

Technical Specifications

OUTPUT	SPECIFICATION	
Power		
Single Phase Mode	See Model table page 9	
Three, Split Phase Mode		
Voltage		
Modes	AC, DC, AC+DC, DC+AC	
	AC Mode	DC Mode
Low Voltage Range	0-180 V _{LN} / 0-312V _{LL}	0 - 255 V _{dc}
High Voltage Range	0-360 V _{LN} / 0-624 V _{LL}	0 - 510 V _{dc}
Programming Resolution	0.01 V	
Accuracy	±0.1% (CSC mode)	
Waveforms (200 Max.)	Sine, Square, Triangle, Clipped (THD), Arbitrary	
DC Offset	< 20 mV	
Harmonic Distortion (V _{thd}) <i>(full, resistive load, up to 360Vrms L-N)</i>	< 100 Hz: < 0.2% 100~1000 Hz: < 0.2% + 0.125%/100Hz	
Output Noise - Low V Range	< 250 mV RMS	
High V Range	< 500 mV RMS	
Load Regulation	± 0.02% (CSC Mode)	
Line Regulation	< 0.1% for 10% Line Change	
Voltage Sense	External Sense, max. voltage drop 5% F.S.	
Voltage Slew Rate	Programmable, 1.0V/us max.	
Isolation		
Input to Output	3000 Vac	
Input to Chassis	3000 Vac	
Output to Chassis	1400 Vpk	
Frequency		
Range	DC, 15.00 – 1000.0 Hz	
Programming Resolution	0.01 Hz	
Accuracy	± 0.005% / 50 ppm	
Current <i>(see charts page 4, table page 9)</i>		
Ranges	See Model table page 9	
Max. AC Peak Current	360 A / 180 A each phase	
Programming Resolution	0.01 Arms	
Accuracy	0.5% F.S.	
Current Protection (CP) Modes	Constant Current (CC) or Output Trip (CV)	
Current Overload Mode	Allows 110% of max. RMS current for up to 1 min	
Phase Angle <i>(In 3 and 2 Phase Mode)</i>		
Programmable Phase (B, C)	0 - 359.9°	
Resolution	0.1°	
Accuracy	±0.35° / ±0.1° Phase Reg. Mode	
Programmable Impedance - 3 Phase Mode, Single Cabinet		
Resistance (R) RT / RMS Modes	±1.000 Ohm / ±10.0 Ohm	
Inductance (L) RT / RMS Modes	0 to 50 µH / 0 to 2000 µH	

PROTECTION	SPECIFICATION
Types	AC or DC Current, True Power, Apparent Power, Over Voltage, Over Temperature

TRANSIENTS	Specification
Programming	
No. of Entries	200 Steps / 400 segments
Modes	LIST, PULSE, STEP
Parameters	Frequency, Volt AC, Volt DC, Waveform, Ramp Time, Dwell Time
Dwell Time Range	0.1 - 10000000.0 msec
Time Resolution	0.1 msec
Edit Modes	Add at end, Insert before, Delete
Execution	
Run Control	Run from step # to step # Run, Step, Restart, Stop
Execution Modes	Normal, Debug
Program Storage	
Non-volatile	100 Programs + Transients

MEASUREMENTS	SPECIFICATION
AC Voltage (Vrms)	
Single or Parallel Cab: Range	0 – 360 VLN / 0-625 VLL
Resolution	0.01 V
Accuracy	± 0.1% F.S.
Frequency (Hz)	
Fundamental Range	15 - 1000 Hz
Resolution	0.01 Hz
Accuracy	± 0.1% Rdg
AC Current (Arms)	
Range	0 - 150 Arms
Resolution	0.01 Arms
Accuracy ¹	± (0.5% + f (kHz) * 0.5%) F.S.
Current Crest Factor	
Range	1.00 - 5.00
Resolution	0.01
Accuracy ¹	± 2.0% F.S.
AC or DC Power (W)	
Range	0 - 50 kW
Resolution	0.01 kW
Accuracy ¹	± 0.75 % F.S.
Apparent Power (VA)	
Range	0 - 50 kVA
Resolution	0.01 kVA
Accuracy ¹	± 0.75 % F.S.
Power Factor	
Range ¹	0.00 - 1.00
Resolution	0.01
DC Voltage (Vdc)	
Range ³	0 – 520 Vdc
Resolution	0.01 V
Accuracy	± 0.1% F.S.
DC Current (Adc)	
Range	0 - 95 Adc
Resolution	0.01 Adc
Accuracy ³	± 0.5% F.S.

Footnotes:

1: For RMS Currents above 2.0 A

2: Range = 0 - 1040 Vdc in Split phase mode

3: For DC current levels above 1.0 A



Technical Specifications (continued)

WAVEFORM CAPTURE	SPECIFICATION
Parameters	VLN-A, VLN-B, VLN-C, VLL AB, VLL AC, VLL BC, IA, IB, IC
Max. Sample Rate	500 ksps
Samples/cycle	1024 (512 in UPC Compatibility mode)
Record Length	1 Period of fundamental Frequency
Bandwidth	100 kHz @ 500 ksps

HARMONICS MEAS.	SPECIFICATION
Parameters	VLN-A, VLN-B, VLN-C, VLL AB, VLL AC, VLL BC, IA, IB, IC
Harmonics Range	H1 ~ H50
Accuracy - Amplitude	± 1.0 % of RMS Reading
Phase Angle Range	0 ~ 359.9
Accuracy - Phase Angle	< 8 µsec
Bandwidth	100 kHz @ 500 ksps
Display Modes	Table format, Graph Format

AC INPUT (Per Cabinet)	SPECIFICATION	
Mains Voltage Form	4 Wire, L1, L2, L3 and PE	
Frequency	47 - 63 Hz	
400V Input Setting	3300AZX	3500AZX
Input Voltage Range	400Vac ± 10%	
Nominal Phase Current ¹	56 Arms	92 Arms
Max Current @ Low Line ¹	62 Arms	102 Arms
Peak Inrush Current ²	< 78 Apk	< 130 Apk
Input Power Factor	> 0.9	
Efficiency	> 87%	
480V Input Setting	3300AZX	3500AZX
Input Voltage Range	480Vac ± 10%	
Nominal Phase Current ³	46 Arms	76 Arms
Max Current @ Low Line ³	52 Arms	85 Arms
Peak Inrush Current ²	< 65 Apk	< 110 Apk
Input Power Factor	> 0.9	
Efficiency	> 87%	

ENVIRONMENTAL	SPECIFICATION
Cooling	Variable speed fan cooled, front and bottom intake, top exhaust
Temperature	
Operating	0 to 40 °C / 32 to 104 °F
Storage	-20 to 70 °C / -4 to 158 °F
Humidity	< 80%, non-condensing
Altitude	2000 m / 6500 feet

INTERFACES	DESCRIPTION
Remote Control	
USB	Device Type B
RS232	1200 - 921600 baud
 LAN	LXI compliant, Ethernet, RJ45, TCP/IP Protocol, Telnet Protocol Command Line
GPIB	IEEE488.1, IEEE488.2 (2003 incl., NI HS488) IEC 60488-1, IEC 60488-2 (2004) Functions: SH1, AH1, T6, L3, SR1, RL1, DC1, DT1
 WiFi	Optional USB WiFi adaptor available

Footnotes:

- 1: For nominal 3ø, 400V input voltage. Low line voltage is 360V.
- 2: I_{peak} Inrush = @ nominal input voltage
- 3: For nominal 480V input voltage. Low line voltage is 432V.

SYSTEM FEATURES	DESCRIPTION
DISPLAY	
Type	Full Color, Touch LCD Display
Size	4.3" Diagonal
Resolution	480 x 272 pixels
USB Ports	2 Front Panel, 1 Rear Panel, Type A
SD Card	32 GB max. Capacity
Video Output	Monitor Out, Front Panel

ANALOG I/O	SPECIFICATION
Analog Inputs (4)	
Modes	Amplifier, Amplitude Modulation, Int + Ext Input Summing
AI1, AI2, AI3	Programmable setting phs A, B, C
AI4	Frequency
Range	0 - 10 Vdc for 0 - F.S.
Accuracy	± 0.1% F.S.
Impedance	10 kOhm
Analog Outputs (4)	
AO1, AO2, AO3	Voltage Meas. phs A, B, C
AO4	Power Measurement Total
Range	0 - 10Vdc for 0 - F.S.
Accuracy	± 0.1% F.S. into > 5 kOhm load
Impedance	5 kOhm
Connector Type	DB25, Rear Panel

DIGITAL I/O	SPECIFICATION
Digital Inputs (6)	
Fixed (3)	Remote Inhibit, Transient Trigger, Phase Sync
User Programmable (3)	DI1, DI2, DI3
Input Levels	Low < 0.4V, High > 2.0V
Digital Outputs (6)	
Open Collector, Fixed (2)	Relay Control FORM, Relay Control T Option
TTL, Fixed (2)	Output Relay/Transient /Function Strobe Phase Sync
User Programmable (2)	DO1, DO2
Output Levels	Low < 0.4V, High > 4.6V
Connector Type	DB25, Rear Panel

MECHANICAL	SPECIFICATION
Dimensions	
H x W x D	59.8" x 24.0" x 31.9" 1520 x 610 x 810 mm
Shipping H x W x D	71" x 32" x 44" 1800 x 810 x 1120 mm
Weight	
Net	517 Kg / 1140 lbs
Shipping	592 Kg / 1305 lbs

REGULATORY	SPECIFICATION
Safety	IEC 61010-1:2010 (Edition 3)
EMC	
Emissions Standard	EN 55011:2009+A1:2010
Immunity Standard	EN 61000-4-2, -3, -4, -5, -6, -8, -11
Product Category	EN 61326-1:2013 (Measurement, Laboratory and Control Equipment)
Approvals	CE Mark
RoHS (DIRECTIVE 2011/65/EU)	
Product Category	EN50581:2012

Ordering Information

Standard Cabinet Systems

Single Cabinet Systems

- 3300AZX
- 3500AZX

Parallel Cabinet Systems

- 31000AZX 32000AZX
- 31500AZX

Selectable Input Voltages (V_{IN})

- 400Vac, $3\phi \pm 10\%$, 47-63Hz
- 480Vac, $3\phi \pm 10\%$, 47-63Hz

Export Version

- E Append "E" postfix

Options

- H Real Time I/O Append "H"
- S Isolated Sense Append "S" postfix

Order Example

- 3500AZX
- Cabinet, 50 kVA, 3-Phase, AC & DC Regenerative Power Source with USB, RS232, LAN, GPIB & AUX I/O
 - 400Vac or 480Vac 3 Phase Input Voltage

Typical Delivery Items

- AC & DC Power Source
- English Manuals in PDF Format
- Certificate of Compliance

Software Options

Windows 10 Software - 64 Bit

- PPSC Studio Control Software
- PPSC Test Manager

Test Sequences - Avionics

- ABD0100.1.8 - Airbus A380, AC & DC Power Groups
- ABD0100.1.8.1 - Airbus A350, AC & DC Power Groups
- AMD24C - Airbus A400M, AC & DC Power Groups
- Boeing 787B3-0147 - B787, AC & DC Power Groups
- MIL-STD704 - US DoD, AC & DC Power Groups
- RTCA-DO160 Section 16, AC & DC Power Groups

Test Sequences - Other

- IEC Test Suite - Includes IEC 61000-4-11, IEC 61000-4-13, IEC 61000-4-14, IEC 61000-4-17, IEC 61000-4-27, IEC 61000-4-28, IEC 61000-4-29 and IEC 61000-4-34
- MIL-STD 1399-300B - US DoD, Shipboard Power, AC Power Groups

Service and Support

Pacific Power Source's customer support is second to none. Our Customer Support Program provides the training, repair, calibration, and technical support services that our customers value. In addition to receiving the right test equipment, our customers can also count on excellent support before, during and after the sale. With company owned support and service centers around the world, support is never far away. Complete calibration and repair services are offered at our US, European and Chinese manufacturing facilities (see contact info below). Calibrations are to original factory specifications and are traceable to NIST (National Institute of Standards and Technology).

NORTH AMERICA

Pacific Power Source, Inc.
Irvine, USA
Phone: +1(949) 251-1800
Fax: +1 (949) 756-0756
Sales: sales@pacificpower.com
Service: support@pacificpower.com

EUROPE

Caltest Instruments GmbH.
Kappelrodeck, Germany
Phone: +49 7842 99722-00
Fax: +49 7842 99722-29
Sales: sales@pacificpower.com
Service: support@pacificpower.com

CHINA

PPST Shanghai Co. Ltd.
Shanghai, China
Phone: +86-21-6763-9223
Fax: +86-21-5763-8240
Sales: sales@pacificpower.com
Service: support@pacificpower.com

Proudly Represented by:



17692 Fitch, Irvine, CA 92614 USA
Phone: +1 949.251.1800
Fax: +1 949.756.0756
Toll Free: 800.854.2433
E-mail: sales@pacificpower.com
www.pacificpower.com

© 2020 Pacific Power Source, Inc. All information subject to change without notice. AZX-CAT 0820