



FIRSTLINE PLT

THREE PHASE ON-LINE DOUBLE CONVERSION UPS

50 - 60 KVA

APPLICATIONS INCLUDE

- Data Centers
- Computer Networks
- Industrial Process Manufacturing
- Hospitals, Medical
- Education, Research
- Laboratories, Bio-tech
- Pharmaceuticals
- Critical Power Management Requirements
- UL 924 Emergency Lighting and Emergency Elevator Power.

PRODUCT FEATURES

- **Up to 94% Efficient**
Lower energy costs and carbon footprint
Hot Standby Economy Mode available
- **Compact & Reliable**
208VAC or 480VAC models with *internal batteries (50-60kVA) allows for smaller footprint. Cooler operation extends internal component life
- **AC Input Performance**
High input power factor of 0.99. Low input current distortion of < 1% (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.

DUAL INPUT

Main power and secondary bypass power increase resilience of single or parallel system configurations.

ADAPTIVE FEED CANCELLATION

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

MENU SELECT DISPLAY

User friendly display is easy to see and intuitive to use.

PARALLEL UP TO 4 UNITS

Provides redundancy for mission critical applications with no additional hardware. Parallel Kit, Communication through CANBUS Parallel Card.

OPERATES AS A PRECISION POWER CONDITIONER

All PLT Models may be operated as a Power Conditioner, upgradeable with batteries at any time for normal UPS operation.

FREQUENCY CONVERSION

All PLT Models may be operated as a Frequency Converter, set as 50 or 60Hz, and batteries can be added for backup time.

WORLDWIDE SERVICE PROGRAM

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

*Internal batteries are not available for 50-60 kVA units.

BATTERY CARE SYSTEM

FirstLine® PLT uses the Battery Care System which optimizes battery performance while extending battery life.

WARRANTY

ELECTRONICS

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

BATTERY

Three (3) Year Full, Limited Warranty, on the Battery System ensures that your batteries are protected from system failure now and in the future. (Warranty provided by battery manufacturer.) Extended warranties, customized service and preventative maintenance plans are also available. Please refer to our warranty statement for complete details.



FIRSTLINE PLT UPS

In the event of an AC power failure, the FirstLine® PLT UPS will automatically transfer to battery power and continue to provide power without any interruption for the full amount of time you select. When power returns, the FirstLine® PLT UPS will automatically recharge the batteries for the next unexpected power outage or disturbance.

AC INPUT PERFORMANCE

FirstLine® PLT is a further evolution of the FirstLine® series with the added advantages offered by an IGBT-based rectifier/inverter assembly. This feature reduces the impact of the UPS on the local supply and simplifies installation where there is limited power capacity in the form of available electrical supply rating or generator size. The FirstLine® PLT is classed as a "Zero Impact Source" and provides:

- Low input current distortion $\leq 3\%$
- High input power factor 0.99
- Power walk-in function that ensures progressive rectifier start up
- Delayed start up phased with the return of mains power supply, when several UPS are connected in the system. The FirstLine® PLT also performs the role of a high performance filter, protecting its upstream power supply sources from any harmonics and reactive power generated by the loads powered.

FLEXIBILITY

FirstLine® PLT models can feature an output transformer with galvanic isolation (between the load and the battery supply) to provide greater versatility and installation options. The UPS can be supplied from two separate power sources (main power and a second source) which helps increase the resilience of system configurations.

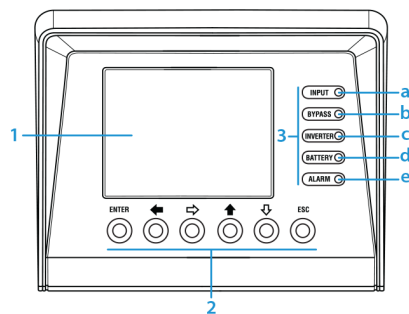
MAIN CHARACTERISTICS

- Efficiency $\geq 94\%$ at full load
- Reduced Weight
- Battery Temp Sensor Module monitors the battery internal cabinet environmental conditions of the Battery Cabinet connected to the UPS and displayed on the UPS front mimic panel.

The entire FirstLine® PLT range is suitable for a wide range of applications thanks to the flexibility of configurations, accessories, options, and choice of performance levels. The UPS 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 4 units (N or N+1).

FIRSTLINE PLT TECHNICAL SPECIFICATIONS

UPS Rating KVA/KW	10/9		15/13.5		20/18		30/27		40/36		50/45		60/54			
Input																
Topology			On-Line Double Conversion													
Voltage			208Y/120 VAC, Three Phase, 4 wire plus ground, 208VAC, 3 wire (Delta) or 220Y/127VAC configurable from the front panel 480Y277 VAC 4 wire plus ground or 480 VAC, 3 wire (Delta)													
Range			+15% / -20% Battery Discharge@-15% with full load													
Frequency			60/50Hz +/- 5.0 Hz													
Power Factor			0.99 at 100% load, 0.98 minimum at 50% load													
Current Distortion			<1% @100% Load, <2% @ 50% Load, <5% @ 10% Load													
Input Current A (208V/208V)			Nominal: 27 Maximum: 33		Nominal: 41 Maximum: 49		Nominal: 54 Maximum: 65		Nominal: 81 Maximum: 97		Nominal: 109 Maximum: 130		Nominal: 143 Maximum: 172		Nominal: 167 Maximum: 200	
Input Current Inrush			Walk-In from 25% maximum to 100% full load rating in 5 seconds													
Output																
Voltage			208Y/120 VAC, Three Phase, 4 wire plus ground or 220Y/127 VAC configurable from the Front Panel or 480Y/277 VAC, 4-wire													
Static Voltage Regulation			+/- 2%													
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 (inverter synchronous)			60/50Hz (tracks frequency of static bypass source) +/- 0.5, 1.0, 2.0, 5.0 Hz (user settable)													
Frequency Slew Rate (inverter synchronized to static bypass)			Adjustable 0.1 to ± 10 Hz per second													
Free Running Frequency (on battery or asynchronous)			60/50Hz +/- 0.01Hz													
Voltage Distortion THD			Less than 1% (Linear load), less than 2% with crest factor 2.5 to 1													
Inverter Overload			125% for 10 minutes, 150% for 60 seconds													
Bypass Overload			400% for 10 seconds, 1000% for half line cycle													
Bypass Input - Range Synchronization Voltage			+12% / -15%													
Bypass Input Frequency Tracking Range			+/- 5Hz													
Overall Efficiency			Up to 94%													
Output Current (A)			28		42		56		84		111		139		167	
Heat Rejection (BTU/Hr) @208VAC			2,400		3,500		4,700		7,000		9,300		21,000		23,500	
Battery																
Battery Type			Internal Sealed Maintenance Free Lead Acid VRLA - 36 Batteries, Center Tap Design (NI-CAD available).									External Battery Cabinet - 36 Batteries, Center Tap				
Voltage			432 volts DC nominal, 486VDC float													
Environmental																
Altitude			De-rate load capability above 1000 meters, 1% per 100 meters													
Operating Temperature			40 °C Maximum													
Audible Noise @ 3 feet "A" weighted scale			<75 dBA													
Dimensions and Weights																
Height x Width x Depth - Inches (mm)																
Height x Width x Depth - Inches (mm)			72.41 x 23.13 x 34.47 / [1839.3] x [587.4] x [875.7]									76.75 x 34.13 x 34.47 / [1949.5] x [866.9] x [875.7]				
lbs. / [kg]			Minimum 659 / [299] Maximum 1894 / [859]							Minimum 659 / [299] Maximum 1919 / [870]		Minimum 881 / [400] Maximum 2013 / [913]				
Communications																
SNMP/WEB (Optional)			SNMP Card & UPS PowerView Pro Shutdown and Monitoring Software for Windows/Novell													
Modbus			Monitoring & Control via RS-485/RTU or TCP/IP Protocol/Read Holding and Write Registers													
Standards																
Agency			UL listed to 1778, CUL to CSA C22.2, NEMA PE-1, ASME, ASA-C-39.1-1984, FCC Part 15 Class B, NEC, OSHA, IEEE587, ANSI C 62.41-1980, ISO9000													



- 1 (LCD) Graphic LCD
- 2 ENT Key <ENTER>
ESC Key <ESC>
(↑) Key move up
(↓) Key move down
(→) Key move to right
(←) Key move to left
- 3 (a) Rectifier Input Voltage OK led (green)
(b) Output Voltage Unit from the Bypass led (orange)
(c) Inverter is Working led (green)
(d) Unit Working from Batteries-mains failure led (red)
(e) General Alarm-in case of any alarm of the unit led (green)

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



Power Factor & Harmonics



STACO
ENERGY
PRODUCTS CO.

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