

THYRISTOR BASED POWER FACTOR CORRECTION MODULE for Dynamic PFC

Features:

- High PIV thyristors used (2200V and above).
- Response time < 10 ms.
- Intelligence provided in the microcontroller
- Available in 10, 25, 40, 50, 100, 200 kvar ratings.
- Fast thyristor switching with no delay.
- Pulse transformer triggering.
- No neutral required for delta connection
- Permanent self monitoring of voltage, phase sequence, temperature and led status indicator.
- Very low maintenance required.
- Zero noise level on switching.
- Compact module.
- Can be used in dynamic power factor correction systems.
- For capacitive loads up to 690 V line voltage



Description

Dynamic Power Factor Correction systems are used to optimize the power factor and reduce the level of harmonics in the grid, The usage of certain new technologies in today's day industry has negative impacts on electric power quality i.e. frequent high load fluctuations and harmonics oscillations. Excessive voltages, increased losses and flickering affects the supply capacity but has a great impact on the operation of sensitive electronic devices.

This module has thyristor switched capacitor with high speed switching ability to correct the power factor of connected loads. Control signals are directly given to capacitor banks from the connected load hence the delay is minimum. Every capacitor bank branch has a capacitor and reactor connected in series which is tuned at frequency below the lowest harmonic frequency present in the system.

Type selection guide:

Type	S2DAC-660-D-20	S2DAC-660-D-25	S2DAC-660-D-40	S2DAC-660-D-50	S2DAC-660-D-100	S2DAC-660-D-125	S2DAC-660-D-150	S2DAC-660-D-200
Kvar rating	20	25	40	50	75-100	125	150	200
Nominal current	116A	130A	181 A	145 A	145 A	145 A	145 A	145 A
Maximum continuous current	180 A	300 A	300 A	193 A	193 A	193 A	193 A	193 A

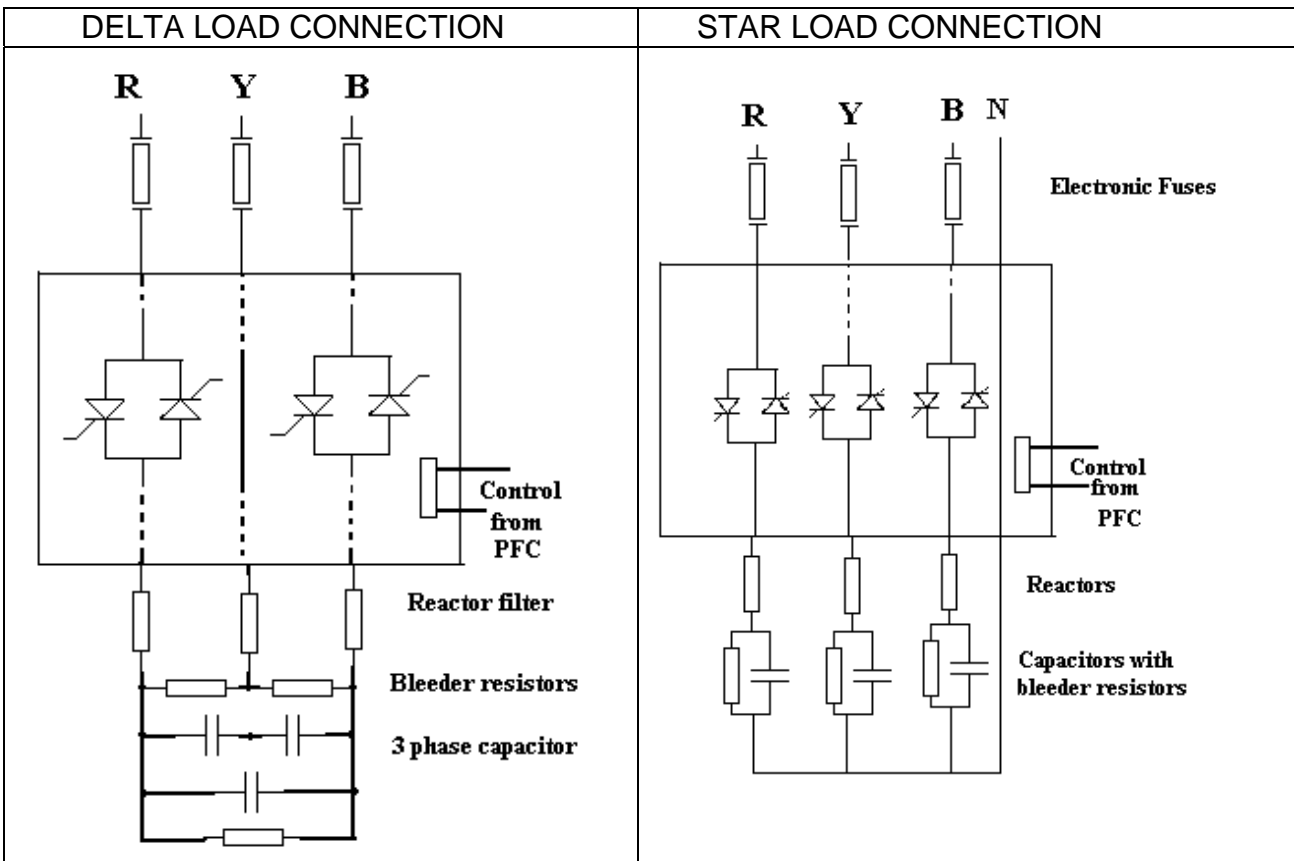
Technical specifications:

Type		S2DAC-660-D-20	S2DAC-660-D-25	S2DAC-660-D-40	S2DAC-660-D-50
Input specifications	Control voltage from PFC	4.5 to 30 VDC			
	Control current	20 mA			
	Consumption	9 VA			
Load Specifications	Rated operational voltage	690 V			
	Frequency	50/60 Hz			
	Switching time	< 10ms			
	Recovery time	20ms			

	Auxiliary Voltage	230VAC , 50/60 Hz (for forced cooling)			
General specifications	Dimensions				
	Cooling	Natural	Natural	Forced	Forced
	Ambient temperature	-10 to +55 °C			
	Humidity	10 to 95% without condensation			
	Display	LED status indication			

Protection methods

- **Reactors:** In dynamic systems fast discharge reactors must not be used
- **Fuses:** Thyristor modules have to be protected using semiconductor fuses.
- **Bleeder resistors:** bleeder resistors must be used for discharging of capacitors.
- **Warning signals:** Due to special switching the PFC module are fully loaded even when a particular branch has been switched off. Protection against contact must be ensured and warning signals must be included in the system.



Cautions / warnings

- The module must not be subjected to uncontrolled high current and voltages in case of any failure
- The module must be protected against moisture and dust, sufficient cooling must be ensured.
- Electronic switches cannot be isolated even in switched off condition therefore parts of systems must not be touched after complete system is switched off before the capacitors completely discharge.

FAILURE to follow cautions may result in premature failures and physical injury

Due to our policy of on going product development we reserve the right to alter specifications

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