

THYRISTOR SWITCH MODULES





Energy Saving & Clean Power Solutions

Thyristor Switch Modules (TSM) for RTPFC



Unique *UFS* Design (Ultra Fast Switching) 5 to 250 KVAR upto 800 Vac • Suitable for real-time capacitor switching

- Available in 1800, 2200 & 4000 PIV •
- Two-leg control, thyristors SEMIKRON make •
- Most advanced thyristor firing card with MOVs •
- Compact and heat efficient design •
- LED indication : ON/OFF/Supply ON/Signal ON •
- Auto Fan operation : 60° C •
- Ambient Temperature : 50° C
- Over temperature protection : thermal cut-off switch •
- Supply voltage : 230 Vac, Control voltage : 24 Vdc •
- Enclosure : IP00 •
- Cooling:Natural/Forced •
- Easy to install and maintenance free
- No inrush current limiting reactors required •
- No fast discharge resistors required

TSM Rating	Product Code		From a Cina	Mainht
440V, 3-Ph, 50 Hz	1800 PIV	2200 PIV	Frame Size	weight
5 - 15 KVAR	TS4S015	TS4A015	1	4.7 kg
20 - 25 KVAR	TS4S025	TS4A025	1	5.0 kg
30 - 35 KVAR	TS4S035	TS4A035	1	5.0 kg
40 - 50 KVAR	TS4S050	TS4A050	1	5.0 kg
60 KVAR	TS4S060	TS4A060	1	5.2 kg
75 KVAR	TS4S075	TS4A075	2	5.5 kg
100 KVAR	TS4S100	TS4A100	2	6.5 kg
125 KVAR	TS4S125	TS4A125	2	6.7 kg
150 KVAR	TS4S150	TS4A150	3	7.5 kg

Comparision between APFC & RTPFC

Sr.	Contactor Switched APFC	Thyristor Switched RTPFC "Cos-One" Brand
1.	High Inrush switching currents - upto 200 times rated	No Inrush currents - switching at zero voltage, no surges
2.	Slow response to changing loads - contactors need upto 3 min to switch on again due to discharge cycle	Fast acting - cycle to cycle correction in 40 to 60 msec Correction will match load changes accurately
3.	Maintenance if high - contactor coil / contact replacement	Negligible maintenance due to static switches - no moving parts
4.	Short term peak loads remain uncompensated	Even momentarily loads of few seconds can be compensated
5.	Limitation of the minimum correction step in panel due to limited operations of contactors	No limitation to minimum correction step due to infinite switching of thyristors
6.	Less accurate p.f. regulation - difficult to maintain over 0.985	Very accurate due to very smaller correction step - unity p.f. possible
7.	Not suitable for DG set application due to load p.f. conditions	Suitable for DG set and harmonic filter applications
8.	Life - of PFC capacitors shortened due to inrush currents	Longer capacitor life due to transient free switching
9.	Cost - Higher cost for larger rating of panels	Economical
10.	Not suitable for welding, crane, lift applications	Suitable for all applications



Contactor Switching



Zero Voltage Switching

Clients Present in 11 Countries







PQS Electrolink (I) P. Ltd.

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