Southern Tier Technologies

Tier 500PFC Series

Dynamic Power Factor Correction

The Tier 500PFC Series combines "real-time" power analytics with a unique, microprocessor driven array to provide immediate reactive power compensation.

Why Install Power Factor Correction?

There's no easier way to manage reactive power consumption and reap the rewards of an improved electrical system.

You'll immediately...

- Lower your utility bill
- Enhance your existing system capacity
- Improve on-site power quality and ultimately;
- Reduce your operation's overall carbon footprint

Features:

- **Hybrid array drives sub-cycle response without the heat dissipation of other systems.**
- **Lower temperature means a longer life, smaller enclosure and a lower cost to operate.**
- **Electronic control ensures transient and "in-rush free" switching.**
- **Redundant safety and disconnect features at both the component and system level.**
- **Active power monitoring provides infrastructure intelligence and precision control.**

Innovative Solutions for Clean, Reliable Power

Tier 500PFC Series

Dynamic Power Factor Correction

Patent Pending Technology

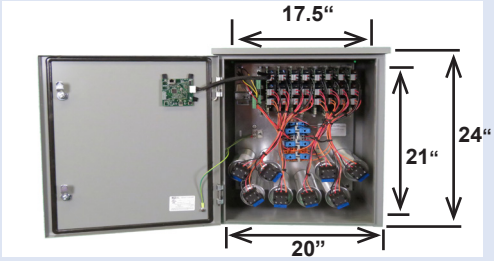
Our patented system continuously monitors and actively engages the precise amount of power correction at the precise moment needed. This controlled response occurs within microseconds and is timed to eliminate the threat of damaging transient impulses and high inrush currents generated by traditional, contactor based methods.

General Technical Specifications	
Nominal Voltage	120 - 480 VAC
Nominal Frequency	50/60 Hz
Number of Phases	2-phase/3 wire, 3-phase/3 wire and 3-phase/4 wire
kVAR at Rated Voltage	12.5, 25, 50, 100
Power Switching	Thyristor
Response Time	< 1 cycle
Dynamic Compensation	< 1 cycle
Capacitor	Metallized polypropylene, aluminum can
Overvoltage	120% rated peak
Overcurrent	150% of IR including combined effects of harmonics, overvolt and capacitances, tolerances
Mount	Stud
Safety	Three, self-healing windings, Pressure sensitive disconnector, discharge resistor
Enclosure	Type 3R, flange mount 12 gauge steel - standard Others Available - contact factory
Dimensions	20"w x 24"h x 12"d (508 x 609.6 x 404.8 mm) Harmonic Rated: 16" Depth
Weight	110 lbs
Operating Temperature	0°C to 60°C continuous
Relative Humidity	0-95%, noncondensing
Operating Altitude	2000 m
Agency Listing	Tested to: UL 508A, cUL, Capacitors-IEC 831, UL 810
Standards	IEC60831, IEC 60439-3, IEC 60664-1/61326

Controller	
Display	LCD 128 x 64, LED backlit, menu driven
RJ-45 Port	Ethernet
Terminals (#24-14)	RS-485 communication
Communications	RS-485, MODBUS TCP/RTU, Ethernet, SNMP
Embedded Webpage	Standard
Measurements	Voltage, Current, kW, kVAr, kVA, Harmonics

Accessories (Table 1)	
Current Transformer	
Type	Split-Core/clamp-on/ 50-400Hz
Class	.6kV, 10 kV BIL Full Wave
Rating/Model	200 A/ CT-2, 400A/ CT-4, 600A/ CT-6, 800A/ CT-8, Others: Contact factory
kVAR Kit: *Ex; 240006HAR-5*	
240V Standard Assembly	240006STD-X; X - 1 through 7 mods
240V High Harmonic Assembly	240006HAR-X; X - 1 through 7 mods
480V Standard Assembly	480012STD-X; X - 1 through 7 mods
480V High Harmonic Assembly	480012HAR-X; X - 1 through 7 mods

Dimensional Data



Ordering Information					
Example Model Number: **500480D100SS**					
500	**480**	**D**	**100**	**S**	**S**
Product Series	Voltage	Source Configuration	kVAr Required	Capacitor Type	Enclosure
Tier 500PFC = 500	240 - 240 480 - 480	D - 3 Phase Delta	012 - 12.5 025 - 25 050 - 50 100 - 100	S - Standard H - High Harmonic Rated	S - NEMA 3R

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