

FIRSTLINE[®] PL

10 – 100 kVA

Three-Phase Double-Conversion On-Line UPS

Up to 95% Efficient

- Lower energy costs and carbon footprint

Compact & Reliable

- 10-30kVA internal batteries allow smaller footprint
- Cooler operation extends internal component life

AC Input Performance

- High input power factor of 0.99
- Low input current distortion of <4%
- Soft Start Power walk-in function that ensures progressive rectifier start-up

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 emergency standby power increase resilience of single or parallel system configuration

High Performance Filter

- Protects upstream power supply sources from harmonics and reactive power generated by the loads power

Menu Select Display

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

Parallel up to 4 Units (Optional)

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

Nationwide Service Program

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



Full Two Year
Warranty

**STACO
ENERGY[®]**
PRODUCTS CO.

Your tailored power solutions provider



FirstLine® PL UPS

The FirstLine® PL is a parallelable three-phase Uninterruptible Power Supply (UPS) for 10-100kVA applications. These units boast AC-AC efficiencies of up to 95%, while delivering maximum availability and flexibility. True on-line, double-conversion technology is achieved through IGBT and Digital Signal Processor (DSP) control

The compact and reliable design is ideal for information technology (IT) applications such as computer rooms, network closets, and small data centers, as well as broadcast studios, assembly/manufacturing lines, medical facilities, and other applications where a high level of available power are essential.

The FirstLine® PL provides a high input power factor of 0.99 and a low input current distortion of less than or equal to 4%. It also performs as a high performance filter by protecting upstream power supply sources from any harmonics and reactive power generated by the loads power.

FirstLine® PL models can be supplied from two separate power sources (main power and a second emergency standby source) which can increase the resilience of single or parallel system configurations intended for applications with input voltage of 208 Vac and a range of +20 /-20% without battery contribution.

A user-friendly menu selectable display located on the front of the unit includes an alarm, emergency power off



button, and LED indicators for bypass, main line, battery powering the load, load on bypass, and normal output. Communications options include Monitoring and Shutdown Software with SNMP Agent. Extended Battery Cabinets, and Power Distribution Units (PDU) to match are also available.

Up to 4 FirstLine® PL units can run in a parallel configuration, providing redundancy for mission critical applications or additional capacity (optional).

Two Year Warranty

Full **Two Year On-site Warranty** (Continental U.S.)

Extended warranties, customized service plans and preventive maintenance are also available.

Please refer to our warranty statement for complete details.

Applications

- Data Centers
- Computer Networks
- Network Closets
- Industrial Process Manufacturing
- Hospitals/Medical
- Education/Research
- Laboratories, Bio-Tech
- Pharmaceuticals/Chemical
- Critical Power Management Requirements
- Any areas needing computer grade power and a high level of available power

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Specifications—FirstLine® PL

	MODELS									
kVA	10	15	20	30	40	50	60	80	100	
ELECTRICAL										
INPUT										
Phases	3P + N + G									
Nominal Voltage	208 Vac (480Vac with Optional Input Transformer)									
Frequency	60Hz ±10%									
Nom. Current (Amps)	26	40	53	79	105	131	158	211	263	
Max. Current (Amps)	32	45	61	95	115	155	195	260	325	
Power Factor	0.99									
OUTPUT										
Phases	3P + N + G									
Nom. Voltage	208 Vac (480Vac with Optional Output Transformer)									
Regulation	< 1%									
Frequency	60 Hz									
Free Running THD	±0.01%									
THD	<3%									
Kva	10	15	20	30	40	50	60	80	100	
Power Factor	0.8									
kW	8	12	16	24	32	40	48	64	80	
Nom. Current (Amps)	27.7	41.6	55.5	83.3	111.1	138.8	166.6	222.2	277.7	
Crest Factor	3:1									
Overload Duration	>1 minute @ 150% Load									
Efficiency	92%									
STATIC BYPASS										
Phases	3P + N + G									
Voltage Range	±10%									
Frequency Range	57 – 63 Hz									
Nom. Current (Amps)	27.7	41.6	55.5	83.3	111.1	138.8	166.6	222.2	277.7	
Transfer Time	0ms									
BATTERY										
Type	Sealed Maintenance Free, Lead Acid, VRLA									
Nom. Voltage	408Vdc Protection Deep Discharge									
Protection	with Auto Cut Off									
MIMIC DISPLAY										
LED	Line, Bypass, Battery, Inverter, Load, Fault Indication									
LCD	Load %, Input & Output Frequency, Voltage & Current, Bypass Voltage, Battery Voltage & Current, Temperature, Alarms									
MECHANICAL										
Enclosure	IP1 / NEMA 1									
Color	Black, Powder Coated									
Dimensions (Inches) (H x W x D)	43 x 16 x 30	43 x 16 x 30	52 x 22 x 35	52 x 22 x 35	60 x 27 x 30	60 x 27 x 30	67 x 31 x 30	74 x 38 x 35	74 x 38 x 35	
Weight (lbs.)	282	295	440	500	585	687	728	816	838	
Weight with batteries	486	567	712	994	—	—	—	—	—	
ENVIRONMENTAL										
Storage Temp	-25 to 55°C									
Operating Temp	0 to +40°C									
Relative Humidity	0 to 90% (non condensing)									
Altitude	3,281 ft. without de-rating									
Protection Level	IP20									
Heat Loss BTU/HR	4,369	6,553	8,737	13,106	17,475	21,843	26,212	34,950	43,686	
Noise Attenuation	65dBA @ 3 ft.			68dBA @ 3 ft.			70dBA @ 3 ft.		75dBA @ 3 ft.	
STANDARDS										
Agency	UL1778; C-UL									
EMI Classification	FCC Part 15, Class A									
Surge Protection	IEEE 587-B /ANSI C62.41-B									
COMMUNICATIONS										
Serial Communication	Serial Port – RS232 & RS422									
Contact Closures	AC failure, battery under voltage, bypass and output failure									
Digital Inputs	Two digital inputs for remote shut down of the UPS and generator operation feedback									
STANDARD FEATURES										
Input Connection	Dual									
Circuit Breaker	Input, Output and Manual Bypass Circuit Breakers									
Parallel	4 Modules for Capacity or Redundancy (No Parallel Cabinet)									
Battery test	Automatic and Manual									
OPTIONS										
Bypass	External 3 Breaker Make-Before-Break, with Interlocks									
Battery Cabinets	External Battery Cabinets for extended run times with built-in Battery Circuit Breaker Disconnect, Line Up and Match									
Remote Alarm Panel	Remote Alarm/Monitoring Panel									
SNMP Card	Internal SNMP/WEB Card and UPS Shutdown and Monitoring Software for Windows/Novell									
Software	LAN/WAN Network Communication Software									
Transformer	480Vac Input and Output Transformer (Auto or Isolation), Line Up and Match									
Seismic	IBC Seismic Restraint (Site Specific) Certification									
Special Enclosure	Complete system mounted and wired internal of any Harsh Environment enclosure with climate control (3R, NEMA 12, 4X)									

Service Options

With our ServiStar® program, a wide range of planned maintenance and extended service options are offered to maximize equipment life and reliability of your FirstLine® UPS. Through an extensive network of factory trained professionals you receive:

- Annual Service Plan
- 24/7 Emergency Service
- Preventive Maintenance
- Programs tailored to meet your needs

About Staco Energy Products

Since 1937, customers worldwide have been relying on Staco Energy Products Company to deliver voltage control and power quality solutions tailored to their needs.

As a leading power quality resource, we offer our customers world-class support; from our thorough applications assessment, to our ability to design and deliver a solution that is tailored to the specific needs of our customers; through delivery and commissioning.

Our professional, factory trained service team is in place to ensure that our customers' revenues are protected, and their investment provides them with many years of trouble free operation.

Staco develops total power solutions for OEM and end user applications.

Represented locally by:

In addition to the FirstLine® products we offer a wide array of power quality products, including:

- **Uninterruptible Power Supplies**
- **Power Conditioners**
- **Voltage Regulators**
- **Power Factor Correction and Harmonic Mitigation**
- **Active Harmonic Filters**
- **Variable Transformers**
- **Custom Engineered Test Sets**



STACO ENERGY PRODUCTS CO.

Your tailored power solutions provider™

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