-TTL (Optional)	-
	- Autorecognise Capacitor Bank Function	Yes	-
	- Line Voltage & Current Measurement	Yes	-
8	Switching Contactors Category	AC-6b	
9	Fuse Breaking Capacity	120KA/gG type	
10	Capacitor Internal Connection	Delta	
11	Capacitor Dielectric Loss	<0.2w/Kvar	
12	Capacitance Tolerance	-5% / +10%	
13	Insulation Test Level	3KV	
14	Mounting Position	Wall	
15	IP Rating	IP42	

PFC7 for Power Factor > 0.75 Product Code	Design for Incomer Value	Total Steps	Total Kvar (440V)	Dimension (mm)
PFC7ELCO0040	40 Amp	3	13.3	500 x 260 x 800
PFC7ELCO0060	60 Amp	3	17.5	500 x 260 x 800
PFC7ELCO0100	100 Amp	3	35.0	500 x 260 x 800
PFC7ELCO0150	150 Amp	4	45.0	600 x 300 x 900
PFC7ELCO0200	200 Amp	4	62.5	600 x 300 x 900

PFC6 for Power Factor > 0.60 Product Code	Design for Incomer Value	Total Steps	Total Kvar (440V)	Dimension (mm)
PFC6ELCO0040	40 Amp	3	20.8	500 x 260 x 800
PFC6ELCO0060	60 Amp	4	26.0	600 x 300 x 900
PFC6ELCO0100	100 Amp	4	50.0	600 x 300 x 900
PFC6ELCO0150	150 Amp	5	72.5	700 x 300 x 1000
PFC6ELCO0200	200 Amp	5	95.0	700 x 300 x 1000

PFC5 for Power Factor > 0.50 Product Code	Design for Incomer Value	Total Steps	Total Kvar (440V)	Dimension (mm)
PFC5ELCO0040	40 Amp	3	25.8	500 x 260 x 800
PFC5ELCO0060	60 Amp	5	38.0	700 x 300 x 1000
PFC5ELCO0100	100 Amp	6	65.8	700 x 300 x 1000
PFC5ELCO0150	150 Amp	6	93.3	700 x 300 x 1000
PFC5ELCO0200	200 Amp	6	130.0	700 x 300 x 1000

Single Step PFC Product Code	Total Kvar (440V)	Dimension (mm)
PFC*TELCO0025FUS	2.5	230 x 240 x 460
PFC*TELCO0050FUS	5.0	230 x 240 x 460
PFC*TELCO0100FUS	10.0	230 x 240 x 460
PFC*TELCO0125FUS	12.5	230 x 240 x 460

* PFCT with Timer : PFCR with Regulator