

LMX Series

High Performance Linear AC Power Source 500VA up to 6kVA; 30kVA option

Cleanest Power, Lowest Distortion, Highest Fidelity Output Waveforms



Key Specifications

- Single, Split, Three-Phase
- Linear Amplifier Technology
- 500VA up to 6kVA; 30kVA option
- Voltage Range: 0-135 VAC L-N / 0-234
 VAC L-L 3ø
- Transformer Option:
 0-338 VAC L-N / 0-585 VAC L-L 3ø
- Frequency: 15 5,000Hz

Highlights

- Linear Tech for superior AC output fidelity
- <0.1% Vthd Distortion up to 450Hz
- Ripple and Noise less than -72dB
- Phase Angle Programming on 3ø Models
- 6:1 Peak Current Capability
- Programmable Impedance
- Precise Output Voltage & Load Regulation
- Metering of Volts, RMS Current, Peak Current, Apparent & True Power
- Harmonics Measurements
- Advanced Scope Function
- Sine, Square, Triangle, Clipped Sine & Arbitrary Waveforms
- Transients Prog. (LIST, PULSE, STEP)
- Safety Programmable Limits
- Full Galvanic Isolation
- SmartSource Suite Control Platform



LMX Series Overview

Meet the industry's leading linear ac power source on the market. The LMX Series Linear AC Power Source produces low-distortion, high fidelity, output waveforms. The advantage of linear amplification is its ability to reliably reproduce oscillator waveforms with very high small signal bandwidth and low output distortion.

All standard models operate from 15 to 5,000 Hz, range in power from 500VA to 30kVA, and provide nominal output voltage ranges up to 600Vrms L-N.

Application Examples:

- Aerospace & Defense
- Industrial, Semi-Conductor, UPS Power Supplies
- Medical, White Goods, Appliances, HVAC, Lighting
- Unidirectional AC/DC Applications

Key Advantages



Very Low Output Distortion & Impedance



Highest Bandwidth, Crest Factor, Start-Up Surge Current



Clean, Reliable & Stable Power



Very High Frequency up to 5000Hz

Automated Test Equipment for Military & Defense Testing

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

With extensive control over voltage, current, frequency, phase angles and transients, the LMX 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 30kVA.



Aerospace & Avionics Testing



The low noise and low distortion analog power conversion technology used in the LMX Series Power Source results in unmatched voltage quality and high peak current capability. A wide frequency range of 15Hz to 5000Hz 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, the high 50 kHz small signal bandwidth of the LMX Series outperforms any switch-mode AC power source.

Appliances, HVAC, UPS Power Supplies, Medical Equipment

Linear AC power sources are ideal for testing appliances, white goods, HVAC systems, Lighting systems, UPS power supplies, and medical equipment, because they provide a clean, stable output with low harmonic distortion and a precise, consistent waveform.

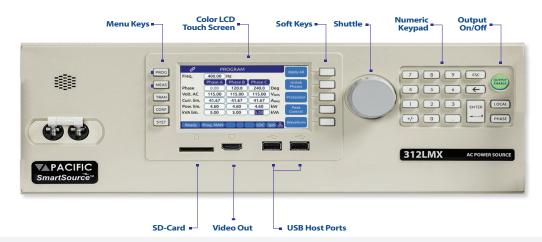
This ensures accurate simulation of real-world power conditions, which is critical for validating the performance and safety of sensitive or complex devices. Their ability to deliver smooth, noise-free power makes them especially suitable for testing high-performance equipment that demands high accuracy and reliability.





Simplify Test with Multiple Control Options

Easily access and control the unit through the front panel, USB, or via Ethernet (LAN) on any web browser.



Programming

Phase 0.00 120.0 240.0 Deg Phases Phases Phase D Phase D Phase C Stat Volt. AC 115.00 115.00 115.00 VRMS Protection Current 25.67 25.67 ARMS Error Error Even Pow. lim. 4.60 4.60 4.60 kWA Peak Control Volt. L-L 199.20 199.19 199.20 VRMS Individuation Waveform Waveform Waveform Volt. L-L 199.20 199.19 199.20 VRMS Individuation										
Freq. 400.00 Hz Page Phase A Phase B Phase C Volt. AC 115.00 120.0 240.0 Deg Volt. AC 115.00 115.00 Vector Protection Curr. lim. 41.67 41.67 African Protection Pow. lim. 4.60 4.60 kW Peak Control Volt. L-L 199.20 Verms Individe Volt. L-L 199.20 199.19 199.20 Verms Individe	Ĉ	PF	ROGRAM					MEASUREMENTS 1 OF	2	
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	kVA lim.	5.00	5.00	5.00	kva 🖸	Control				Plo
							Volt. L-L	199.20 199.19 19	9.20 V _{RMS}	Individ
	Ready I	Prog. MAN		LOC 3	3ph 品 W	Vaveform	Ready	Prog. MAN	LOC 3ph 器	

Metering

SmartSource Suite, Built-In

Breakthrough Remote Control Platform for Enhanced Visualization & Control

The **SmartSource Suite** is an embedded web server that allows you to fully access and control Pacific Power Source products on any web browser, in real-time with an enhanced user experience and visualization tools.

Its intuitive user-interface, full access to all test functions, and easy programming capabilities substantially reduce test time and increase productivity.

- Enhanced Visualization
- Intuitive Test Creation & Execution
- Pre-Written Test Sequences
- Usability Without Limits



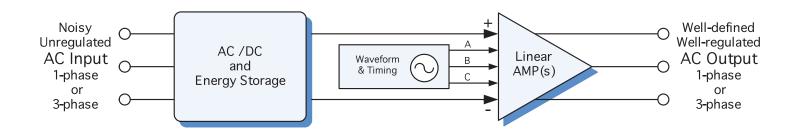


Access SmartSource Suite on Any Web Browser in Real-Time



The Benefits of a Linear Amplifier Topology

Linear AC Power Sources produce low-distortion, high fidelity, output waveforms. The advantage of linear amplification is its ability to faithfully reproduce oscillator waveforms with very high small signal bandwidth and low output distortion. The disadvantage is larger size and lower efficiency inherent to Class A/AB amplifiers.



BENEFITS	DRAWBACKS	FEATURE/CAPABILITY	LINEAR
Very low output distortion	Higher temperature operation due to	Lowest harmonic distortion	Best
Wide output bandwidth	class A, B, and AB amplifier inefficiencies	Lowest output impedance	Best
High crest factor handling for	Larger size due to increased component count	Highest bandwidth	Best
wide range of loads without waveform distortion	Higher weight due to increased	Active impedance control	Best
	component count	Highest crest-factor	Best
	·	Highest startup surge current	Best

Output Phase Modes

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

Single Phase

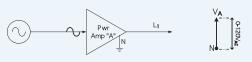
Enables Single phase output with the load connected between the 1 Phase and Neutral output terminals. Voltages are programmed phase to neutral.

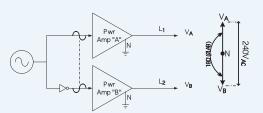
Split/Single Phase

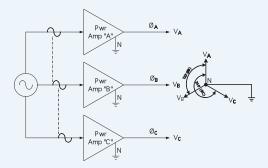
Enables high range Split/Single phase output. Load is connected either between the Phase A and Phase B output terminals (full voltage) or Phase and Neutral (half voltage). Voltages are programmed phase to phase.

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.







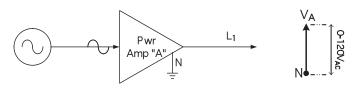


Wide Selection of Voltage Ranges

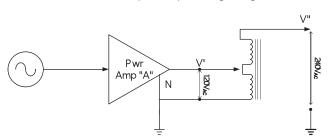
LMX Series supports up to 135VLN/270VLL (single-phase) or 135VLN/234VLL (three-phase).

Transformer Option

The T-Option provides transformer-coupled outputs at 1.5:1, 2.0:1, or 2.5:1 ratios, reaching 600V (single-phase) or 585V (three-phase). Automatic switching eliminates manual reconnection.



Direct Coupled Output Voltage Range.



Transformer Coupled Output Voltage Range

Generate Clean Waveforms

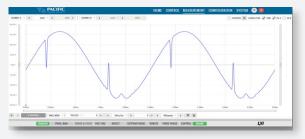
The built-in **SmartSource Suite** simplifies execution of test sequences. In this avionics application example, we are building a transient waveform at 115Vac, 400Hz using the LMX Series.

The user can easily enter various parameters and evaluate the waveforms using multiple windows on a web browser to increase productivity.

The LMX provides the lowest harmonic distortion and output impedance for high fidelity output waveforms.



Building a transient in Waveform

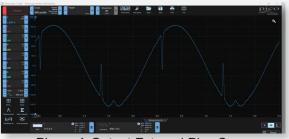


Phase A Output Scope Function

PACIFIC				HOME	CONTROL	MEASUREN	IENT CON	FIGURATIO	ON SYSTEM	0
PROGRAM										
OUTPUT ENABLE	ON		OFF		SELECTED PHA	SE	ABC	A	8	c
FREQUENCY	400.00	HL	• .		CURRENT LIMI	т	310	Aeses		
VOLTAGE AC	115.00	Vags			POWER LIMIT		375.00	W		
					VA LIMIT		375.00	VA		
			✓ APPLY	N CANCEL		C SYNC				
MEASUREMENTS			Phase A	Phase B	Phase C		Tetal			
FREQUENCY			400.00 Hz	400.00 Hz	400.00 Hz					
VOLTAGE L-N RMS (AC-DC)			115.00 Vats	115.00 V _{BMS}	115.00 V _{RMS}					
VOLTAGE L-N RMS (AC)			115.00 ¥895	115.00 Vens	115.00 V _{KVIS}					
VOLTAGE L-N THD			0.03 %	0.02 %	0.03 %					
VOLTAGE L-N DC			-0.01 Vnc	0.01 Vpc	0.00 Vac					
CURRENT RMS (AC-DC)			0.00 Aans	D.DO AZMS	0.00 A ₂₀₅					
CURRENT RMS (AC)			0.00 Ants	0.00 Arns	0.00 Anus					
CURRENT THD			0.00 %	0.00 %	0.00 %					
POWER			0 W	0 W 0	0 W		0 W 0			
WATT-HOUR	ON RE	SET	0.000 kWh	0.000 kWh	0.000 kWh		0.000 kWh			
ELAPSED TIME							1h Om 21s			
APP POWER			O VA	O VA	0 VA		O VA			
POWER FACTOR			0.00	0.00	0.00					



Applied Waveform to All Three Phases



Phase A Output External Pico Scope



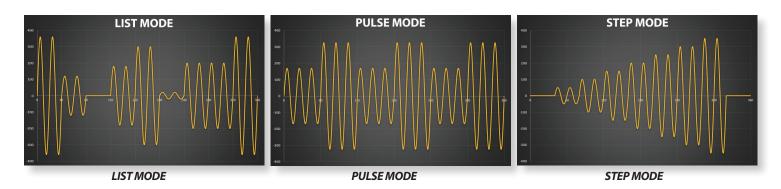
Transient Programming

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.

Create voltage, waveform, and frequency transients easily via the front panel or web interface using LIST, PULSE, or STEP modes. Edit, store, and execute transients in nonvolatile memory.

	٦	RANSIEN	T VIEW		Run		
#	Freq	Volt AC	Volt DC	Dwell			
1	400.00	115.00	0.00	100.0	Step		
2	400.00	100.00	0.00	10.0	Step		
3	400.00	115.00	0.00	100.0			
4	400.00	100.00	0.00	10.0	Step Mode		
5	400.00	115.00	0.00	100.0	Mode		
6	400.00	100.00	0.00	10.0	Edit		
7	400.00	115.00	0.00	100.0	Mode		
8	400.00	100.00	0.00	10.0			
Ready Prog. MAN LOC 3ph 器 Screen							

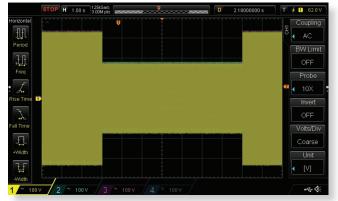
Transient Executing in View Mode



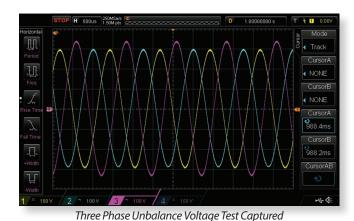
Advanced Scope Capture

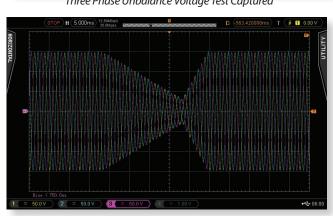
The LMX Series supports diverse AC power tests with full control over voltage, current, frequency, power, slew rates, and phase angles.

Ideal for compliance, transformer, appliance, DC charger, and UPS testing. Scope images show example waveforms.



Three Phase Voltage Drop Test Captured



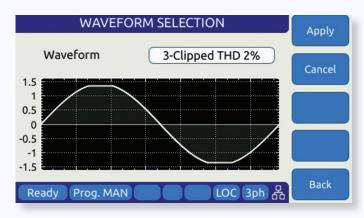


AC Transient Output Captured on Digital Scope



Select from Library of 200 Arbitrary Waveforms

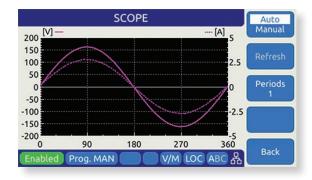
LMX Series offers sine, clipped sine, square, triangle, and custom waveforms. Create and preview arbitrary waveforms via SmartSource Suite web browser with named aliases for easy selection.



Clipped Sine Waveform Selection - Vthd = 2%

Capture Voltage and 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.



Harmonic 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.

	TIARI*I	ONICS ANAL		Auto Manual	
#	Mag. A [%]	Mag. B [%]	Mag. C [%]	HARMONIC PLOT (%-N)	Auto
THD	10.56	10.59	10.58	Refresh	Manual
EHD	0.04	0.45	0.43		
OHC	10.56	10.58	10.57		Refresh
1	100.00	100.00	100.00		Kerresi
2	0.01	0.09	0.09		
3	9.74	9.73	9.72	Voltage	Zoom Scroll
4	0.01	0.09	0.08	Current	
5	3.74	3.83	3.82		Voltage
Enabl	led Prog. MA	N V	/M LOC 3ph 品		Current
				Z 3 4 5 6 7 8 9 10 11 12 13 14 Enabled Prog. MAN V/M LOC 3	Table

Auxiliary I/O Functions

To support integrated test system design and interaction with the load or other equipment, the LMX 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 C	Coupled	l Outpu	ıt Units (15 Hz - 5000 Hz)				
MODEL	Rated Power (VA) ¹	Output Form ²	Output Voltage Max ³ (I-n/I-I)	Output Current ⁴ (A _{ms})	Input Power⁵	Unit Height (inU)	Unit Weight (Ibs/kg)
105LMX	500	1/2	0-135/270	4/2	1Ø	5.25-3U	70/31.8
108LMX	750	1/2	0-135/270	6/3	1Ø	5.25-3U	70/31.8
112LMX	1200	1/2	0-150/300	10/5	1Ø	5.25-3U	80/36.3
140LMX	4000	1/2	0-135/270	32/16	3Ø	14-8U	185/84.0
160LMX	6000	1/2	0-135/270	48/16	3Ø	14-8U	195/88.6

Direct / Transformer Coupled Selectable Output Units (45 Hz - 5000 Hz)

				Output Voltag	e Max ³ (l-n/l-l)			Output Cu	irrent⁴ (A _m	_s)		Unit	Transformer
	Rated				Transformer			1	Transforme	er		Height (inU)	Height (inU)
MODEL	Power (VA) ¹	Output Form ²	Direct	Ratio 1.5:1	Ratio 2.0:1	Ratio 2.5:1	Direct	Ratio 1.5:1	Ratio 2.0:1	Ratio 2.5:1	Input Power⁵	Weight (lbs/kg)	Weight (lbs/kg)
105LMXT	500	1/2	0-135/270	0-202/404	0-270/540	0-338/600	4/2	2.6/1.3	2/1	1.6/0.8	1Ø	5.25-3U 97/44.0	Integrated
108LMXT	750	1/2	0-135/270	0-202/404	0-270/540	0-338/600	6/3	4/2	3/1.5	2.4/1.2	1Ø	5.25-3U 97/44.0	Integrated
140LMXT	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	14-8U 185/84.0	5.25-3U 125/56.8
160LMXT	6000	1/2	0-135/270	0-202/404	0-270/540	0-338/600	48/16	32/10.7	24/8	19.2/6.4	3Ø	14-8U 195/88.6	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 single phase units are operable with dual voltage ranges as listed. Output voltage ranges and 10/20 conversions are selected by front panel or bus command.

3. Output voltage ranges listed are for standard units. VMAX is achievable with nominal input voltage at full load.

4. Current ratings at 125 V_{RMS} output. Current may vary with power factor. 5. Input power frequency is 47–63 Hz. Single Phase: 100, 110, 120, 200, 208, 220, 230, 240, VAC ±10%. Three phase: 208, 220, 240, 380, 400, 416 VAC ±10% (480 VAC option available).

6. Single phase and 400 Hz input options may be available. Consult Factory.

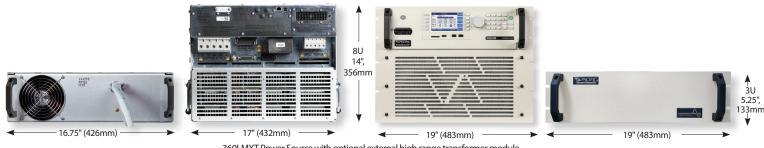




3U (5.25") Rack Height Models

5U (8.25") Rack Height Models

8U (14") Rack Height Models



360LMXT Power Source with optional external high range transformer module.



Three-Phase Models

Direct C	oupled	Output	: Units (15 Hz - 5000 Hz)				
MODEL	Rated Power (VA) ¹	Output Form ²	Output Voltage Max ³ (I-n/I-I)	Output Current ⁴ (A _{ms})	Input Power⁵	Unit Height (inU)	Unit Weight (Ibs/kg)
305LMX	500	1/2 3	0-135/270 0-135/234	4/2 1.3/Ø	1Ø	5.25-3U	74/33.6
308LMX	750	1/2 3	0-135/270 0-135/234	6/2 2/Ø	1Ø	5.25-3U	74/33.6
312LMX	1200	1/2 3	0-150/300 0-150/260	10/3.3 3.3/Ø	1Ø	5.25-3U	80/36.3
320LMX	2000	1/2 3	0-135/270 0-135/234	18/6 6/Ø	3Ø	8.75-5U	150/68.2
345LMX	4500	1/2 3	0-135/270 0-135/234	36/12 12/Ø	3Ø	14-8U	190/86.3
360LMX	6000	1/2 3	0-135/270 0-135/234	48/16 16/Ø	3Ø	14-8U	195/88.6

Direct / Transformer Coupled Selectable Output Units (45 Hz - 5000 Hz)

				Output Voltage Max ³ (I-n/I-I)				Output Cu	urrent ⁴ (A _{rm})			_
	Rated				Transformer			-	Transforme	ransformer		Unit Height (inU)	Transformer Height (inU)
MODEL	Power (VA) ¹	Output Form ²	Direct	Ratio 1.5:1	Ratio 2.0:1	Ratio 2.5:1	Direct	Ratio 1.5:1	Ratio 2.0:1	Ratio 2.5:1	Input Power⁵	Weight (lbs/kg)	Weight (lbs/kg)
305LMXT	500	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	4/2 1.5/Ø	2.6/1.3 1.0/Ø	2/1 0.75/Ø	1.6/0.8 0.6/Ø	1Ø	5.25-3U 100/45.5	Integrated
308LMXT	750	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	6/2 2/Ø	4/1.3 1.3/Ø	3/1 1/Ø	2.4/0.8 0.8/Ø	1Ø	5.25-3U 100/45.5	Integrated
320LMXT	2000	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	18/6 6/Ø	12/4 4/Ø	9/3 3/Ø	7.2/2.4 2.4/Ø	3Ø	8.75-5U 150/68.2	5.25-3U 125/56.8
345LMXT	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	14-8U 190/86.3	5.25-3U 125/56.8
360LMXT	6000	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	48/16 16/Ø	32/10.7 10.7/Ø	24/8 8/Ø	19.2/6.4 6.4/Ø	3Ø	14-8U 195/88.6	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 10/30 conversions are selected by front panel or bus command.

3. Output voltage ranges listed are for standard units. VMAX is achievable with nominal input voltage at full load. Other voltage ranges are available with the output magnetics option.

4. Current ratings at 125 $\rm V_{\rm \tiny RMS}$ output. Current may vary with power factor.

5. Input power frequency is 47–63 Hz. Single Phase: 100, 110, 120, 200, 208, 220, 230, 240, VAC ±10%. Three phase: 208, 220, 240, 380, 400, 416 VAC ±10% (480 VAC option may be available.).

6. Single phase and 400 Hz input options may be available. Consult Factory.

Parallel Configurations for Higher Power

LMX models (140LMX, 345LMX, 160LMX, 360LMX) with the Parallel Bus (-PB) option can synchronize up to five units for systems up to 30kVA. Programming and measurements are managed via the master unit, while AUX units operate under its control. See table for configurations.

MODEL ¹	Consist of	Phase Mode	Rated Power
390/180LMX	2 x 345 or 140LMX	3 & 2 or 1 Phase	9 / 8 kVA
3120/1120LMX	2 x 360 or 160LMX	3 & 2 or 1 Phase	12 kVA
3180 /1180LMX	3 x 360 or 160LMX	3 & 2 or 1 Phase	18 kVA
3240/1240LMX	4 x 360 or 160LMX	3 & 2 or 1 Phase	24 kVA
3300/1300LMX	5 x 360 or 160LMX	3 & 2 or 1 Phase	30 kVA

Note 1: System Model numbers shown are for reference only. Not actual order numbers.



Technical Specifications

OUTPUT	SPECIFICATION				
	SPECIFICATION				
Power					
Output	See Model Tables page 8 & 9				
Voltage					
Mode	AC				
Direct Coupled Range ¹	0-135 Vac LN / 0-234 Vac LL				
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	Sine, Square, Triangle,				
(200 Max.)	Clipped (THD), Arbitrary				
DC Offset	< 20 mV				
Harmonic Distortion (Vthd)	(full, resistive load)				
3U Models:	15~450 Hz: < 0.1%				
	450~5000 Hz: < f x 0.076% +				
	0.07% (f in kHz)				
5U Models:	15~1000 Hz: < 0.1%				
8U Models:	1000~5000 Hz: < 0.25%				
Output Noise	< 50 mVrms				
Load Regulation	± 0.02% F.S. in CSC Mode				
	±0.25% F.S. CSC off				
Line Regulation	< 0.1% for 10% Line Change				
Voltage Sense	External Sense, max. voltage				
	drop 5% F.S.				
Voltage Response Time	5 µsec typical step load change				
Small Signal Bandwidth	5 Hz to 40 kHz, ±3dB, 10% F.S.				
Isolation					
Output Neutral to Chassis	150Vac				
Frequency					
Direct Coupled Range	15.00 – 5000.0 Hz				
T-Option	45.00 – 5000.0 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 ²	± (0.5% + f (kHz) * 0.5%) F.S.				
Current Protection (CP)	Constant Current (CC)				
Modes	or Output Trip (CV)				
Phase Angle (In 3 and 2 Phase					
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)	$\pm 100 \Omega$ $\pm 200 \Omega$				
Inductance (L)	0 - 2 mH 0 - 4 mH				

Note 1: VLL applies to three phase LMX Models in three phase mode Note 2: Specification valid above 40Hz

PROTECTION	SPECIFICATION
Types	AC Current, True Power, Appar- ent Power, Over Voltage, Over Temperature

TRANSIENTS	Specification
Programming	
No. of Entries	200 Steps / 400 segments
Modes	LIST, PULSE, STEP
Parameters	Frequency, Volt AC, 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 - 5000 Hz
Resolution	0.01 Hz
Accuracy	± 0.1% Rdg
AC Current (Arms)	
Range	See Model Tables page 8 & 9
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 Power (W)	
Range	See Model Tables page 8 & 9
Resolution	1 W front panel / 0.1 W remote
Accuracy ¹	± 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	Vln-a, Vln-b, Vln-c,
	Vll ab ,Vll ac ,Vll bc ,Ia, Ib, Ic
Max. Sample Rate	500 ksps
Samples/cycle	
	mode)
Record Length	8 MSamples
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	H2 ~ 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	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, 220 or 240 Vac	
Phase Current	Model specific	
Input Power Factor	> 0.9	
Three Phase AC Input Selections		
Input Voltages	208, 220, 240, 380, 416 or 480 Vac	
Phase Current	Model specific	
Input Power Factor	> 0.9	

ENVIRONMENTAL	SPECIFICATION
Cooling	Variable speed fan cooled, front and/or side air intake, rear exhaust
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	
Туре	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 extensions for Instrumentation	LXI compliant, Ethernet, RJ45, TCP/IP Protocol, Telnet Protocol Command Line
GPIB	IEEE488,1,IEEE488.2(2003incl.,NIHS488) IEC 60488-1, IEC 60488-2 (2004) Functions:SH1,AH1,T6,L3,SR1,RL1,DC1,DT1
Restauration 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
Al4	Programmable
Range	-10V to +10 V
Accuracy	± 0.1% F.S.
Impedance	AI1, 2 & 3: 7.2 kOhm, AI4: 5.0 kOhm
Analog Outputs (4)	
AO1, AO2, AO3, AO4	User defined measurement func-
	tions.
Range	0 – 5 Vdc for 0 - F.S.
Accuracy	± 0.1% F.S. into > 5 kOhm load
Impedance	< 10 Ohm
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)	D01, D02
Output Levels	Low < 0.4V, High > 4.6V
Connector Type	DB25, Rear Panel

MECHANICAL	SPECIFICATION
Dimensions	
Width	19" / 482mm
Height	See Model Tables page 8 & 9
Depth	3U Models: 23.8" / 604 mm
(Includes rear connectors,	5U Models: 25.1" / 637 mm
excludes rack handles)	8U Models: 24.4" / 621 mm
Weight	
Net	See Model Tables page 8 & 9

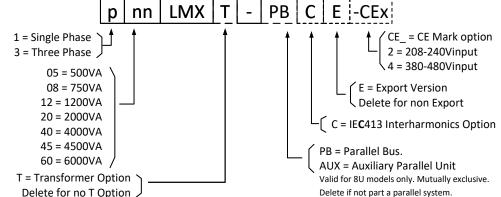
REGULATORY	SPECIFICATION
Safety	IEC 61010-1:2010 (Edition 3)
EMC	
Emissions Standard	EN 55011:2009+A1:2010
Immunity Standard	EN 61000-4-2, -3, -4, -5, -6, -8, -11
Product Category	EN 61326-1:2013 (Measurement,
	Laboratory and Control Equipment)
Approvals (Option)	CE Mark, NRTL Safety
RoHS (DIRECTIVE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



Ordering Information

Single Phase Models (T = Option) 105LMX(T) 108LMX(T) 112LMX 140LMX(T) 160LMX(T)	Three Phase Models (T = Option) 305LMX(T) 308LMX(T) 312LMX 320LMX(T) 345LMX(T) 360LMX(T)	AC Input Voltages (VIN) AC Input Voltages (VIN) Must be specified on order, see pages 8 & 9 Options A13 Option "C" Interharmonics Generator PB* Parallel Bus Master Unit AUX* Parallel Auxiliary Unit, no controlller E Export version, "E" postfix * Available on 140, 160, 345 & 360LMX models only
 Order Example 360LMX AC Power Source, 6000VA, 3-Phase, No T- Option, USB, RS232, LAN, GPIB & AUX I/O Specify Factory set AC Input Voltage Specify if CE or NRTL certification is needed 	Model Number Configurator	K T - PB C E -CEx Image: Constraint of the second seco
 Typical Delivery Items AC Power Source English Manuals in PDF Format 	05 = 500VA 08 = 750VA 12 = 1200VA	4 = 380-480Vinput E = Export Version Delete for non Export

- Certificate of Compliance
- Optional CE Mark (CE2 or CE4) or optional NRTL - Must be specified on order



Pre-Written Test Sequence Options

Test Sequence Options require use of the built-in SmartSource Suite remote control platform via LAN or USB.

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 IEEE 1547.1

MIL-STD 1399-300B - US DoD MIL-STD 1275 Rev E SEMI F47-0706 KS C 9610 4-11, KS C 9610-4-29

Worldwide Service & Support

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