



PurityElec

Pure Energy, Smart Savings!

THYRISTOR SWITCHED REAL TIME POWER FACTOR CORRECTION (RTPFC) PANEL

Features

PurityElec the thyristorised switch RTPFC system is the most powerful automatic capacitor bank that provides the ideal power factor correction solution for industrial and commercial application.



- Compensate the reactive power on real time basis for extremely rapid acquisition of the power factor within few milliseconds.
- Connection and disconnection of the capacitor to and from the network occurs at zero crossing through thyristor switches.
- This smooth connection avoids transient effects like waveform distortions, generation of switching spikes etc., typically created by electromechanically switched contactor based system.
- The response time of this is much higher than electromechanically switched systems.
- Harmonic Immunity through appropriate detuned, high linearity and low losses harmonic blocking series reactors
- Less maintenance, Longer life

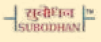


Key Components



- Harmonic Filter detuned series Reactor 7%/14%
- AL/CU wound
- High Linearity upto 200%
- H-Class insulation



- Heavy Duty Gas Filled power capacitor
- MPP withstand 525,3PH
- High inrush withstand capacity
- More productive life
- Make :  and 
- German Technology



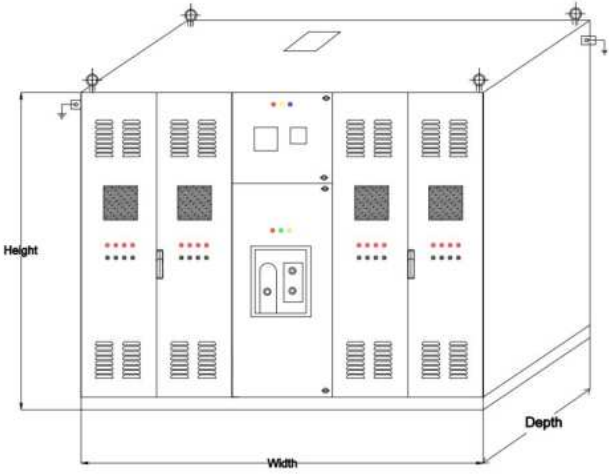
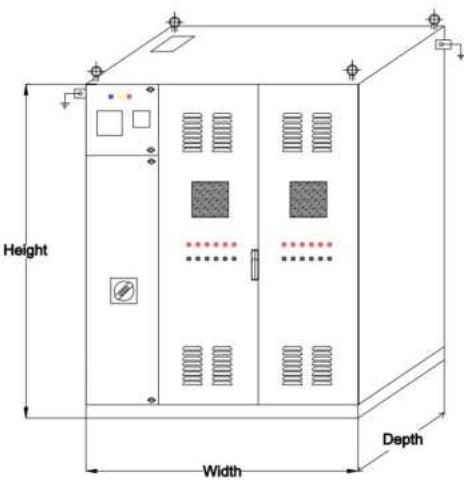
- Intelligent APFC Controller
- 3PH sensing with LCD display
- 5mA Sensitivity
- Auto step ,phase sequence correction
- Harmonic measurement
- Suitable with solar connection
- Make : Entes



- Thyristor switch for capacitor
- High PIV Heavy duty
- 12V /24V Trigger
- Long life, maintenance free
- Auto Thermal cut off



Dimensions



Kvar Rating	No of Stages	Steps	Dimensions	Unit Price (INR)
			Width*Height*Depth (mm)	
100	6 Stages	5kvar + 10kvar*2 + 25kvar*3	1400*1775*400	*on request
125	6 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar	1400*1775*400	
150	7 Stages	5kvar + 10kvar*2 + 25kvar*3 + 50kvar	1200*1775*700	
175	7 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*2	1200*1775*700	
200	8 Stages	5kvar + 10kvar*2 + 25kvar*3 + 50kvar*2	1400*1875*800	
250	8 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*2 + 75kvar	1400*1875*800	
300	9 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*3 + 75kvar	1500*1875*900	
350	10 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*4 + 75kvar	1500*1875*900	
400	10 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*2 + 75kvar*3	1500*1875*900	
450	11 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*3 + 75kvar*3	1000*1600*350	
500	12 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*4 + 75kvar*3	2300*2075*900	
550	13 Stages	5kvar + 10kvar*2 + 25kvar*3 + 50kvar*3 + 75kvar*4	2300*2075*900	
600	13 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*3 + 75kvar*5	2300*2075*900	
650	14 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*4 + 75kvar*5	2600*2075*900	
700	15 Stages	5kvar + 10kvar*2 + 25kvar*3 + 50kvar*3 + 75kvar*6	2600*2075*900	
800	16 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*4 + 75kvar*7	2700*2075*900	
900	17 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar*3 + 75kvar*9	2700*2075*900	
1000	18 Stages	5kvar + 10kvar*2 + 25kvar*2 + 50kvar* + 75kvar*11	3400*2075*1000	



Hybrid RTPFC

Hybrid RPFC system is a combination of thyristorised switch RTPFC and IGBT fired APF or RPG offers most viable and economical solution for both Power Factor Compensation and Harmonic Mitigation.



The designs offered by us are installed for compensation and Harmonic compliance of main transformer or at major load feeders. Though there are standard ratings but any design can be offered as per customer load characteristics and level of harmonic distortion.

Rating (Thyristorised RTPFC system + RPG/AHF)

- 100KVAR + 30A
- 200 KVAR + 50A
- 300 KVAR + 50/100A
- 400 KVAR + 50/100A
- 500 KVAR + 100/200A

Any other rating on request

Hybrid RTPFC



**Intelligent APFC
CONTROLLER**

+



Thyristor Switch

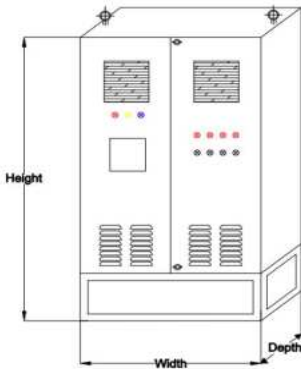
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**Static VAR Generator
(SVG/APF)**

Micro RTPFC

- Lower range RTPFC panel for LT Consumers. Range from 10kvar to 100kvar
- Thyristor base switching for fast changing dynamic type loads
- Indoor/Outdoor type
- Most reliable and economical solution for LT Consumers, assured PF correction above 0.99



Kvar Rating	No of Steps	Steps	Dimensions	Unit Price (INR)
			Width*Height*Depth (mm)	
10	3	2kvar + 3kvar + 5kvar	550*1400*350	*on request
15		2kvar + 5kvar + 7.5kvar		
20		2kvar + 5kvar + 12.5kvar		
25	4	2kvar + 5kvar + 7.5kvar + 10kvar	700*1400*350	
30		2kvar + 5kvar + 7.5kvar + 15kvar		
35		2*5kvar + 10kvar + 15kvar		
40		2*5kvar + 10kvar + 20kvar		
45		5kvar + 10kvar + 2*15kvar		
50		5kvar + 10kvar + 15kvar + 20kvar		
55	5	5kvar + 2*10kvar + 2*15kvar	1000*1600*350	
60		5kvar + 2*10kvar + 15kvar +20kvar		
65	6	2*5kvar + 2*10kvar + 15kvar +20kvar	1000*1600*350	
70		5kvar + 2*10kvar + 3*15kvar		
75		5kvar + 2*10kvar + 2*15kvar + 20kvar		
80		5kvar + 2*10kvar + 15kvar + 2*20kvar		
100	7	5kvar + 2*10kvar + 15kvar + 3*20kvar	1100*600*1800	
125		5kvar + 2*10kvar + 4*25kvar		

Comparative chart for PFC Systems

#	Parameter	RTPFC	RPG / Hybrid RTPFC	APFC
1	Switching Device	Thyristor	IGBT	Contactors
2	Response Time	< 1 Sec	< 15 ms	Min 5 Sec
3	Compensation Speed	Fast compensation	Ultra fast compensation	Low speed compensation
4	No of Steps	Minimum steps required for fine correction	Stepless compensation with precise control	Max steps required for fine correction
5	Lead /Lag compensation (Inductive/ Capacitive)	* Only Lead or Lag compensation * Separate steps required for lag and lead	Lead as well as lag compensation (Inductive as well as capacitive)	* Only Lead or Lag compensation * Separate steps required for lag and lead
6	Inrush Current	Smooth, transient free switching	Smooth, transient free switching	Switching inrush current
7	Maintenance	Less maintenance	Maintenance free	High maintenance
8	Application	Fluctuating balance inductive load. *Welding machines, *Rolling mills , *Cranes, *Elevators, *Press machines *Molding etc	Fluctuating unbalance inductive / capacitive load *Welding machines, *Rolling mills , *Cranes, *Elevators, *Press machines *Molding etc	Stable and balance inductive load *Motor load

The Complete Solution for Power Factor Correction

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