

LX550 SERIES

Flexible single and multiple outputs



[2 YEAR WARRANTY]



- **550W continuous output power**
- **Industry standard footprint, low profile**
- **Conducted noise to meet EN55022 class B**
- **AC and DC input voltage options in same package**
- **Efficiency up to 88%**
- **Optional power sharing/VME signals**
- **Autoranging input**

The LX550 family offers 550 Watts of continuous output power in a low profile industry standard footprint. Cover and fan assembly and over temperature protection are fitted as standard. With two standard single output options, and a flexible standard multiple output, the series can address most power requirements as standard. The design is specifically tailored to allow full flexibility, and modifications to meet customer applications can be implemented with ease. The LX550 AC input series meet the safety requirements of EN60950, VDE0805, UL1950 and CSA C22.2 No. 950. Input conducted noise levels meet the requirements of EN55022 class B. LX550 series power supplies are ideal for use in high power industrial applications and are particularly suitable for front end power systems.

SPECIFICATION All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS		
Voltage adjustability	Vout on singles +5V output on multiple	-8%/+16% ±20%
Remote sense		±10%
Line regulation LL to HL, FL See Note 5	Single output Multiple: +5V output Multiple: aux. outputs,	±0.2% ±0.2% ±0.5%
Load regulation (20% to 100% FL) See Note 5	Single output Multiple: +5V output Multiple: ±12, +24 outputs Multiple: -5V output	±0.2% ±1.0% ±2.0% ±4.0%
Cross regulation See Note 5	5A load step on main output Auxiliary outputs	1.0%
Transient response	25% di/dt	1.0% max. dev. 1ms recovery
Temperature coefficient	Main/single output Multiple: auxiliary outputs	±0.02%/°C ±0.04%/°C
Overvoltage protection	Main/single output	130% ±10% Vout
Output power limit	Multiples: primary power limited Singles: current foldback	600W Pout 105% to 120% Iout
Shot circuit protection	All outputs	Yes
Minimum output current		0A
INPUT SPECIFICATIONS		
Input voltage range (See Note 6)	Autorange fitted as standard Drop-out voltage	98 to 132VAC 190 to 264VAC 98VAC
Input frequency		50Hz/60Hz
Input surge current	110VAC 230VAC	16A max. 25A max.
Safety ground leakage current	110VAC, 60Hz 230VAC, 50Hz	1.6mA 2.5mA

INPUT SPECIFICATIONS CONTINUED		
Remote OFF		Logic 0 on $\overline{\text{ROF}}$
ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS		
Conducted emissions	EN55022, EN55011, FCC	Class B
Input noise immunity	Line to line Line to ground	2.5kV, 10µs 1.5kV, 150µs
GENERAL SPECIFICATIONS		
Hold-up time	110VAC and 230VAC	18ms
Efficiency		82% min.
Isolation voltage	Input/output Input/chassis	3000VAC 1500VAC
Switching frequency	Fixed	44kHz
Approvals and standards	Safety	EN60950, VDE0805, UL1950 CSA C22.2 No. 950
Weight		3.0kg (106oz)
ENVIRONMENTAL SPECIFICATIONS		
Thermal performance (See Note 7)	Operating Non-operating 0°C to 40°C ambient, fan cooled 40°C to 70°C ambient, fan cooled Peak, (0°C to 40°C, max. 10s)	0°C to +70°C -25°C to +85°C 550W Derate linearly to 25% full load 550W, same as max. output but allows individual peaks
Relative humidity	Non-condensing	5% to 95% RH
Altitude	Operating Non-operating	10,000 feet max. 30,000 feet max.
Vibration	Operating Non-operating	5–50Hz, 0.05mm pk-pk 50–100Hz, 0.025mm pk-pk 100mm drop on chassis face

550 Watt

AC/DC universal input switch mode power supplies

OUTPUT VOLTAGE	OUTPUT CURRENTS		OUTPUT RIPPLE		MODEL NUMBER
	MAX (1)	PEAK (2)	RMS	PK-PK	
+5.0V	60.0A	100.0A	0.2%	2.0%	LX550-7620
-5.0V	5.0A	10.0A	0.2%	2.0%	
-12.0V	5.0A	10.0A	0.2%	2.0%	
+12.0V	10.0A	20.0A	0.2%	2.0%	
+24.0V	5.0A	10.0A	0.2%	2.0%	
24.0V (4)	24.0A	-	0.1%	1.0%	LX550-7624
48.0V (4)	12.0A	-	0.1%	1.0%	LX550-7617

INPUT CONNECTIONS

Pin 1	Earth
Pin 2	Neutral
Pin 3	Live

OUTPUT CONNECTIONS

	MULTI O/P	SINGLE O/P	SIGNALS
1	+5VS	0VS	$\overline{\text{SRS}}$
2	+5V	0V	$\overline{\text{ACF}}$
3	+5V	0V	$\overline{\text{DCF}}$
4	+5V	0V	PM
5	0V	0V	PS
6	0V	0V	$\overline{\text{ROF}}$
7	0V	+V	+VS
8	-5V	+V	0V
9	-12V	+V	-
10	+12V	+V	-
11	+24V	+VS	-
12	$\overline{\text{ROF}}$	$\overline{\text{ROF}}$	-

OVERLOAD/SHORT CIRCUIT PROTECTION

The overload/short circuit protection mechanisms are different for the single output models and the multiple output model.

The single output models will current limit when the output load reaches 105-120% of maximum load during overload or short circuit conditions.

The unit will operate in a constant current mode making the single output models suitable for battery charging applications.

The multiple output model uses a power limiting function. When the total output power reaches 600W the outputs will foldback to the values detailed below:

Output	Foldback Value
+5V	30A continuous
+12V	8A continuous
+24V	4A continuous
-5V/-12V	Protected by 4A Multi Fuse™

The outputs will not foldback until the total output power exceeds the maximum power limits. This allows the units to have a peak power capability but it requires that care must be taken not to permanently overload any individual output. The +5V, +12V and +24V outputs are not individually protected and it is recommended that the maximum continuous load does not exceed the value given in the output specifications. The -5V and -12V outputs are individually protected by a 4A Multi Fuse™ and the maximum continuous load should not exceed the value given in the output specifications.

Notes:

- The multiple output LX550 has a continuous output power rating of 550W. The single-output versions have a continuous power output rating of 570W. The LX550 cannot operate without fan cooling.
- Peak power figures for individual outputs on the multiple output unit are for less than 10 seconds duration. Total output power should not exceed 550W.
- Fan fitted as standard, see maximum output current specifications.
- Single output models are adjustable -8%, +16%.
- A 10% load on the main output is necessary to maintain regulation on the auxiliaries at full load (multiple output model).
- The input board is fitted with an autorange circuit as standard which automatically senses the input voltage and switches to the appropriate voltage range.
- Over temperature protection is provided by a thermal switch fitted to the main transformer. After thermal shutdown (90°C) the unit must be powered down and the thermal switch must be allowed cool to 70°C before power up.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.

Options

- DC input models for 24V and 48V operation are detailed on page 170.
- A signals board is available as an option. To order, add the suffix '-S', see table below.

OPTIONS	SUFFIX	EXAMPLE
None		LX550-7620
Signals	-S	LX550-7620-S

SIGNALS (OPTIONAL)

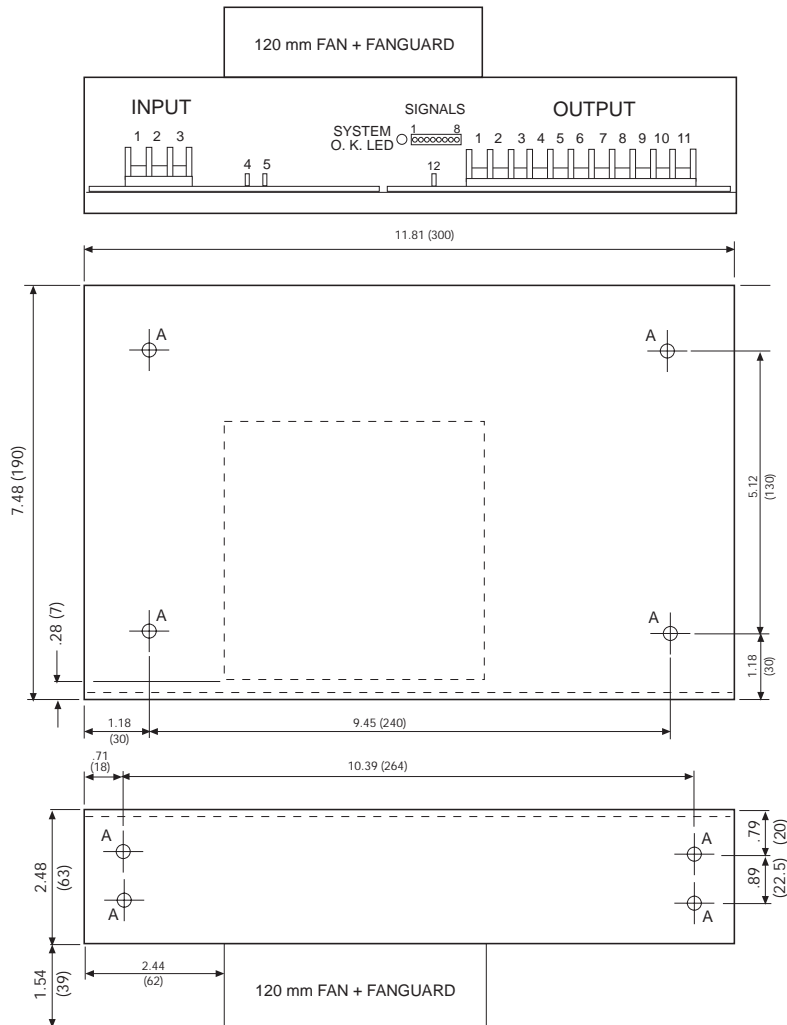
An optional signals board supplies the following VME utility bus signals:

$\overline{\text{ACF}}$	(AC Fail) Logic 1 to 0 transition occurs >10ms before outputs fall below 90% of nominal in the event of input failure.
$\overline{\text{DCF}}$	(DC Fail) Logic 0 occurs if output falls below <85%-95% of nominal.
$\overline{\text{SRS}}$	(System Reset) Logic 1 for system OK (AC and DC good and reset times [200ms])
PM	Power Monitor signal, proportional to the output power, ratio of 10mV/W.
PS	Power Share connections, to be joined for parallel operation of two or more units, ensuring equal power share. For power share operation unit outputs need to be set to $\pm 5\%$ of each other and should be connected in star configurations with the load as star centre.

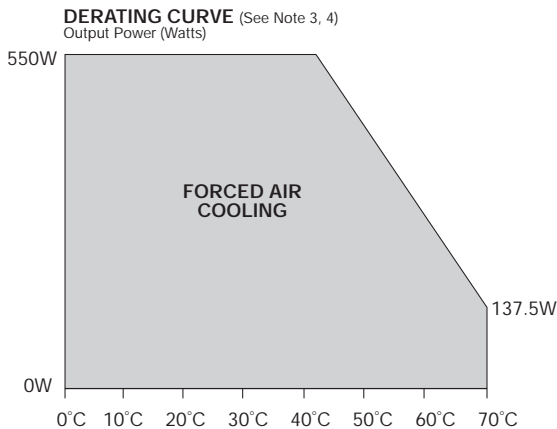
550 Watt AC/DC universal input switch mode power supplies

Mechanical Notes

- A Input and output connectors are 15 way terminal block, 5mm pitch. 3 way and 11 way 9.5mm barrier strip with M4 x 8 fixings, 250V 20A. Signals board connector is 8 way, single row right angle 0.1", Molex 910210128, this mates with 90147 1108 or equivalent.
- B Customer fixing screws (A) are M3 isometric. They must not penetrate into unit by more than 5mm.



ALL DIMENSIONS IN INCHES (mm)



International Safety Standard Approvals:

Multiple output and 24V Single output units are approved to these standards. Safety approval pending for 48V output model.

EN60950/VDE0805 Reg. File No. 90370

UL1950 File No. E136005

CSA C22.2 No. 950 File No. LR41062C/LR101320

Data Sheet © Artesyn Technologies® 2000

The information and specifications contained in this data sheet are believed to be correct at time of publication. However, Artesyn Technologies accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.



<http://www.artesyn.com>