



LSX Series

High Performance Switch Mode AC Power Sources
Single, Split and Three Phase Mode
Pulse Width Modulation Amplifier Technology

Extensive Features:

- PWM Switch Mode Power Conversion Technology
- Three Phase, Split Phase and Single Phase Output Modes
- Frequency Range 15 - 1200Hz
- Phase Angle Programming on 3 ϕ Models
- Excellent Output Voltage and Load Regulation
- Metering of Volts, RMS Current, Peak Current, Apparent Power & True Power on all Phases
- Harmonic Measurements
- Scope Function to capture Voltage & Current waveforms
- Sine, Square, Triangle, Clipped Sine and Arbitrary Waveforms Selections
- Output LIST, PULSE and STEP Mode Transient Programming
- Standard USB, LAN, RS232 & GPIB Interfaces
- Compatible with Legacy UPC1/3 Controllers
- Available reduced feature set economy "M" version
- Built-in Web Servers for browser control
- Available instruments drivers for LabView™ and LabWindows™
- PPSC Manager Windows GUI Software

1500 VA to 6000 VA

**Single, Split & Three Phase
Output Voltages up to 600VLL
15 - 1200 Hz**



"Innovating Solutions for Control and Monitoring of Power"



THE POWER OF EXPERTISE



FREQUENCY CONVERSION

AEROSPACE

R & D

MILITARY

MANUFACTURING

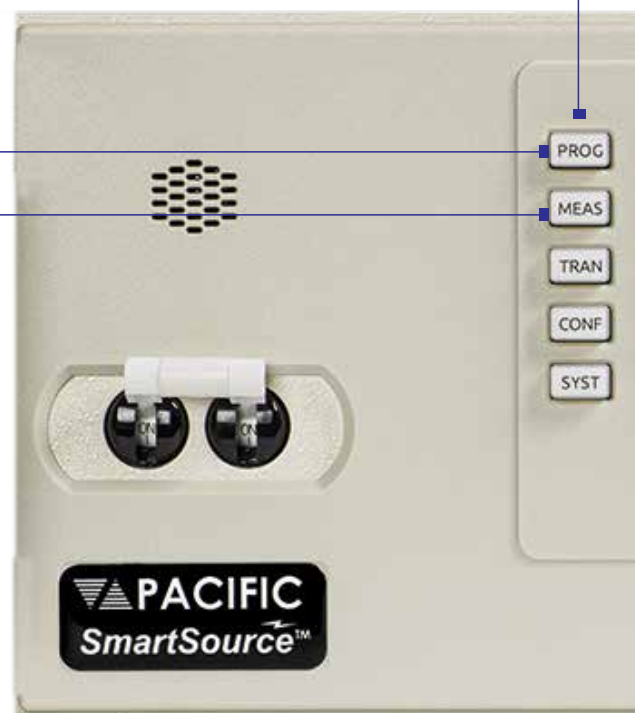
CUSTOM

Total Control, Metering and Analysis of AC Power. Simple.

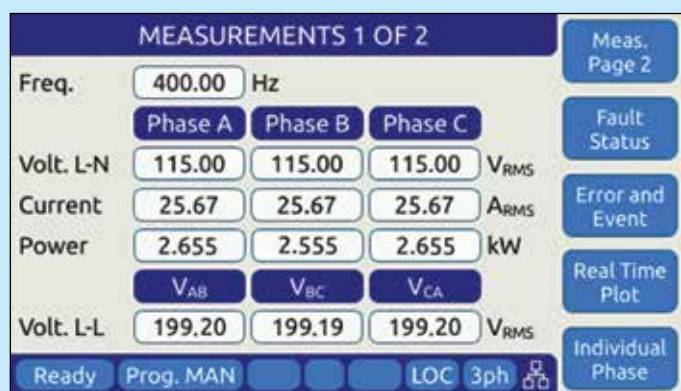
Programming



Menu Keys



Metering



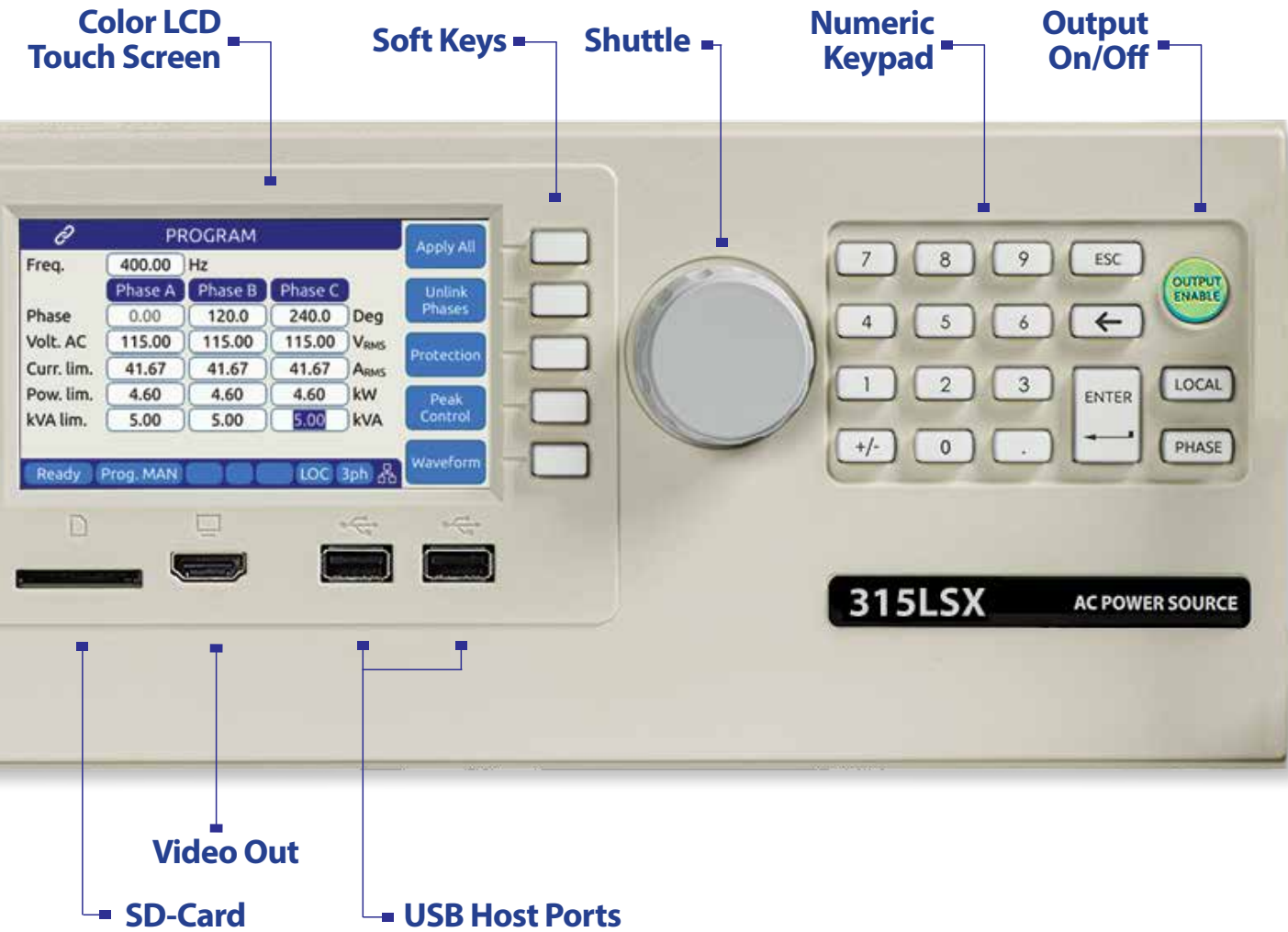
Automated Test Equipment Power for Defense Applications

Growing demand for power to support increasingly complex avionics, radar and weapons systems means more power is needed in less available space. The new LSX Series addresses this need by offering unmatched AC power quality output.

With extensive control over voltage, current, frequency, phase angles and transients, the LSX series is capable of handling complex Test Program Sets (TPS's) with minimal programming effort. Available in a range of power levels and output phase configuration to meet any AC test requirement up to 6000 VA.



Simple, Intuitive Operation



Commercial Avionics Power Test

The low noise and low distortion analog power conversion technology used in the LSX Series Power Source results in unmatched voltage quality and high peak current capability. A frequency range of 15Hz to 1200Hz supports both 400Hz fixed frequency as well as 360Hz to 800Hz wild frequency development and test with exceptional harmonics support.

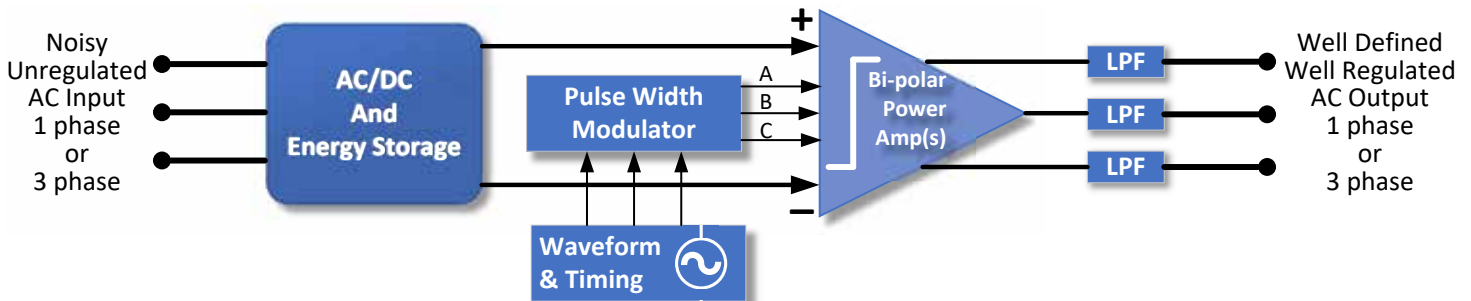
For compliance testing to electrical avionics test standards like RTCA/DO160 Section 16 and Mil-Std 704, Windows 10 test software test sequences are available as an option.



Selecting the best Topology for Your Application

PWM AC Power Sources offer very good density, high efficiency, and perform well into low power factor loads. They use a combination of both linear and non-linear methods to achieve high efficiency conversion in lighter and smaller packages.

A trade-off is the method's lesser ability to provide high crest factor current and very low output distortion. The graphic below demonstrates the characteristics of PWM technology.



BENEFITS

- Moderately low output distortion
- Full current into very low power factor reactive loads
- Lower weight due to higher amplification efficiencies
- Smaller size compared to Linear AC Sources

FEATURE/CAPABILITY SWITCH MODE TECH

| FEATURE/CAPABILITY | SWITCH MODE TECH |
|------------------------------|------------------|
| Highest amplifier efficiency | ✓ |
| Lowest operating temperature | ✓ |
| Lowest weight | ✓ |
| Smallest size | ✓ |
| Lowest cost | ✓ |
| Low-power factor handling | ✓ |

Output Phase Modes

Three phase LSX Models can be configured to operate in one of three available phase modes or FORMs:

Single Phase

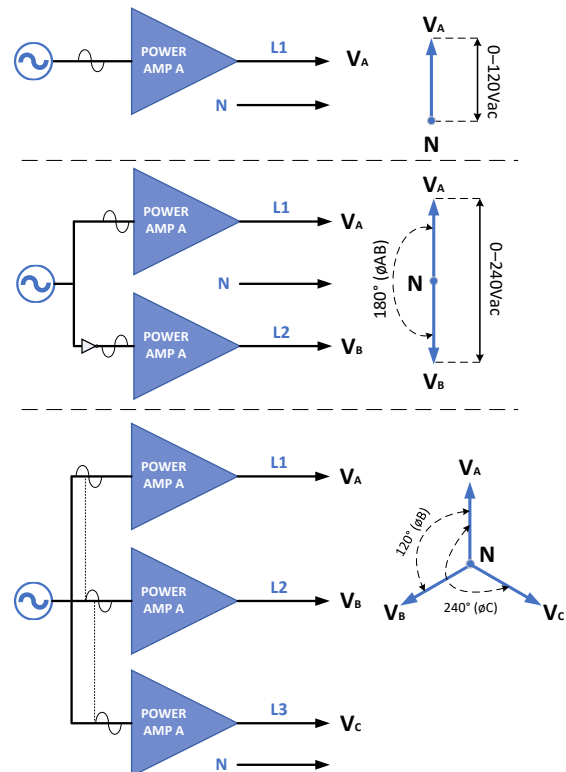
Enables Single phase output with the load connected between the 1 Phase and Neutral output terminals. Voltages are programmed phase to neutral.

Split/Single Phase

Enables high range Split/Single phase output. Load is connected either between the Phase A and Phase B output terminals (full voltage) or Phase and Neutral (half voltage). Voltages are programmed phase to phase.

Three Phase

Enables Three phase output with the load connect between the A, B, C, and Neutral terminals. Loads may be connected either line to line or line to neutral. Voltages are programmed phase to neutral.

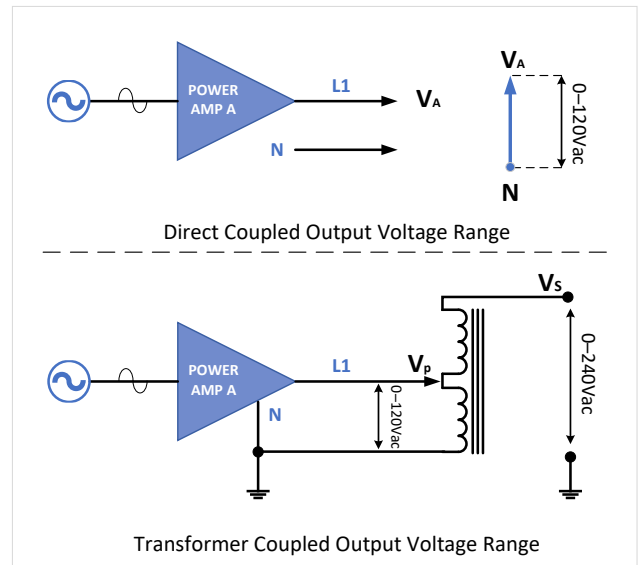


Wide Selection of Voltage Ranges

All LSX Series models support direct coupled output voltages up to 135V_{LN} or 270V_{LL} on single phase models or 135V_{LN}/234V_{LL} on three phase models.

For higher voltage output applications on three phase models, the transformer option (T-Option) offers three transformer coupled output ranges at ratios of 1.5:1, 2.0:1 or 2.5:1 for a maximum output voltage of 600V_{LL} in split phase or 585V_{LL} in three phase mode.

Switching between direct coupled output voltage range and transformer coupled voltage range is done automatically so there is no need to disconnect and re-connect your EUT.



Powerful yet Easy to Use

Although LSX Series sources offer a wide range of operating modes and features, they are easy to operate through a large full color LCD display and soft key driven menus.

Top level menus are always available directly by pressing any of the five menu keys on the left of the display. Entering setup data is accomplished using the numeric keypad or the shuttle. Operating status is shown on screen using various colors to distinguish between setting, measurements and operator warnings, or error messages.

The built-in web server provides access to a large computer touch monitor based user interface with complete control over all LSX Functions and features without the need for any special software. The web browser based program and measurement screen is shown to the right.



Touch Screen and WiFi Connection

The standard external HDMI™ Monitor interface supports the use of an external flat panel touch monitor for display and control of the power source. This allows measurements to be monitored from across the lab or factory floor as needed.

Alternatively, a tablet or smart phone can be used to operate the power source using the built-in LXI browser interface. Of course, extensive safety protocols are in place to prevent unauthorized access via WiFi or LAN connections.



The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Transient Programming for AC Power Test Applications

Voltage, Waveform and Frequency output transients are easily created from the front panel using an intuitive spreadsheet style data entry method. Data may be entered for a specific phase or for all three phases at the same time.

The LSX Series supports LIST, PULSE and STEP Mode Transient Types. The user can select the most appropriate type from the front panel or the web server interface. The image below illustrates the three modes graphically. Transients can be stored in non-volatile memory and easily edited as needed on screen.

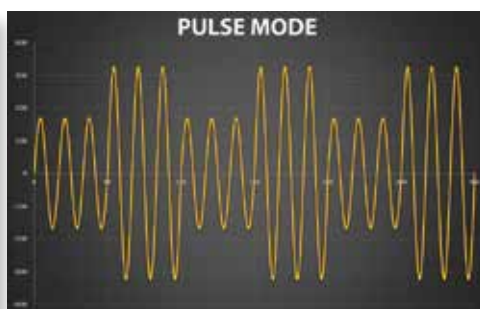
If preferred, transient programming and execution can be also be accomplished using the available Windows control software or web browser interface.

| TRANSIENT VIEW | | | | |
|----------------|--------|---------|---------|-------|
| # | Freq | Volt AC | Volt DC | Dwell |
| 1 | 400.00 | 115.00 | 0.00 | 100.0 |
| 2 | 400.00 | 100.00 | 0.00 | 10.0 |
| 3 | 400.00 | 115.00 | 0.00 | 100.0 |
| 4 | 400.00 | 100.00 | 0.00 | 10.0 |
| 5 | 400.00 | 115.00 | 0.00 | 100.0 |
| 6 | 400.00 | 100.00 | 0.00 | 10.0 |
| 7 | 400.00 | 115.00 | 0.00 | 100.0 |
| 8 | 400.00 | 100.00 | 0.00 | 10.0 |

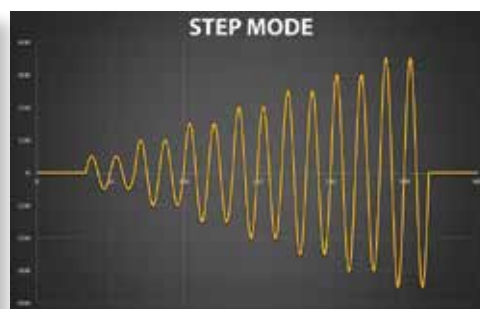
Transient Executing in View Mode



TRANSIENT LIST MODE



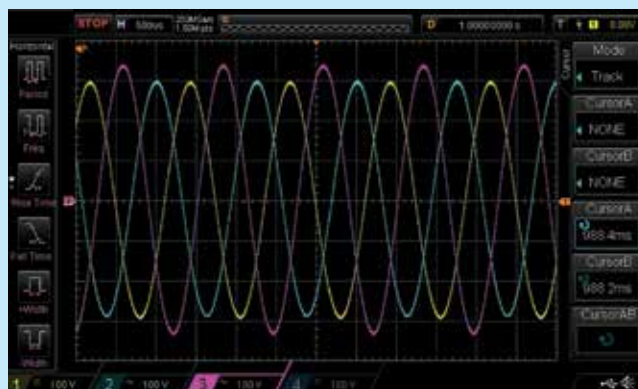
TRANSIENT PULSE MODE



TRANSIENT STEP MODE

The LSX Series' rich feature set supports a wide variety of AC power test applications. With full control over voltage, current, frequency, power, slew rates and phase angles, no test requirement is too challenging for the LSX to handle. This includes AC power compliance testing, transformer testing, appliance testing, DC charger testing, UPS testing and more.

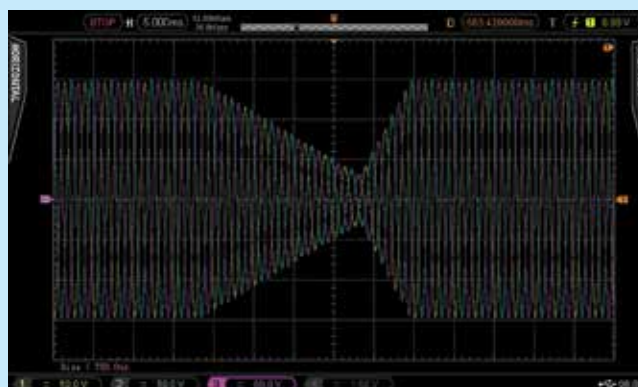
The scope images shown here capture several examples of AC power test waveforms generated by an LSX.



Three Phase Unbalance Voltage Test Captured



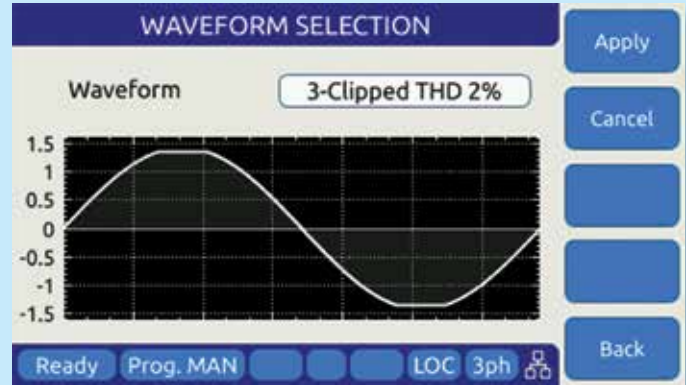
Three Phase Voltage Drop Test Captured



AC Transient Output Captured on Digital Scope

200 Selectable Arbitrary Waveforms

In addition to sine wave, the LSX Series offers multiple selectable AC waveforms such as clipped sine wave at various distortion levels, square, triangle and stepped squares. The operator can create arbitrary waveforms using Pacific Power's PPSC Studio Windows software or using a web browser and download these to the power source. A graphical representation (preview) of each waveform is shown on screen and a waveform name alias can be assigned to each so the operator can be sure the correct waveform is applied to the unit under test.

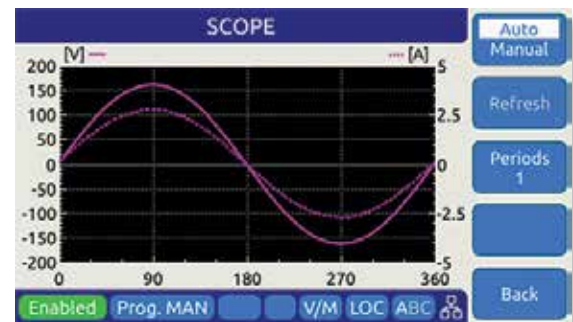


Clipped Sine Waveform Selection - Vthd = 2%

Capture Voltage & Current Waveforms

Built-in digital scope function captures voltage and current time domain signals, perfectly synchronized to the output frequency. Voltage and current displayed with accurate phase relationship. Display output waveforms on front panel or in Web browser.

The browser user interface supports more advanced digital scope functionality by utilizing a PC or tablet's larger screen area allowing multiple scope channels and periods of voltage, current and power waveforms to be captured and displayed.



Harmonics Measurements

Eliminate the need for an external power analyzer by measuring voltage and current harmonics. Harmonics information is displayed in either bar charts or detailed table format for easy viewing and analysis.

Data is displayed for individual phase or all three phase simultaneously.



Auxiliary I/O Functions

To support integrated test system design and interaction with the load or other equipment, the LSX Series offers a range of analog and digital I/O functions.

User Programmable I/O. Assign command macros or programming parameters to analog or digital I/O pins as needed. This provides a unique level of customization for putting together sophisticated test stations.



Single Phase Models

Direct Coupled Output Units (15 Hz - 1200 Hz)

| MODEL | Rated Power (VA) ¹ | Output Form ² | Output Voltage Max ³ (I-n/I) | Output Current ⁴ (A _{rms}) | Input Power ⁵ | Unit Height (in.-U) | Unit Weight (lbs/kg) |
|--------|-------------------------------|--------------------------|---|---|--------------------------|---------------------|----------------------|
| 115LSX | 1500 | 1 | 0-132 | 16 | 1Ø | 5.25-3U | 65/29.5 |
| 120LSX | 2000 | 1/2 | 0-150/300 | 20/14 | 1Ø | 5.25-3U | 75/34 |
| 140LSX | 4000 | 1/2 | 0-135/270 | 32/16 | 3Ø | 8.75-5U | 120/54.5 |
| 160LSX | 6000 | 1/2 | 0-132/264 | 48/16 | 3Ø | 8.75-5U | 145/66 |

Direct / Transformer Coupled Selectable Output Units (45 Hz - 1200 Hz)

| MODEL | Rated Power (VA) ¹ | Output Form ² | Output Voltage Max ³ (I-n/I) | | | | Output Current ⁴ (A _{rms}) | | | Input Power ⁵ | Unit Height (in.-U) Weight (lbs/kg) | Transformer Height (in.-U) Weight (lbs/kg) | |
|---------|-------------------------------|--------------------------|---|-------------|-------------|-------------|---|-------------|-------------|--------------------------|--|---|---------------------|
| | | | Direct | Transformer | | | Direct | Transformer | | | | | |
| | | | | Ratio 1.5:1 | Ratio 2.0:1 | Ratio 2.5:1 | | Ratio 1.5:1 | Ratio 2.0:1 | | | | Ratio 2.5:1 |
| 115LSXT | 1500 | 1 | 0-132 | 0-198 | 0-264 | 0-330 | 16 | 10.7 | 8 | 6.4 | 1Ø | 5.25-3U 80/36.4 | Integrated |
| 140LSXT | 4000 | 1/2 | 0-135/270 | 0-202/404 | 0-270/540 | 0-338/600 | 32/16 | 21.3/10.7 | 16/8 | 12.8/6.4 | 3Ø | 8.75-5U 120/54.5 | 5.25-3U 125/56.8 |
| 160LSXT | 6000 | 1/2 | 0-132/264 | 0-198/396 | 0-264/528 | 0-330/600 | 48/16 | 32/10.6 | 24/8 | 19.2/6.4 | 3Ø | 8.75-5U 145/66 | 5.25-3U 125/56.8 |

- Rated output power is based on a combination of output voltage, current and load power factor. Values stated represent the rated capabilities of a given model. Consult factory for assistance in determining specific unit capabilities as they might apply to your application.
- All single phase output units (Model 115 ASX excepted) are operable with dual voltage ranges as listed. Output voltage ranges and 1Ø/2Ø output form are selected by front panel or bus commands.
- Output voltage ranges listed are for standard units. VMAX is output voltage with nominal input and full rated load applied. Other voltage ranges are available with the output magnetics options below.
- Available current will vary with output voltage and power factor.
- Input power frequency is 47-63 Hz. Single phase input: 100, 110, 120, 208, 220, 230 and 240 VAC +10%. Three phase input: 208, 220, 240, 380, 400 and 416 VAC +10%.
- Single phase and 400 Hz input options may be available. Consult Factory.

LSXM Version Reduced Feature Set Summary

| FEATURES | LSX | LSXM |
|--|--------------|---------------------------------|
| Output Waveforms | See Page 10 | Sinewave only |
| Phase Angles phase B, C | Programmable | Fixed: 120°, 240° or 240°, 120° |
| Transient Programming | yes | no |
| Programmable V,F slew rate | yes | yes |
| Programmable Settings | yes | yes |
| Measurements (scalar) | yes | yes |
| Harmonic Measurements | yes | no |
| Waveform Capture | yes | no |
| Programmable output Impedance (Prog-Z) | yes | no |
| Digital control interfaces | yes | yes |
| Embedded Web Server | yes | yes |



115LSX Model - 1500VA - 3U (5.25")



120LSX Model - 2000VA - 3U (5.25")



140LSX Model - 4000VA - 5U (8.75")

Three Phase Models

Direct Coupled Output Units (15 Hz - 1200 Hz)

| MODEL | Rated Power (VA) ¹ | Output Form ² | Output Voltage Max ³ (l-n/l-l) | Output Current ⁴ (A _{rms}) | Input Power ⁵ | Unit Height (in.-U) | Unit Weight (lbs/kg) |
|--------|-------------------------------|--------------------------|---|---|--------------------------|---------------------|----------------------|
| 315LSX | 1500 | 1/2 3 | 0-132/264 0-132/228 | 12/6 4/Ø | 1Ø | 5.25-3U | 75/34 |
| 320LSX | 2000 | 1/2 3 | 0-150/300 0-150/260 | 20/12 7/Ø | 1Ø | 5.25-3U | 85/38.5 |
| 345LSX | 4500 | 1/2 3 | 0-135/270 0-135/234 | 36/12 12/Ø | 3Ø | 8.75-5U | 145/66 |
| 360LSX | 6000 | 1/2 3 | 0-132/264 0-132/228 | 48/16 16/Ø | 3Ø | 8.75-5U | 145/66 |

Direct / Transformer Coupled Selectable Output Units (45 Hz - 1200 Hz)

| MODEL | Rated Power (VA) ¹ | Output Form ² | Output Voltage Max ³ (l-n/l-l) | | | Output Current ⁴ (A _{rms}) | | | Input Power ⁵ | Unit Height (in.-U) Weight (lbs/kg) | Transformer Height (in.-U) Weight (lbs/kg) | | |
|---------|-------------------------------|--------------------------|---|------------------------|------------------------|---|---------------|-------------------|--------------------------|--|---|-------------------|---------------------|
| | | | Direct | Transformer | | Direct | Transformer | | | | | | |
| | | | | Ratio 1.5:1 | Ratio 2.0:1 | | Ratio 2.5:1 | Ratio 1.5:1 | | | | Ratio 2.0:1 | Ratio 2.5:1 |
| 345LSXT | 4500 | 1/2 3 | 0-135/270 0-135/234 | 0-202/404 0-202/350 | 0-270/540 0-270/468 | 0-338/600 0-338/585 | 36/12 12/Ø | 24/8 8/Ø | 18/6 6/Ø | 14.4/4.8 4.8/Ø | 3Ø | 8.75-5U 145/66 | 5.25-3U 125/56.8 |
| 360LSXT | 6000 | 1/2 3 | 0-132/264 0-132/228 | 0-198/396 0-198/343 | 0-264/528 0-264/457 | 0-330/600 0-330/572 | 48/16 16/Ø | 32/10.7 10.7/Ø | 24/8 8/Ø | 19.2/6.4 6.4/Ø | 3Ø | 8.75-5U 145/66 | 5.25-3U 125/56.8 |

1. Rated output power is based on a combination of output voltage, current and load power factor. Values stated represent the rated capabilities of a given model. Consult factory for assistance in determining specific unit capabilities as they might apply to your application.
2. All three phase units are operable as single phase with dual voltage range capability or as three phase. Output voltage ranges and 1Ø/3Ø output form are selected by front panel or bus commands.
3. Output voltage ranges listed are for standard units. VMAX is output voltage with nominal input and full rated load applied. Other voltage ranges are available with the output magnetics options below.
4. Current ratings at 125Vrms output. Current may vary with power factor.
5. Input power frequency is 47-63 Hz. Single phase input: 100, 110, 120, 208, 200, 220, 230 and 240 VAC +10%. Three phase input: 208, 220, 240, 380, 400 and 416 VAC +10%. (480V input or 400 Hz frequency input available as a cost option on most ASX models.
6. Single phase and 400 Hz input options may be available. Consult Factory.



315LSX Model - 1500VA - 3U (5.25'')



360LSX Model - 6000VA - 5U (8.25'')



360LSXT Model - 6000VA with Mag Module - 8U (14'')

Technical Specifications (common to all LSX Models)

| OUTPUT | | SPECIFICATION | |
|--|--|--------------------|--|
| Power | | | |
| Output | See Model Tables page 8 & 9 | | |
| Voltage | | | |
| Mode | AC | | |
| Direct Coupled Range ¹ | See Model Tables page 8 & 9 | | |
| T-Option Ranges | Turns ratios: 1.5:1, 2.0:1, 2.5:1 | | |
| 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 (Vthd) | Form 1 | Form 3 | |
| 3U Models 15 - 200 Hz | < ±0.25% | < ±0.25% | |
| 200 - 1200 Hz ² | < f x 0.7% + 0.36% | < f x 0.7% + 0.11% | |
| 120/320LSX 15 - 200 Hz | < ±0.25% | < ±0.25% | |
| 200 - 1200 Hz ² | < f x 0.7% + 0.11% | < f x 0.7% + 0.11% | |
| 5U Models 15 - 200 Hz | < ±0.25% | < ±0.25% | |
| 200 - 1200 Hz ² | < f x 1.4% + 0.22% | < f x 1.4% + 0.03% | |
| Note: | Under full, resistive load conditions | | |
| Output Noise | -66 dB | | |
| Load Regulation | Form 1 | Form 3 | |
| 3U Models 15 - 200 Hz | < ±0.25% | < ±0.25% | |
| 200 - 1200 Hz ² | < f x 0.7% + 0.11% | < ±0.5% | |
| 120/320LSX 15 - 200 Hz | < ±0.25% | < ±0.25% | |
| 200 - 1200 Hz ² | < ±0.6% | < ±0.5% | |
| 5U Models 15 - 200 Hz | < ±0.25% | < ±0.25% | |
| 200 - 1200 Hz ² | < f x 2.5% - 0.25% | < f x 1.5% - 0.05% | |
| Line Regulation | < 0.1% for 10% Line Change | | |
| Voltage Sense | External Sense, max. voltage drop 5% F.S. | | |
| Voltage Response Time | 60 µsec typical, 10–90% load step | | |
| Isolation | | | |
| Output Neutral to Chassis | 150Vac Max. | | |
| Output Line to Chassis | 338Vac Max. | | |
| Frequency | | | |
| Direct Coupled Range | 15.00 – 1200.0 Hz | | |
| T-Option | 45.00 – 1200.0 Hz | | |
| Programming Resolution | 0.01 Hz | | |
| Accuracy | ± 0.005% / 50 ppm | | |
| Current | | | |
| Range | See Model Tables page 8 & 9 | | |
| Programming Resolution | 0.01 Arms | | |
| Accuracy ³ | ± (0.5% + f (kHz) * 0.5%) F.S. | | |
| Current Protection (CP) Modes | Constant Current (CC) or Output Trip (CV) | | |
| Phase Angle (In 3 and 2 Phase Mode) | | | |
| Programmable Phase (B, C) | 0 - 359.9° | | |
| Resolution | 0.1° | | |
| Accuracy | ±0.35° / ±0.1° Phase Reg. Mode | | |
| Programmable Impedance | | | |
| Available Modes | Real-time mode, RMS mode | | |
| Phase Mode | 1 Phs / 3 Phs | 2 Phs | |
| Resistance (R) | ±100 Ω | ±200 Ω | |
| Inductance (L) | 0 - 2 mH | 0 - 4 mH | |

| 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 | 0.2 - 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) | |
| Range | 0 – 340 VLN / 0-600 VLL |
| Resolution | 0.01 V |
| Accuracy | ± 0.1% F.S. |
| Frequency (Hz) | |
| Fundamental Range | 15 - 1200 Hz |
| Resolution | 0.01 Hz |
| Accuracy | ± 0.1% Rdg |
| AC Current (Arms) | |
| Range | See Model Tables page 8 & 9 |
| Resolution | 0.01 Arms |
| Accuracy | ± (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 | See Model Tables page 8 & 9 |
| Resolution | 1 W front panel / 0.1 W remote |
| Accuracy | ± 0.75 % F.S. |
| Apparent Power (VA) | |
| Range | See Model Tables page 8 & 9 |
| Resolution | 1 VA front panel / 0.1 VA remote |
| Accuracy ¹ | ± 0.75 % F.S. |
| Power Factor | |
| Range | 0.00 - 1.00 |
| Resolution | 0.01 |

Note 1: Specification valid above 40Hz

| WAVEFORM CAPTURE | SPECIFICATION |
|------------------|--|
| Parameters | V _{LN-A} , V _{LN-B} , V _{LN-C} , V _{LL AB} , V _{LL AC} , V _{LL BC} , I _A , I _B , I _C |
| Max. Sample Rate | 500 ksps |
| Samples/cycle | 1024 (512 in UPC Compatibility mode) |
| Record Length | 8 MSamples |
| Bandwidth | 100 kHz @ 500 ksps |

Note 1: V_{LL} applies to three phase LSX Models in three phase mode

Note 2: Frequency "f" is in kHz

Note 3: Specification valid above 40Hz

Technical Specifications (continued)

| HARMONICS MEAS. | SPECIFICATION |
|------------------------|---|
| Parameters | VLN-A, VLN-B, VLN-C, VLL AB, VLL AC, VLL BC, IA, IB, IC |
| Harmonics Range | H2 ~ H50 |
| Accuracy – Amplitude | ± 1.0 % of RMS Reading |
| Phase Angle Range | 0 ~ 359.9 |
| Accuracy - Phase Angle | < 8 µsec |
| Bandwidth | 100 kHz @ 500 ksp/s |
| Display Modes | Table format, Graph format |

| AC INPUT | SPECIFICATION |
|---|--|
| Mains Voltage Form | 4 Wire, L1, L2, L3 and PE |
| Frequency | 47 - 63 Hz |
| Single Phase AC Input Selections | |
| Input Voltages | 100, 110, 120, 200, 208, 220, 230 or 240 Vac |
| Phase Current | Model specific |
| Three Phase AC Input Selections | |
| Input Voltages | 208, 220, 240, 380, 400, 416 or 480 ¹ Vac |
| Phase Current | Model specific |

| ENVIRONMENTAL | SPECIFICATION |
|---------------|--|
| Cooling | Variable speed fan cooled, front and/or side air intake, rear exhaust. 115/120/315/320 Models: 200 CFM 140/160/345/360 Models: 300 CFM |
| Audible Noise | 65 dBA Max. @ 1 meter |
| Temperature | |
| Operating | 0 to 55 °C / 32 to 131 °F |
| Storage | -10 to 70 °C / 14 to 158 °F |
| Humidity | < 0 - 95 %, non-condensing |
| Altitude | Operating: 1,981 m / 6500 feet Storage: 12,192 m / 40,000 feet |

| 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 |

| 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 |

| 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 to ±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 - 5Vdc 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 | |
| Width | 19" / 482 mm |
| Height | See Model Tables page 8 & 9 |
| Depth | 3U Models: 23.0" / 584 mm 5U Models: 23.12" / 587 mm |
| <i>(Includes rear connectors, excludes rack handles)</i> | |
| Weight | |
| Net | See Model Tables page 8 & 9 |

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

Note 1: 480Vac Input is an available option on some models. Consult factory.

Ordering Information

Standard Models

Single Phase Models (T = Option)

- 115LSX(T) 115LSXM(T)
- 120LSX 120LSXM
- 140LSX(T) 140LSXM(T)
- 160LSX(T) 160LSXM(T)

Three Phase Models (T = Option)

- 315LSX¹ 315LSXM
- 320LSX¹ 320LSXM
- 345LSX(T) 345LSXM(T)
- 360LSX(T) 360LSXM(T)

AC Input Voltages (V_{IN})

- Must be specified on order, see pages 8 & 9

Options

- C Interharmonics Generator Option
- E Export version, "E" postfix

Order Example

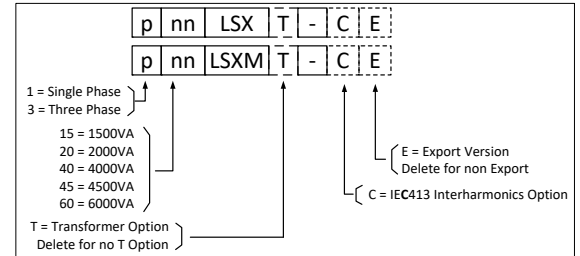
- 360LSX
- AC Power Source, 6000VA, 3-Phase, No T-Option, USB, RS232, LAN, GPIB & AUX I/O
 - Specify Factory set AC Input Voltage

Note 1: For External Transformer option on 315LSX & 320LSX models, refer to option M99222

Typical Delivery Items

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

Model Number Configurator¹



Software Options

Windows 10 Software - 64 Bit

- PPSC Studio Control Software
- PPSC Test Manager

Test Sequences - Avionics²

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

Test Sequences - Other²

- IEC Test Suite - Includes IEC61000-4-11p, IEC61000-4-14, IEC61000-4-27p, IEC61000-4-28 and IEC61000-4-34p
- MIL-STD 1399-300B - US DoD, Ship-board 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).

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