

STACO ENERGY[®] PRODUCTS CO.

FIRSTLINE[®] P/PPC 65, 80, 100, 125, 160, 200, 250 kVA



Full Two Year
Warranty

Three-Phase Precision Power Conditioner

Up to 98% Efficient

- Lower energy costs and carbon footprint

Compact & Reliable

- Requires either front, top or bottom access, so it can be placed against a wall to minimize footprint
- Cooler operation extends internal component life

AC Input Performance

- High input power factor of 0.99
- Low input current distortion of $\leq 3\%$
- Power walk-in function that ensures progressive rectifier start-up

IGBT and Digital Signal Processor (DSP)

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

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

Upgrades to a UPS

- When your application changes, simply add batteries with no major re-wire required

Frequency Conversion

- All units can be set as a 50/60Hz Frequency Converter.

Nationwide Service Program

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

Your Tailored Power Solutions Provider™

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 PPC on the local supply and simplifies installation where there is limited power capacity in the form of available electrical supply rating or generator size. 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



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 up to 98%
- Reduced weight

The entire FirstLine® P/PPC range is suitable for a wide range of applications thanks to the flexibility of configurations, accessories, options, and choice of performance levels. The PPC 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).

Front Panel Display



STACO FirstLine P/PPC Technical Specifications

PPC Rating kVA/kW	65/59	80/72	100/90	125/112	160/144	200/180	250/225
INPUT							
Nominal voltage	480Vac 3 phase, 3 or 4-Wire + Grd. (208V Optional with Input Transformer)						
Nominal voltage range	-10%, +15%						
Input frequency range	From 45 to 65Hz						
Input Current (A)	76	94	118	147	188	235	294
Maximum current absorbed at full load	89	109	136	160	212	265	331
Power factor at nominal voltage (480 V)	>0.99						
Current Harmonic distortion (THDi) (with mains distortion <2%)							
• load 100%	≤ 3%						
• load 75%	≤ 5%						
• load 25-50%	≤ 8%						
Progressive rectifier (Walk-in)	from 0 to 30 seconds (configurable)						
Delay of Progressive start of rectifier (Power Walk-in delay timer)	from 0 to 120 seconds (configurable)						
OUTPUT							
Nominal voltage	480Vac 3 phase, 3 or 4-Wire + Grd. (208V Optional with Input 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%						
Frequency stability with synchronized inverter to the by-pass network.	± 2% (± 1% to ± 6% from control panel)						
Frequency stability with not synchronized inverter to the by-pass line	± 0.05%						
Speed of frequency variation	1Hz/sec						
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						
• Three phase							
• Single phase							
SYSTEM							
Overall efficiency	93 %						
Input Current (A)	76	94	118	147	188	235	294
Full Load Heat Rejection BTU/hr	15,033	18,500	23,120	28,900	37,009	46,262	57,827
MECHANICAL							
Dimensions	PPC (kVA)						
	65	80	100	125	160	200	250
Mechanical with internal bypass							
Height x Width x Depth – inches (mm)	75 (1900) x 31.5 (800) x 33.5 (850)				75 (1900) x 55 (1397) x 33.5 (822)		
Weight – lbs. / Kg	1,213 / 550	1,213 / 550	1,433 / 650	1,544 / 700	2,326 / 1,055	2,546 / 1,154	2,767 / 1,255
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	-25° C to 70° C						
Relative humidity	20 – 90% non-condensing						
Altitude	3,281 feet without derating						
Audible noise	65 dBA @ 1 meter				68 dBA @ 1 meter		
STANDARD COMMUNICATIONS							
SNMP/WEB	SNMP Card & ViewPower Pro Shutdown and Monitoring Software for Windows/Novell						
Modbus	Monitoring & Control via RS-485/RTU Protocol/Read Holding and Write Registers						
STANDARDS							
UL listed to 1778, CUL to CSA C22.2, CE, NEMA PE-1, ASME, ASA-C-39.1-1984, FCC Part 15 Subpart J Class B, NEC, OSHA, IEEE587, ANSI C 62.41-1980, ISO9001, IBC Rating A-F site specific							

FirstLine P/PPC 65–250kVA Part Numbers

Model	kVA / kW
FLU-065-00-PPC	65VA/58.5kW
FLU-080-00-PPC	80kVA/72kW
FLU-100-00-PPC	100kVA/90kW
FLU-125-00-PPC	125kVA/112.5kW
FLU-160-T-PPC	160kVA/144kW
FLU-200-T-PPC	200kVA/180kW
FLU-250-T-PPC	250kVA/225kW

Two Year Warranty

Electronics:

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

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

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.

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**



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Your Tailored Power Solutions Provider™

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