NEVO+1200SL

LOW NOISE INDUSTRIAL AC/DC MODULAR CONFIGURABLE POWER SUPPLY

DATA SHEET

6"x6"x1.61"
Small

900W
Powerful

1.2kg
Light

The NEVO+1200SL configurable power supply is the smallest in its class, delivering up to 900W from a 6"x 6" x 1.61" package weighing only 1.2kg when fully configured and is the ultimate power solution for demanding industrial applications where size, weight, low standby power and low noise are vital factors. Each configured unit consists of an input module with up to eight output modules, where any combination of outputs can be fitted to create a power solution with up to sixteen isolated outputs.

Standard features include intelligent fan control, wide output voltage adjust capability and primary side shutdown with standby power consumption of less than 3 Watts. The low noise fan option allows you to use this innovative power supply in even the quietest of environments. The series carries full IEC/UL60950 safety approvals, complies with EN61000 Immunity, EN55022-B EMC Standards and features market leading specifications and design in application support.

MAIN FEATURES

- Up to 900 Watts of output power
- Low noise operation (~18dBA reduction from S version)
- Efficiency up to 89%
- 6" x 6" x 1.61" footprint
- Industry leading power density (16W/in^3)
- Lightest modular design – only 1.2kg – 750Watts/kg
- Up to 16 isolated outputs
- Parallel and series connection of modules
- Wide output voltage adjust range
- Remote current / voltage programming
- Primary side remote on/off function
- Standby power ≤ 3 Watts
- Accurate current sharing
- 2 x 5V 1A bias supply
- Field configurable
- RoHS compliant
- UL60950 2nd edition approved
- 2 Year warranty

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SPECIFICATIONS

INPUT ELECTRICAL						
Parameter		Details	Min	Typ	Max	Units
AC Input Voltage		Nominal range is 100V to 240V	85		264	Vrms
AC Input Frequency		Contact factory for 400Hz operation.	47	50/ 60	63	Hz
DC Input Voltage		Standard	120		370	Vdc
Power Rating		See graphs for de-rating			900	Watts
Input Current		900Watts output at 120Vrms input		8.5		Amps
Inrush Current		265Vrms (cold start)			40	Amps
Fusing		5x20 Fast acting			12.5	Amps
Input Current Limit				14		Amps
Efficiency		See graphs		86	89	%
Idle Power		All outputs fitted and enabled		46		Watts
Idle Power		All outputs fitted and Disabled		32		Watts
Standby Power		Latched off state, 120Vrms		2.5		Watts
Power Factor				0.99	0.99	
Holdup		900Watts output at 120Vrms input	21	24	26	mS
UVLO		Turn on only	78		84	Vrms
Over temperature		Internally monitored. Latching	115		125	°C
Reliability		40°C 80% load			2	FPMH
Signals	Output Bias voltage	Two isolated Bias Outputs available	4.8	5	5.2	V
	Output Bias current	Hiccup type current limit	0		1	A
	Power Good voltage	PNP open collector with internal 10k pull down resistor	8	10	15	V
	Power Good current		0		20	mA
	Inhibit voltage		2		15	V
	Inhibit current	10k ohm input impedance	0.2		1.5	mA
	Global inhibit voltage		3		15	V
	Global inhibit current	5k ohm input impedance	0.6		3	mA
	AC_OK voltage	High output Low output	4.7 0		5.2 0.1	V V
	AC_OK current		-10		10	mA
	AC_OK warning	See user manual for exceptions	5			mS
	Primary Bias voltage	Medically Isolated	4.8	5	5.2	V
	Primary Bias current	Hiccup type current limit			0.5	A
	Primary Remote On/Off	Negative Edge Triggered, Refer to User Manual		5		V

INSTALLATION			
Parameter	Details	Parameter	Details
Equipment class	I	Flammability rating	94V-2
Installation category	II	IP Rating	IP10
Pollution degree	2	ROHS Compliance	2011/65/EC
Material group	IIIb		Indoor use only

RELIABILITY				
Component	Details	Min	Max	Units
Fan	Mag Lev Std (2 Fans per unit)		3.8	FPMH
Input	Excluding FAN		2	FPMH
Output	See individual output datasheets		1	FPMH
Warranty			2	Years

SAFETY				
Parameter	Details	Min	Max	Units
Isolation Voltage	Input to Output		4000	Vac
	Input to Chassis		1500	Vac
	Output to Chassis		250	Vdc
	Output to Output		250	Vdc
Isolation Clearance	Primary to Secondary (Reinforced)	7		mm
	Primary to Chassis (Basic)	2.5		mm
Isolation Creepage	Primary to Secondary (Reinforced)	12		mm
	Primary to Chassis (Basic)	4		mm
Leakage Current	265Vac, 63Hz, 25°C		1500	uA

MECHANICAL	
Parameter	Details
Size	154.5mm (L) x 152.4 mm (W) x 41.0 ± 1.0 mm (H)
Weight	720 gram +60 gram per output module
Mounting	Bottom (see diagram for details)

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ENVIRONMENTAL

	Parameter	Details	Min	Max	Units
Storage	Temperature		-40	+85	°C
	Humidity	Relative, non-condensing	5	95	%
	Altitude		-200	5000	m
	Air Pressure		54	106	kPa
Operation	Temperature	Full power	-20	50	°C
		De-rate input and outputs at 2.5%/°C	50	70	°C
	Humidity	Relative, non-condensing	5	95	%
	Altitude		-200	3000	m
	Air Pressure		78	106	kPa
	Noise Level	Unit at idle		24	dBA
	Measured 1m from fan intake	Unit at full power,25°C		43	dBA
	Shock	3000 bumps at 10G (16ms) half sine wave			
	Vibration	1.5G 10 to 200Hz sine wave, 20G for 15min in 3 axes random vibration			

EMC

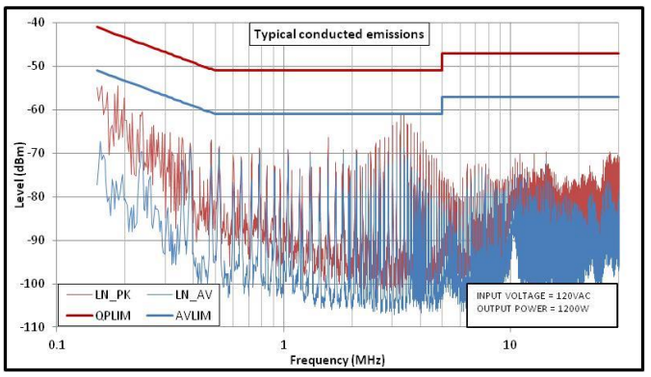
	Parameter	Standard	Level
Emissions	Radiated electric field	EN55011, EN55022, FCC	A (See Note)
	Conducted emissions	EN55011, EN55022, FCC	B
	Harmonic Distortion	EN61000-3-2	Compliant
	Flicker & Fluctuation	EN61000-3-3	Compliant
Immunity	Electrostatic discharge	EN61000-4-2 (15kV air, 8kV contact)	4
	Radiated RFI	EN61000-4-3 (10V/m)	3
	Fast Transient burst	EN61000-4-4 (4kV)	4
	Input line surges	EN61000-4-5 (1kV L-N, 2kV L-E)	3
	Conducted RFI	EN61000-4-6 (10V)	4
	Power Freq. Magnetic Field	EN61000-4-8 (10A/m)	3
	Voltage Dips	EN61000-4-11 (EN55024)	Compliant

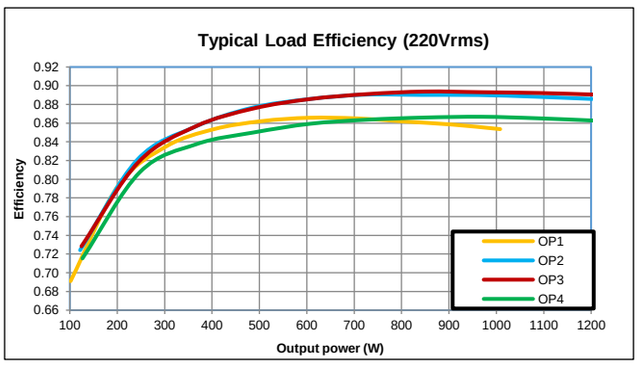
Note: To meet Class B radiated emissions the end user should add ferrites to I/P and O/P cables. Consult Vox Power for details.

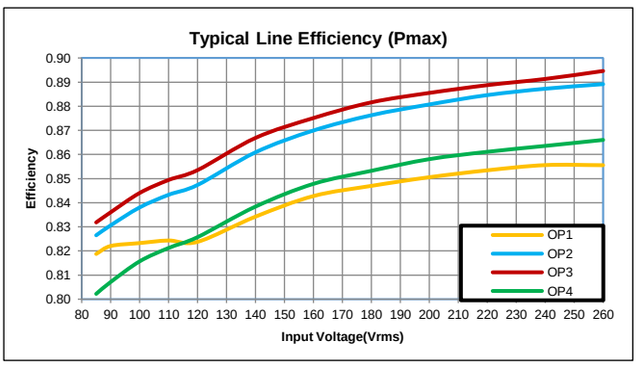
AGENCY APPROVALS

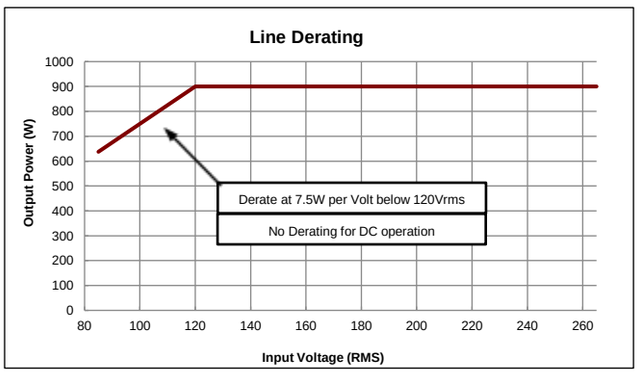
Standard	Details	File
UL60950-1	UL60950-1 2nd edition, December 19, 2011	UL: E316486
IEC/EN60950-1	IEC 60950-1:2005 (2nd Edition); Am 1:2009	
CSA-C22.2 No. 60950-1A-07	2nd edition	
CE MARK	LVD 2014/35/EU	

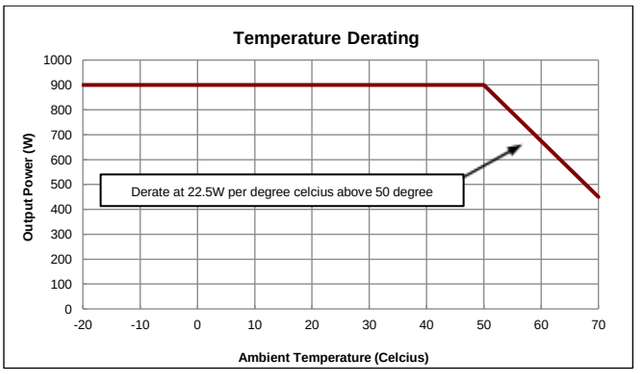
CB certificate and report available on request











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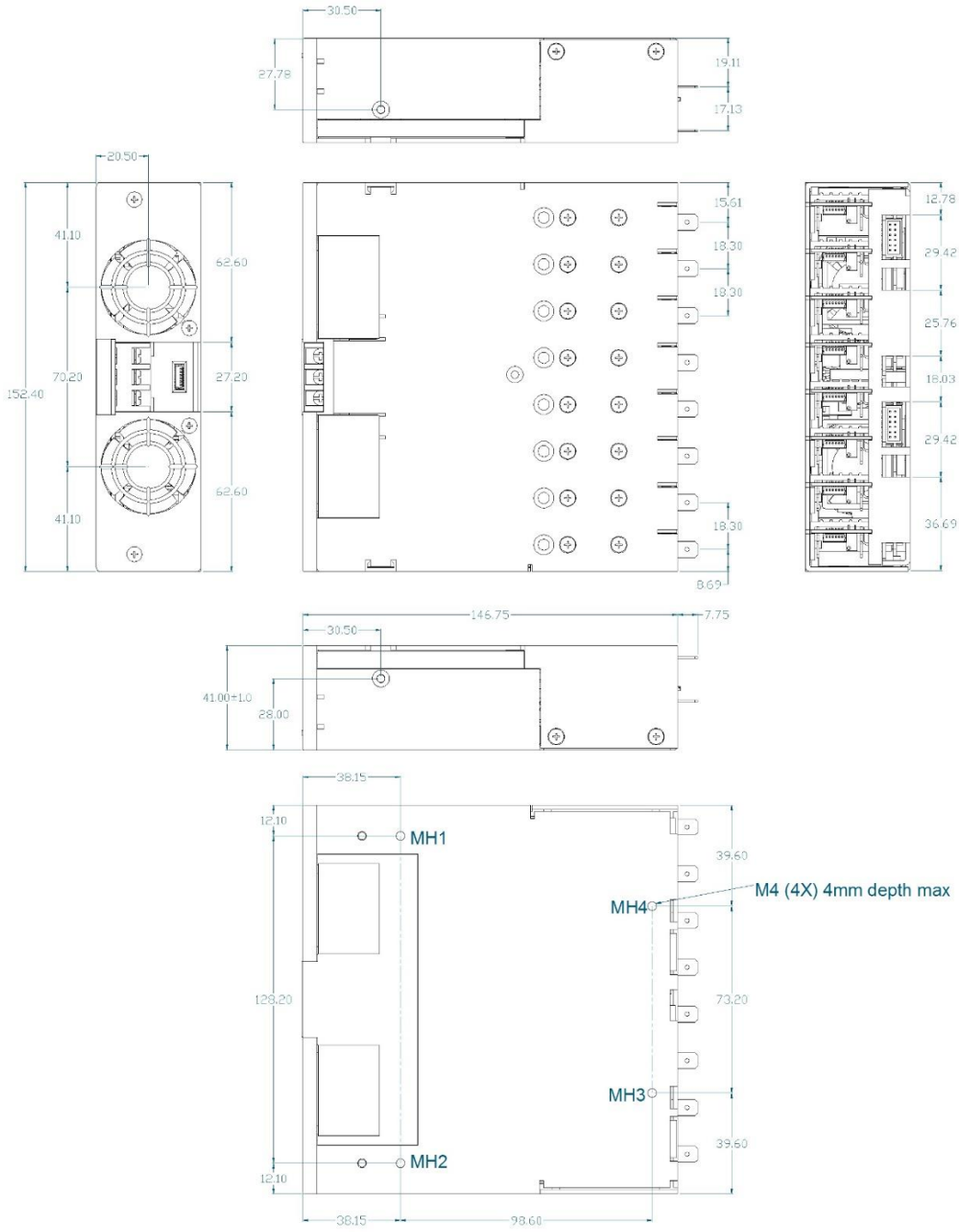
MECHANICAL DIMENSIONS AND MOUNTING SCREWS

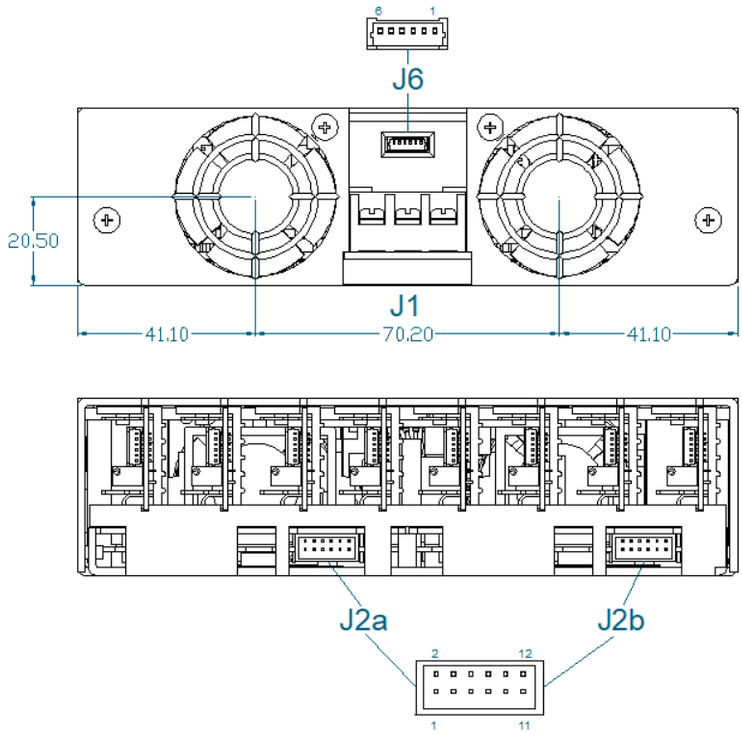
SCREWS			
LOCATION	DETAILS	PENETRATION	TIGHTENING
MOUNTING	M4 x 4	4mm max, including chassis	0.55 NM [1]
OUTPUT MODULES	M3 x 5, Countersink Posi, 16 Places	Defined by screw	0.50 NM [1]
CHASSIS LID AND FACEPLATE	M3 x 5, Countersink Posi, 11 Places	Defined by screw	0.50 NM [1]
1. Torque settings are for general reference only. The torque settings shown in the datasheet are the insert manufacturers recommended values.			



TOLERANCES unless otherwise stated - All dimensions in mm and according to DIN 2768-1/-2 CLASS C

CONNECTORS

PINOUTS		
J1		
Circuit	Details	
1	Live	
2	Earth	
3	Neutral	
J2a/b		
Circuit	Details	
1	Power Good	Slot A and E
2	Inhibit	
3	Power Good	Slot B and F
4	Inhibit	
5	Power Good	Slot C and G
6	Inhibit	
7	Power Good	Slot D and H
8	Inhibit	
9	Global Inhibit	
10	AC OK	
11	+5V 1A Bias Supply	
12	COM	
J6		
1	Common	
2	+5V 500mA Bias	
3	Shut Down	
4	Reserved	
5	Reserved	
6	Reserved	

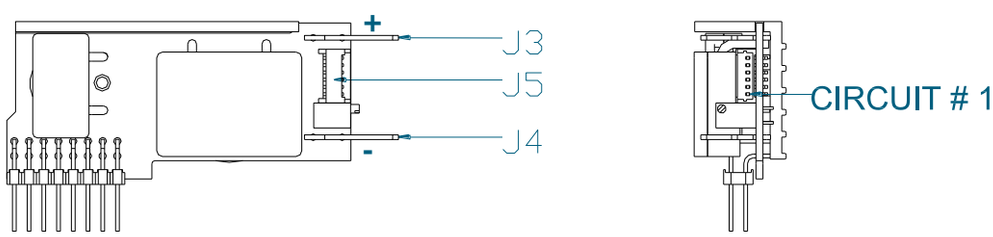


REF	DETAILS	MANUFACTURER	HOUSING	TERMINAL
J1	MAINS INPUT: 3 Pin, Barrier, 6-32 Steel Screws, 0.8 NM or 7IN LB Torque Cable 14-18AWG, 300V, 16A, 105°C, use appropriately rated fork or ring terminal.	MOLEX		
J2a/b	GLOBAL SIGNALS: 12 Pin, 2mm, without Friction Lock, 24-30 AWG	MOLEX	511101251	503948051
J6	INPUT BIAS: OUTPUT SIGNALS: 6 Pin, 1.25mm, with Friction lock, 28-32 AWG	MOLEX	510210600	500588000

Notes
1. Direct equivalents may be used for any connector parts.
2. All cables must be rated 105°C min, equivalent to UL1015

SINGLE OUTPUT MODULE CONNECTORS

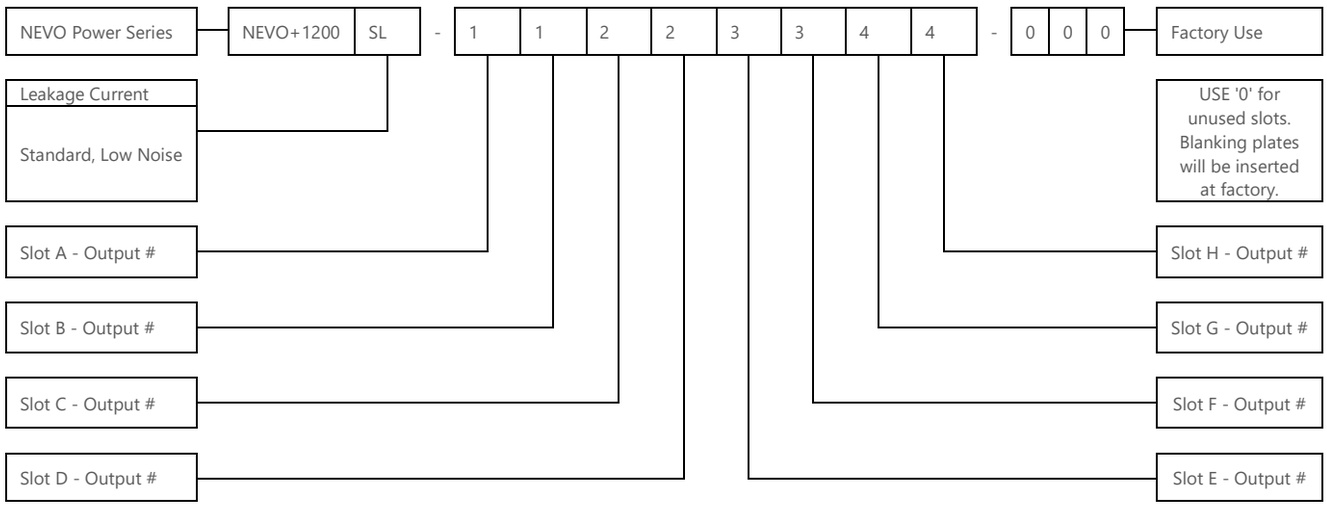
PINOUTS	
J3	
Circuit	Details
1	Positive output
J4	
Circuit	Details
1	Negative output
J5	
Circuit	Details
1	-Sense
2	+Sense
3	Voltage control
4	Current control / share / out
5	COM
6	+5V local bias supply



REF.	DETAILS	MANUFACTURER	HOUSING	TERMINAL
J1	MAINS INPUT: 3 Pin, 5.08mm, with Friction Lock, 18-24 AWG	MOLEX	10013036	0008701031
J2	GLOBAL SIGNALS: 12 Pin, 2mm, without Friction Lock, 24-30 AWG	MOLEX	511101251	0503948051
J3/4(1)	OUTPUT POWER TERMINAL: TAB SIZE 6.35mmx0.8mm	VARIOUS		VARIOUS
J5	OUTPUT SIGNALS: 6 Pin, 1.25mm, with Friction lock, 28-32 AWG	MOLEX	0510210600	0500588000

Notes
1. Terminal and wire current rating must exceed maximum short circuit output current. Eg. Output 1 = 25A*1.25 = 31.25Amps
2. Direct equivalents may be used for any connector parts
3. All cables must be rated 105°C min, equivalent to UL1015

PART NUMBERING SYSTEM



Our design team will assist with value add requirement if an application requires standard/non-standard accessories or non-nominal voltage settings. Once approved, the factory will issue a 3 or 4 digit code for your specific configuration which can be used for all future orders of the same configuration. When ordering an input unit with no outputs inserted, simply order NEVO+1200SL

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