



FIRSTLINE P_E

THREE PHASE ON-LINE DOUBLE CONVERSION UPS

50 - 200 KVA | 480VAC

APPLICATIONS INCLUDE

- Data Centers
- Computer Networks
- Industrial Process Manufacturing
- Hospitals, Medical
- Education, Research
- Laboratories, Bio-tech
- Pharmaceuticals, Waste Water
- Critical Power Management Requirements
- Any Areas Needing Computer Grade Power and a High Level of Available Power

PRODUCT FEATURES

- Up to 99% Efficient
Lower energy costs and carbon footprint
- Built-in Power Quality Metering
Accurately diagnose and troubleshoot utility power events
- Advanced Touchscreen Display
- Integrated 4 channel oscilloscope for troubleshooting without any use of special software or encrypted tools





FIRSTLINE P_E UPS

In the event of an AC power failure, the FirstLine® P_E 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® P_E UPS will automatically recharge the batteries for the next unexpected power outage or disturbance.

AC INPUT PERFORMANCE

FirstLine® P_E is a further evolution of the FirstLine® series with the added advantages offered by a 3 level switching rectifier and inverter. 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® P_E 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.
- High energy efficiency, $\geq 96\%$ at full load.

FirstLine® P_E 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® P_E UPS can be supplied from two separate power sources (main power and a second bypass source).

MAIN CHARACTERISTICS

- Efficiency $\geq 96\%$ at full load and up to 99% in ECO / hot standby Mode
- Reduced Weight
- Battery Temp Sensor Module monitors the battery internal cabinet environmental conditions of one (1) Battery Cabinet connected to the UPS and displayed on the UPS front mimic panel.

The entire FirstLine® P_E 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 with a low derating equal to 15% of the active power (kW). Efficient and reliable power supply for mission critical applications is guaranteed by operating in redundancy and power parallel mode with up to 8 units (N+1), and by the Dual Bus System and Dynamic Dual Bus system configurations.



FirstLine® P_E UPS shown with optional side car



OPTIONS

REMOTE STATUS PANEL

Provides Fault Indication for System Normal, UPS Alarm, Shutdown Imminent, Mains Failure, Load on Service, and Inverter Fault.

TOP OR SIDE CABLE ENTRY

A "Side-car" Cabinet Expansion is Offered to Accommodate Top or Side Incoming Cable Entry.

EXTERNAL MAINTENANCE BYPASS, 3 BREAKER WITH ELECTRONIC INTERLOCKS

Make-Before-Break, Line Up and Match Wrap-Around MBS for Total UPS Isolation During Maintenance or Removal of the UPS.

POWER DISTRIBUTION UNIT (PDU)

PDU Provides 208/120 Output Distribution Capabilities to Peripheral Devices. Up to (4) 42 Pole Panelboards or Sub-Feed Circuit Breakers Available

BATTERY MONITORING SYSTEM (BMS)

The FirstLine BMS Systems Provide Monitoring and Recording Battery Cycle Data of Each Battery String or Jar. Factory Installed for Easy Commissioning.

HARSH ENVIRONMENT ENCLOSURE

UPS and Accessories Mounted and Pre-Wired, with AC Cooling Inside any NEMA (12, 3R, 4X) Type Enclosure.

SEISMIC WITHSTAND CERTIFICATION

Site Specific Seismic Certification and Documentation. All Units Come Standard with Bolt Down Capability.

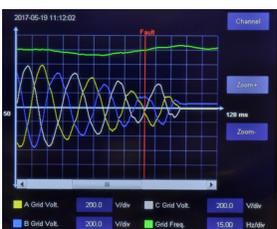
START-UP SERVICE, PREVENTATIVE MAINTENANCE PROGRAMS

A Wide Range of Service Programs are Available to Suit all User Requirements. Consult Factory. Parallel Systems up to 8 modules.

FRONT PANEL DISPLAY



Color touch screen display with integrated 4 channel oscilloscope for troubleshooting input, output, and DC signal without any use of special software or encrypted tools. Allows analysis of 3 phase voltage, current, frequency, DC link voltage and DC current within the UPS chassis.



Detection of the input failure from the generator. Input voltage and frequency shown for easy understanding of why the UPS accessed the battery backup circuit.

WARRANTY

ELECTRONICS

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

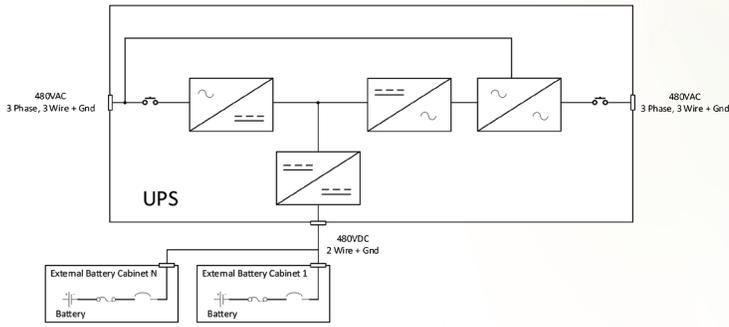
BATTERY

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 plans and preventative maintenance are also available. Please refer to our warranty statement for complete details. Valve Regulated Lead Acid (VRLA) Batteries purchased for commercial or industrial use, and installed within, the continental United States or Canada.

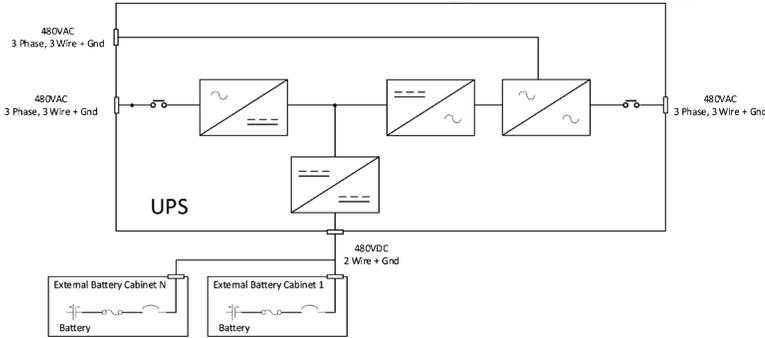
FIRSTLINE P_E TECHNICAL SPECIFICATIONS

Electrical Data	UPS Power (KVA / KW)						
	50 / 50	65 / 65	80 / 80	100 / 100	125 / 125	160 / 160	200 / 200
Input							
Nominal Voltage	480VAC 3 Phase, 3-Wire + Grd.						
Nominal Voltage Range	-30%, +15%						
Input Frequency Range	From 45 to 65Hz						
Nominal Input Current	63	81	100	125	156	200	250
Maximum Input Current	73	94	112	145	181	224	280
Power Factor at nominal voltage (480 V) and battery charged from 25% to 100% of the load	> 0.99						
Reflected Current Harmonic distortion (THDi) at 100% load	≤ 3%						
Rectifier Walk-in	from 0 to 125 Seconds (Configurable)						
Rectifier Walk-in Delay	from 0 to 600 Seconds (Configurable)						
D.C. Intermediate Circuit							
Number of Cells	240						
Inverter							
Static Variation	± 1%						
Dynamic Variation	± 5%						
Crest Factor	3:1						
Voltage Distortion with Linear Load	≤ 1%						
Voltage Distortion with non-linear Load	< 3%						
Frequency Stability with Synchronized Inverter to the By-Pass Line	± 2% (± 1% to ± 6% from Control Panel)						
Frequency stability with not synchronized inverter to the by-pass line	± 0.1Hz						
Speed of Frequency Variation	1Hz/sec (Parallel Units can be Calibrated from 0.1 to 1Hz/s)						
Phase Voltage Asymmetry with Balanced and Unbalanced Load	≤ 1%						
Phase Displacement of the Voltages with Balanced and Unbalanced Loads	120 ± 1 °el						
Overload in Referred to the Nominal Power	110% for 60 Minutes, 125% for 10 Minutes, 150% for 1 Minute						
Inverter Efficiency	≥ 96%						
By-Pass							
Nominal Voltage	480VAC 3-Phase (Without Neutral)						
Nominal Voltage Tolerance	± 10% (up to ± 20% Programmable)						
Nominal Frequency	50/60 Hz						
Frequency Tolerance	± 5% Nominal (up to ± 10% Programmable)						
System							
AC/AC Efficiency at Full Load	≥ 96%						
Efficiency with UPS in STAND-BY Mode	up to 99%						
Full Load Heat Rejection BTU/hr	7,000	9,100	10,350	13,058	17,055	21,000	26,300
Mechanical							
Height x Width x Depth - inches (mm)							
UPS	70.98 x 27.65 x 32.07 [1803 x 702.4 x 814.6]					70.98 x 31.59 x 32.07 [1803 x 802.4 x 814.6]	
UPS with Side Car	70.98 x 43.58 x 32.24 [1803 x 1107 x 819]					70.98 x 47.52 x 32.24 [1803 x 1206.9 x 819]	
Weight - lbs. / [kg]							
UPS	991 / [450]					1268 / [575]	
UPS with Side Car	Minimum 1141 / [518] Maximum 1281 / [581]					Minimum 1438 / [652] Maximum 1578 / [716]	
Freestanding NEMA 1 Enclosure, Powder Coat Painted Black Color with Textured Finish, Bottom Access for Conduit Entries							
Environmental							
Ambient Temperature	-5° C to 40° C						
Storage Temperature	-25° C to 55° C						
Relative Humidity	0 ~ 95% Non-Condensing						
Altitude	< 2000 Meters Derate Load Capability Above 1000 Meters 1% per 100 Meters						
Audible Noise	≤ 69 dBA						
Communications							
SNMP/WEB (Standard)	SNMP Card with NetAgent Software						
Modbus (Standard)	Monitoring via RS-485/RTU Protocol/Read Holding						
BACnet (Optional)	TCIP & RS485						
SNMP/WEB WiFi or Cellular (Optional)	SNMP Card with NetAgent Software						
Modbus WiFi or Cellular (Optional)	Monitoring Protocol/Read Holding						
BACnet WiFi or Cellular (Optional)	TCIP						

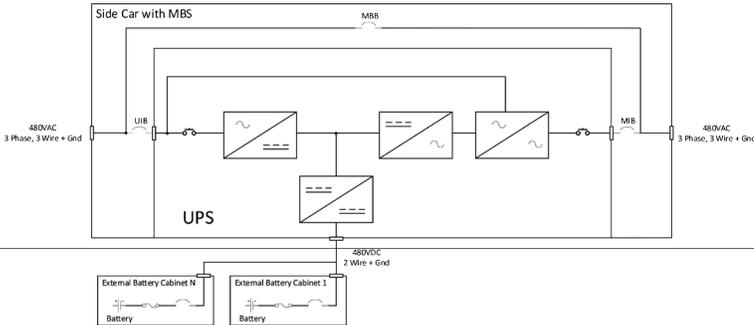
P_E Series Standard UPS- Single Input



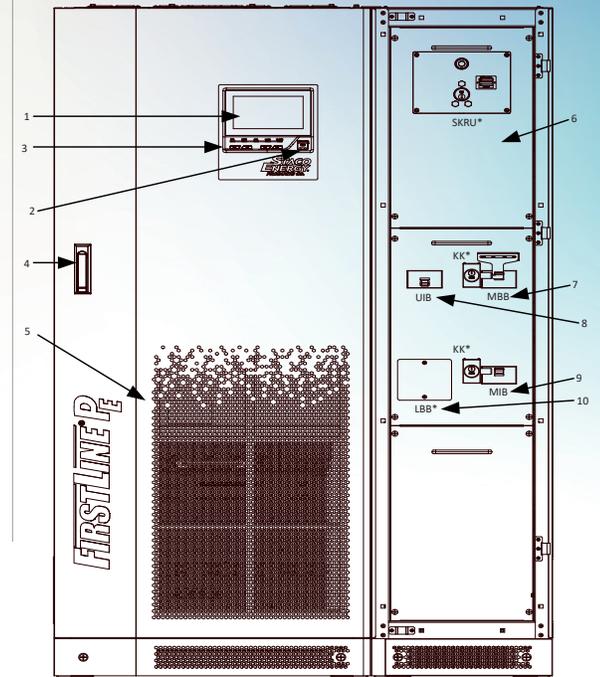
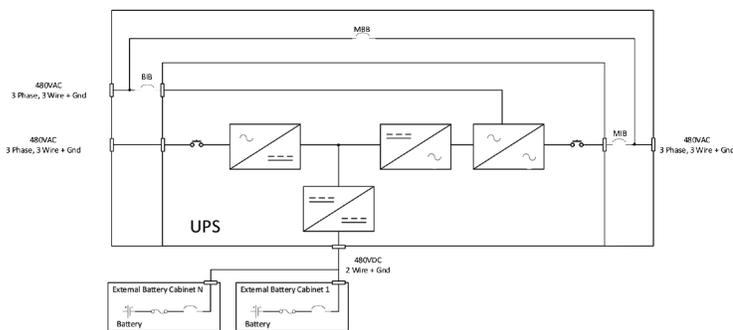
P_E Series Standard UPS- Dual Input



P_E Series Standard UPS- Single Input with Optional Side Car



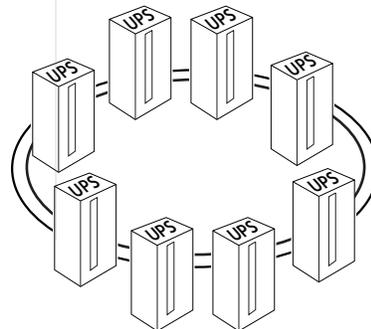
P_E Series Standard UPS- Dual Input with Optional Side Car



- 1 Touch Screen Color Display
 - 2 EPO Switch
 - 3 Dual Action & Redundant ON & OFF Switch
a Secured Against Incidental Touch
 - 4 Key Access Door Handle
 - 5 Filtered Ventilation
 - 6 Optional Side Car - Shown with door open.
Door is lockable.
a Used for Top Cable Entry
b With 3 Breaker MBB (UL1778)
c With 3 Breaker MBB & LBB Breaker (UL1778)
d SKRU-Kirk Key: used with MBS
 - 7 MBB - Maintenance Bypass Breaker
 - 8 UIB - UPS Input Breaker
 - 9 MIB - Module Isolation Breaker
 - 10 LBB - Load Bank Breaker
- *Options

Standards

- Underwriters Laboratories, Listed to UL1778 (Designed to 60950); c-UL to CSA C22.2
- NEMA PE-1
- ASME
- ASA-C-39.1-1984
- FCC PT 15, Class B
- National Electrical Code
- IEEE 587 ANSI C 62.41-1980
- ISO 9001
- IBC (International Building Code) Ratings A-F, Site Specific



FirstLine® P_E
Up to Eight Units in Parallel



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.

FL-PE_bro-201029

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