



FIRSTLINE P/PPC

THREE PHASE PRECISION POWER CONDITIONER

65 - 500 KVA PARALLEL UP TO 4000 KVA

APPLICATIONS INCLUDE

- Telecommunications - Radio Stations, Transmitters, Studios, Telecom Networks
- Utility, Substation power, nuclear facilities, Waste Water
- Manufacturing Process
- Hospitals, Medical - MRI, CT, PET, X-Ray
- Renewable Energy - Solar and Wind Farms
- Areas Needing Computer Grade Power

PRODUCT FEATURES

- **Compact & Reliable**
Front accessibility to minimize footprint. Cooler operation extends internal component life.
- **AC Input Performance**
High input power factor of 0.99. Low input current distortion of $\leq 3\%$ (THDi) @ Full Load. Soft Start Power walk-in function that ensures progressive rectifier start-up.
- **Upgrades to a UPS**
When your application changes, simply add batteries with no major re-wire required.





MORE FEATURES

2 LEVEL IGBT WITH DPS PROCESSING

Reduces the impact of the UPS on the local supply. Simplifies installation where there is limited power capacity in the form of available electrical supply rating or generator size.

HIGH PERFORMANCE FILTER

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

MENU SELECT DISPLAY

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

PARALLEL UP TO THE 8 UNITS

Provides redundancy for mission critical applications.

SEISMIC CERTIFIED

For environments requiring seismic certification, the FirstLine® P/FC is available.

DUAL INPUT

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

UPGRADE TO A FREQUENCY CONVERTER

When your application requires a 50/60Hz Frequency Converter.

WORLDWIDE SERVICE PROGRAM

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

WARRANTY

ELECTRONICS

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

BATTERY *IF BATTERIES ARE INCLUDED

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 P/PPC

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 PPC has an input range of +15% /-10% with instantaneous response to voltage fluctuations while maintaining the output within +/- 1%.

AC INPUT PERFORMANCE

FirstLine® P/PPC 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 Frequency Converter 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/PPC 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 systems are connected in the system.

The FirstLine® P/PPC 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/PPC models feature an output transformer with galvanic isolation to provide greater versatility and installation options.

MAIN CHARACTERISTICS

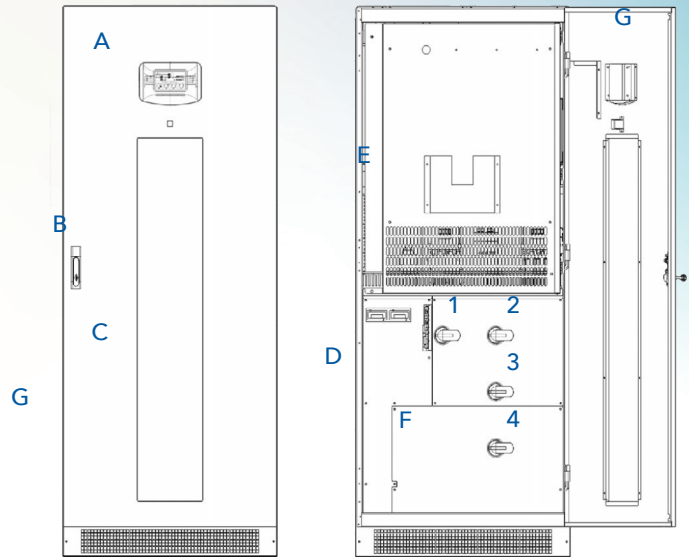
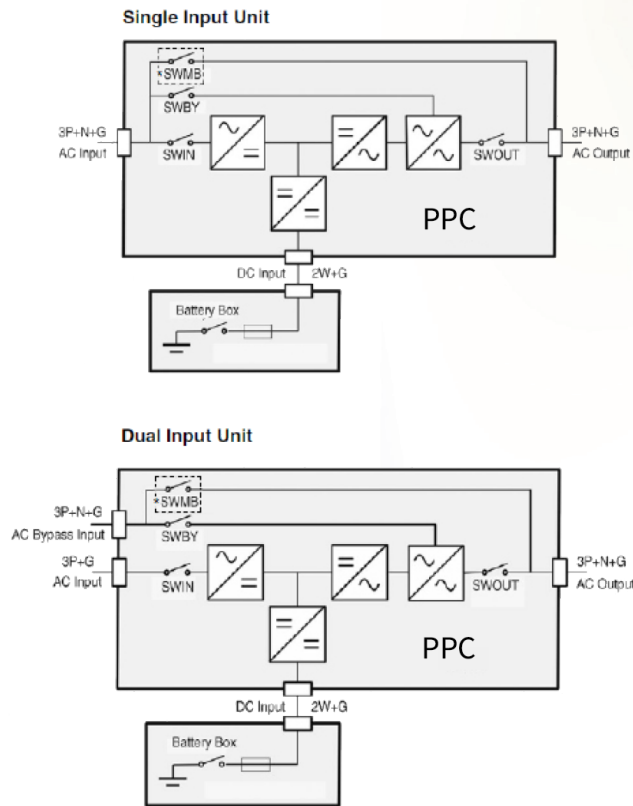
- Efficiency above 93% at full load
- Reduced Weight

The entire FirstLine® P/FC range is suitable for a wide range of applications thanks to the flexibility of configurations, accessories, options, and choice of performance levels. The Frequency Converter 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 8 units (N or N+1),



FIRSTLINE P/PPC TECHNICAL SPECIFICATIONS

Electrical Data			Power Conditioner Power (KVA / KW)									
			65 / 58.5	80 / 72	100 / 90	125 / 112.5	160 / 144	200/180	250/225	300/300	400/400	500/450
Input												
Nominal Voltage			480VAC 3 Phase, 3 or 4-wire + Grd. (Up to 600V Optional with Input Transformer)									
Nominal Voltage Range			-10%, +15%						-10%, +10%			
Input Frequency Range			From 45 to 65Hz default									
Power Factor at Nominal Voltage (480V)			> 0.99									
Voltage Range			-10%, +15% -20%, +15% -30%, +15% -40%, +15%						-10%, +10% -20%, +10% -30%, +10% -40%, +10%			
• Load 100%												
• Load 85%												
• Load 75%												
• Load 65%												
Current Harmonic Distortion (THDi) (with Main Distortion <2%)			≤ 3% ≤ 5% ≤ 8% ≤ 8%						≤ 3% ≤ 3% ≤ 5% ≤ 8%			
• Load 100%												
• Load 75%												
• Load 50%												
• Load 25%												
Progressive Rectifier (Walk-in)			0 to 30 Seconds (Configurable)									
Delay of Progressive Start of Rectifier (Power Walk-in Delay Timer)			0 to 120 Seconds (Configurable)									
Output												
Nominal Voltage			480VAC 3 Phase, 3 or 4-wire + Grd. (Up to 600V Optional with Output Transformer)									
Static Voltage Regulation			± 1%									
Crest Factor			3:1									
Voltage Distortion with Linear Load			1% (Typical), 2% (max)									
Voltage Distortion with Non-Linear Load			< 3%									
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 200% for 7 Seconds									
System												
AC/AC Efficiency at Full Load			93%									
Full Load Heat Rejection BTU/hr			13,900	18,500	21,400	28,900	34,200	42,700	49,100	77,100	102,800	115,600
Maximum Current Dispersion			300mA Maximum									
Mechanical												
Dimensions			(kVA/kW)									
			65 / 58.5	80 / 72	100 / 90	125 / 112.5	160 / 144	200/180	250/225	300/300	400/400	500/450
Height x Width x Depth - Inches (mm)												
-00			75.02 x 31.43 x 33.47 (1905.5 x 798.2 x 850.0)			75.02 x 39.37 x 33.47 (1905.5 x 1000.0 x 850.0)		74.80 x 59.06 x 39.37 (1900.0 x 1500.0 x 1000.0)				
-T			N/A			75.02 x 55.12 x 33.47 (1905.5 x 1400.0 x 850.0)						
-CEC			75.02 x 47.17 x 33.47 (1905.5 x 1198.2 x 850.0)					74.80 x 74.80 x 39.37 (1900.0 x 1900.0 x 1000.0)				
-T-CEC			N/A			N/A						
Weight - lbs. / kg												
-00			1,499 / 680		1,742 / 790		2,447 / 1110		4,190 / 1,900	4,741 / 2,150		
-T			N/A				2,799 / 1,270		4,200 / 1,905	4,751 / 2,155		
-CEC			1,749 / 793		1,992 / 904		2,789 / 1,265		4,410 / 2,000	4,961 / 2,250		
-T-CEC			N/A				N/A		4,420 / 2,005	4,971 / 2,255		
Freestanding NEMA 1 Enclosure, Powder Coat Painted Black Color with Textured Finish, Bottom Access for Conduit Entries												
Environmental												
Ambient Temperature			0° C to 40° C									
Storage Temperature			-20° C to 70° C									
Relative Humidity			0 - 95% Non-Condensing									
Altitude			3,281 feet without derating									
Audible Noise			65 dBA @ 1 meter			68 dBA @ 1 meter			72 dBA @ 1 meter			



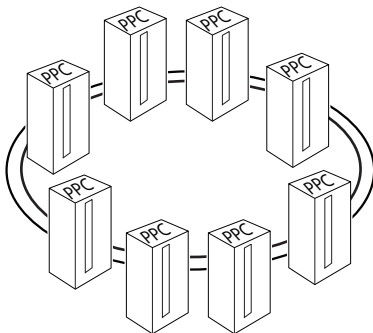
- A Control Panel with Graphic Display
- B Door Handle
- C Ventilation Grills
- D Communication Area
- E Front Cover Panel with Ventilation Grills
- F Switch Cover Panel
- G Door

- 1 Input Isolating Switch
- 2 Output Isolating Switch
- 3 Maintenance Isolating Switch
- 4 Bypass Isolating Switch

FirstLine P 65-500kVA Part Numbers

Model	kVA / kW
1 FLU-065-00	65kVA/58.5kW
1 FLU-080-00	80kVA/72kW
1 FLU-100-00	100kVA/90kW
1 FLU-125-00	125kVA/112.5kW
1 FLU-160-00	160kVA/144kW
1 FLU-200-00	200kVA/180kW
1 FLU-250-00	250kVA/225kW
FLU-300-00	300kVA/300kW
FLU-400-00	400kVA/400kW
FLU-500-00	500kVA/450kW

¹ For OSHPD, add "-S" to model number. Top entry available.



FirstLine® P/PPC Up to Eight Units in Parallel

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 Part 15, Class B
- National Electrical Code
- IEEE 587 ANSI C 62.41-1980
- ISO 9001
- IBC (International Building Code) Ratings A-F, Site Specific



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



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