



STACO E3/FC

THREE PHASE FREQUENCY CONVERTER

3.5 - 40 kVA

APPLICATIONS INCLUDE

- International Equipment requiring 50Hz supply
- Testing 50Hz products to ship worldwide
- Solar and wind farm component testing
- HVAC production facility
- Appliance manufacturer
- Motor design efficiency testing
- Shipping 60Hz products with FC Power supply worldwide

PRODUCT FEATURES

- Above 92% Efficient and Unity Power Factor
Lower energy costs and carbon footprint
- Compact & Reliable
208VAC or 480VAC models with internal transformers allows for a smaller footprint. Cooler operation extends internal component life
- AC Input Performance
High input power factor of 0.99. Low input current distortion of < 3% (THDi) @ full load. Soft Start Power walk-in function that ensures progressive rectifier start-up





MORE FEATURES

IGBT AND DIGITAL SIGNAL PROCESSOR (DSP)

Reduces the impact of the UPS on the local supply. Simplifies installation where there is limited power capacity.

ADAPTIVE FEED CANCELLATION

Advanced control with AFC forward cancellation technology for low harmonic distortion.

MENU TOUCHSCREEN DISPLAY

User friendly screen to navigate through the settings and eliminate the need for peripherals such as keyboard and display.

UPGRADE TO A UPS

Simply add batteries and no major rewire required as all E3 Models are upgradeable at any time for normal UPS operation.

SEISMIC CERTIFICATION

For environments requiring seismic certification, the STACO E3/FC is available.

WORLDWIDE SERVICE PROGRAM

Factory trained service personnel maximize equipment life. Full start-up service & preventive maintenance services lowers cost of ownership.

STACO E3/FC MODELS

60Hz Input to 50Hz Output

Model	kVA/kW
E3303A0-2Y2YAA-0A00A	3.5
E3305A0-2Y2YAA-0A00A	5
E3307A0-2Y2YAA-0A00A	7
E3310A0-2Y2YAA-0A00A	10
E3315A0-2Y2YAA-0A00A	15
E3320A0-2Y2YAA-0A00A	20
E3330A0-2Y2YAA-0A00A	30
E3340A0-2Y2YAA-0A000A	40

50Hz Input to 60Hz Output

Model	kVA/kW
E3403A0-2Y2YAA-0A00A	3.5
E3405A0-2Y2YAA-0A00A	5
E3407A0-2Y2YAA-0A00A	7
E3410A0-2Y2YAA-0A00A	10
E3415A0-2Y2YAA-0A00A	15
E3420A0-2Y2YAA-0A00A	20
E3430A0-2Y2YAA-0A00A	30
E3440A0-2Y2YAA-0A000A	40

WARRANTY

ELECTRONICS

A full Two-Year On-site Warranty (Continental U.S., Canada, or Mexico).

Extended warranties, customized service and preventative maintenance plans are also available. Please refer to our warranty statement for complete details.



STACO E3/FC

Provides the clean, regulated precision power for all your sensitive loads. Protects your application from sags and surges that would normally damage your expensive devices. The E3/FC has an input range of +20% /-17% with instantaneous response to voltage fluctuations while maintaining the output within +/-1%.

AC INPUT PERFORMANCE

Staco E3/FC is a further evolution of the Unity Power Factor Output and with the added advantages offered by an IGBT-based rectifier/inverter assembly. This feature helps reduce the impact of the E3/FC on the local supply and simplifies installation where there is limited power capacity available from the electrical supply rating or generator size. The Staco E3/FC is classified as a "Zero Impact Source" and provides:

- Low reflected input current distortion <3% @ 100% Load
- High input power factor 0.99 @ 100% Load
- Power walk-in function that ensures progressive rectifier start up

The Staco E3/FC also performs the role of a high-performing filter, protecting its upstream power supply sources from any harmonics and reactive power generated by the loads powered.

FLEXIBILITY

Staco E3/FC models feature multiple voltage configurations as each system can accommodate both input and output Autotransformers and Isolation transformers to provide voltages from 200-600 volts which provides greater versatility and installation options. The E3/FC can be supplied from two separate power sources (main power and second source) which helps increase the resilience of system configurations.

MAIN CHARACTERISTICS

- Efficiency above 92% at full load
- Reduced Weight

The entire Staco E3/FC range is suitable for a wide range of applications thanks to the flexibility of configurations, accessories, options, and choice of performance levels. The E3/FC is compatible with capacitive loads, such as blade servers, without any reduction in active power, ranging from 0.9 lead to 0.8 lag and up to 0.8 capacitive power. Efficient and reliable power supply for mission critical applications is guaranteed by operating in redundancy and power parallel mode with up to 3 units (N or N+1).

FC Rating kVA/kW (Unity Power Factor)		3.5	5	7.5	10	15	20	30	40
Input									
Topology		Online Double Conversion w/ Output Unity Power Factor							
Voltage		208/120vAC, 3 Phase, 4 wire plus Ground. 220/127vAC configurable from front panel Optional with transformers 208vAC or 480 vAC, 3 wire (Delta); 480/277vAC 4 wire plus Ground							
Range		+20% / -17% Full Load							
Frequency		60/50 Hz +/- 5.0 Hz							
Power Factor		0.99 at 100% load, 0.98 minimum at 50% load							
Reflected Current Distortion (THDi)		<3% @ 100% load							
Input Current A (208/120vAC)	Maximum:	13	19	29	39	59	78	117	156
Input Current Inrush		Walk-in from 25% maximum to 100% full load rating in 5 seconds							
Output									
Voltage		208/120vAC, 3 Phase, 4 wire plus Ground. 220/127vAC configurable from front panel Optional with transformers 208vAC or 480vAC, 3 wire (Delta); 480/277vAC 4 wire plus Ground							
Static Voltage Regulation		+/- 1%							
Voltage Transient Response		Voltage transient response shall not exceed the following, and shall recover to 95% within 10 milliseconds: a) <5% RMS for 100% step load b) +/- 1% (loss or return of AC input)							
Frequency		46-54 Hz @ 50 Hz system 56-64 Hz @ 60 Hz system							
Free Running Frequency (asynchronous)		60/50 Hz +/-0.01 Hz							
Voltage Distortion (THDv)		≤2 % @ 100% Linear Load; ≤ 4 % @ 100% Non-linear Load (PF≥0.8)							
Inverter Overload		100%~110%: 60 min; 110%~130%: 1 min; >130%:1 sec; Overload is based on the kVA, kW and current for each phase.							
Overall Efficiency		Above 92%							
Output Current (A)		10	14	21	28	42	56	83	111
Heat Rejection (BTU/Hr) 100% Load 208/120		1100	1500	2300	3900	5800	7700	11600	15400
Environmental									
Altitude		< 2000 meters; Derate load capability above 1000 meters 1% per 100 meters							
Operating Temperature		0 ~ 40°C							
Audible Noise (dbA)		<75							
Dimensions and Weights									
Height x Width x Depth - Inches (mm)		72.44" x 23.13" x 40.50" (1840 x 587x 1029)							
Pounds (Lbs.)		628	628	628	628	628	628	628	628
Kilograms (Kg)		285.5	285.5	285.5	285.5	285.5	285.5	285.5	285.5
Communications									
SNMP Web; Modbus; BACnet		Optional Intellislot Communications card includes: SNMP with PowerView Pro Shutdown and Monitoring Software for Windows/Novell Modbus with Monitoring & Control vis RS-485/RTU Protocol/ Read Holding and Write Registers BACnet							
Alarm Relay Board		(6) Form "C" contacts 30v AC/DC <2A							
Standards									
Agency		208Y/120 or 220Y/127 Input and Output Units only UL listed to 1778, cUL to CSA C22.2, NEMA PE-1, ASME, ASA-C-39.1-1984, FCC Part 15 Subpart J Class B, NEC, OSHA, IEEE587, ANSI C62.41-1980, ISO9000, 14000							

STACO SERVICE

FIELD SERVICE PROGRAM

Staco specializes in providing choice and flexibility by developing tailored solutions for preventive and remedial maintenance services, as well as emergency repairs for all of our products. Staco Service is built upon a nationwide network of highly trained and motivated customer support engineers and technicians who can provide professional services and care throughout the life of your equipment.

- Start-Ups
- Preventive Maintenance
- Spare Parts
- Battery Analysis/Refresh/Replacement
- On-Site Training
- Time & Material Services

WHY STACO ENERGY PRODUCTS?

BECAUSE WE ARE YOUR CUSTOM POWER SOLUTIONS PROVIDER!

Unique application design demands, harsh environment concerns, the need to meet non-standard physical space requirements; providing the “not so usual” is what we do best. From leading edge uninterruptible power supplies, power conditioners, power factor and harmonic correction equipment, to the world’s most stable voltage control systems, we have the technology you need to protect and manage your business, and the knowledge to make it work for you.

Since 1937, customers worldwide have relied on Staco Energy as their custom solutions provider, to solve a wide range of electrical power problems. Headquartered in Miamisburg, Ohio, Staco Energy Products is a wholly owned subsidiary of Components Corporation of America, located in Dallas, Texas.

Voltage Control



UPS & Emergency Lighting



Harmonic Mitigation



Contact Us:
US Toll Free: 866-261-1191
Phone: 937-253-1191
E-mail: sales@stacoenergy.com