

STACO ENERGY[®] PRODUCTS CO.

FIRSTLINE[®] P_{LT} / PPC



Full
Two Year
Warranty

10 to 60 kVA Three-Phase Precision Power Conditioner

Up to 94% Efficient

- Lower energy costs and carbon footprint

Compact & Reliable

- 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

IGBT and Digital Signal Processor (DSP)

- Reduces the impact of the PPC 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

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

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® PLT/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% /-20% with instantaneous response to voltage fluctuations while maintaining the output within +/- 2%.

AC Input Performance

FirstLine® PLT/PPC is a further evolution of the FirstLine® series with the added advantages offered by an IGBT-based rectifier/inverter assembly. FirstLine® PLT/PPC is classed as a “Zero Impact Source” and provides:

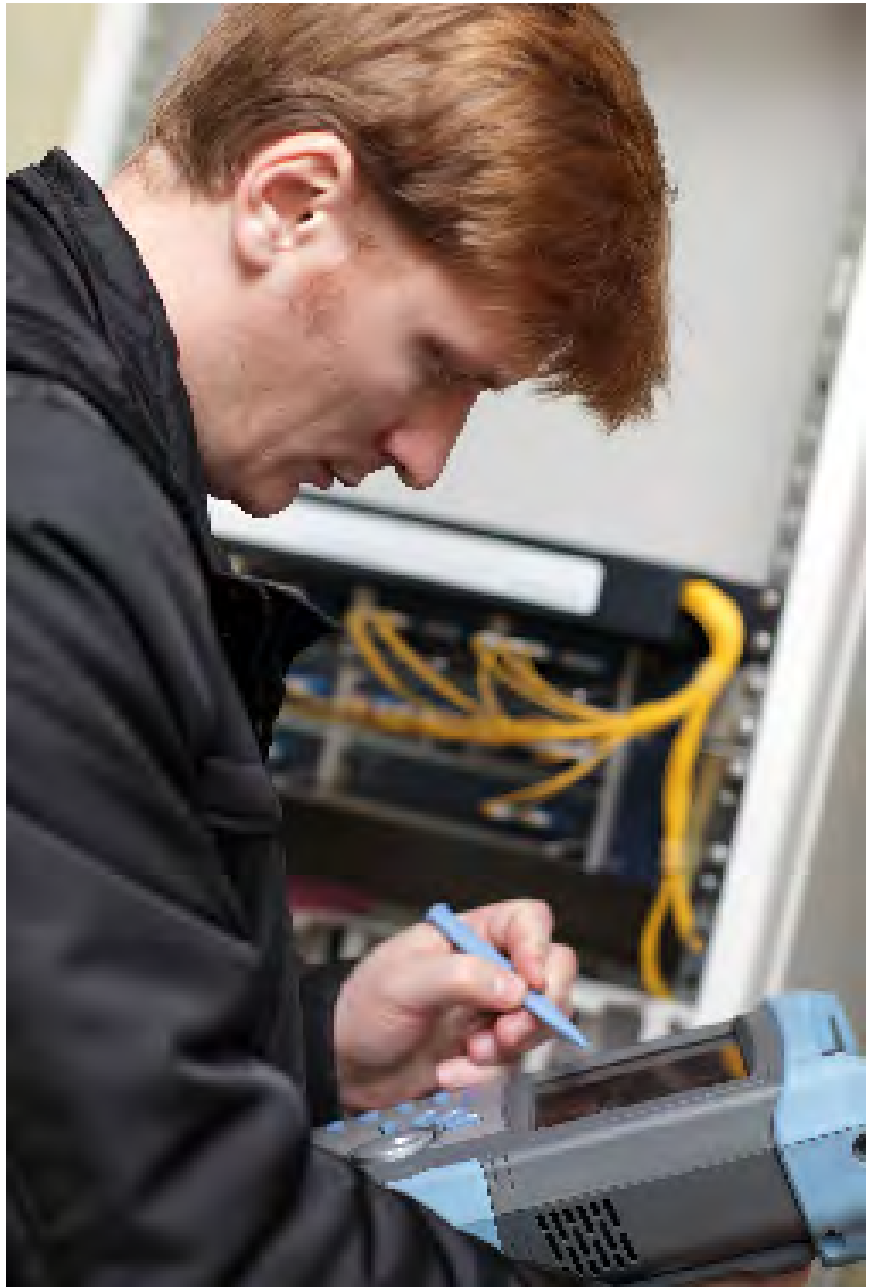
- Low input current distortion— <1 % (THDi) @ full load
- High input power factor 0.99
- Power walk-in function that ensures progressive rectifier start up

FirstLine® PLT/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.

Main Characteristics

- Efficiency up to 94%
- Reduced weight

The entire FirstLine® PLT/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 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).



Mimic Panel

1 (LCD) Graphic LCD

ENT Key <ENTB>

ESC Key <ESC>

2

(↑) Key move up

(↓) Key move down

(→) Key move to right

(←) Key move to left

3

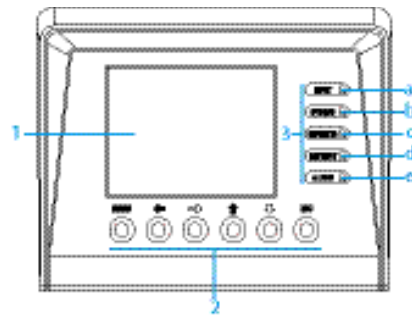
(a) Rectifier Input Voltage OK led (green)

(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 FirstLine PLT/PPC Technical Specifications

PPC Rating kVA/kW	10/9	15/13.5	20/18	30/27	40/36	50/45	60/54
Input							
Voltage	208Y/120 VAC, Three Phase, 4 wire plus ground, 208VAC, 3 wire (Delta) or 220Y/127VAC configurable from the front panel 480Y/277 VAC 4 wire plus ground or 480 VAC, 3 wire (Delta)						
Range	+15% / -20%						
Frequency	50/60Hz +/- 5.0 Hz						
Power Factor	0.99 at 100% load, 0.98 minimum at 50% load						
Current Distortion (THDi)	<1% @ 100% Load, <2% @ 50% Load, <5% @ 10% Load						
Input Current A (208Y/208Y)	Nominal: 28 Maximum: 33	Nominal: 42 Maximum: 49	Nominal: 55 Maximum: 65	Nominal: 83 Maximum: 97	Nominal: 111 Maximum: 130	Nominal: 143 Maximum: 172	Nominal: 172 Maximum: 206
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) +/- 15% at the first cycle for a 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)	± 10 Hz per second						
Voltage Distortion THD	Less than 1% (Linear load), less than 2% with crest factor 2.5 to 1						
Inverter Overload	125% for 10 min, 150% for 60 sec						
Bypass Overload	400% for 10 seconds, 1000% for half line cycle						
Overall Efficiency	Up to 94%						
Output Current (A)	28	42	55	83	111	139	167
Heat Rejection (BTU/Hr) @208VAC	3,412	5,118	6,824	10,237	13,649	21,000	25,000
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	61dBA			<75 dBA			
Dimensions and Weights							
H" x W" x D" / [mm]	72.41 x 23.13 x 34.48 / [1839.3] x [587.4] x [875.7]				76.75 x 34.13 x 34.48 / [1949.5] x [866.9] x [875.7]		
lbs. / [kg]	Minimum 659 / [299] Maximum 1179 / [807]			Minimum 659 / [299] Maximum 1889 / [857]		Minimum 850 / [386] Maximum 1860 / [844]	
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							
Agency	UL listed to 1778, CUL to CSA C22.2, NEMA PE-1, ASME, ASA-C-39.1-1984, FCC Part 15 Subpart J Class B, NEC, OSHA, IEEE587, ANSI C 62.41-1980, ISO9000						

FirstLine PLT/PPC Models

Model	kVA	kW
FLP-010-0-PPC	10kVA	9kW
FLP-015-0-PPC	15kVA	13.5kW
FLP-020-0-PPC	20kVA	18kW
FLP-030-0-PPC	30kVA	27kW
FLP-040-0-PPC	40kVA	36kW
FLP-050-0-PPC	50kVA	45kW
FLP-060-0-PPC	60kVA	54kW

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® products. 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**



**STACO
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Your Tailored Power Solutions Provider™

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