



NEVO+1200M SERIES

- Medically Approved
- User Configurable
- 1200 Watts of Power



The NEVO+1200M series are medically approved modular and user configurable power supplies offering unrivalled performance and flexibility. Delivering up to 1200 watts from a 1.2kg 6" x 6" x 1U package, the NEVO is the ultimate medical power solution for applications where size and weight are vital factors. Each system consists of an input module with eight slots where any combination of outputs can be fitted to create a power solution with up to sixteen isolated outputs. The series carry full 60601 3rd Edition safety approvals and comply with EN61000-3, EN61000-4 and EN550022-B EMC standards.

MAIN FEATURES:

- ✓ 1200 watt output at 120VAC
- ✓ 6" x 6" x 1U footprint
- ✓ High power density (21W/in³)
- ✓ EN60601 3rd Edition
- ✓ Primary Side Remote On/Off
- ✓ High efficiency – up to 89%
- ✓ Only 1.2kg – 100W/kg
- ✓ I²C control option
- ✓ Remote current/voltage programming
- ✓ Accurate current sharing
- ✓ Current output signal
- ✓ 2x 5V 1A bias supply
- ✓ RoHS compliant
- ✓ Field configurable
- ✓ Two year warranty



SYSTEM 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			1200	Watts	
Input Current	1200Watts output at 120Vrms input			12	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	1200Watts output at 120Vrms input	17	20	21	mS	
UVLO	Turn on only	78		84	Vrms	
Over temperature	Internally monitored. Latching	115		125	°C	
Reliability	40°C 80% load			2	FPMH	
Leakage Current	Normal condition, 264V, 63Hz		190		µAmps	
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	2002/95/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 (2 MOPP)		4000	Vac
	Input to Chassis (1 MOPP)		1500	Vac
	Output to Chassis		250	Vdc
Isolation Clearance	Output to Output		250	Vdc
	Primary to Secondary (Reinforced)	7		mm
Isolation Creepage	Primary to Chassis (Basic)	2.5		mm
	Primary to Secondary (Reinforced)	12		mm
Leakage Current	Primary to Chassis (Basic)	4		mm
	265Vac, 63Hz, 25°C		300	uA

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

ENVIRONMENTAL

Storage	Parameter	Details	Min	Max	Units
	Temperature			-40	+85
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		5	95	%
	Altitude		-200	3000	m
	Air Pressure		78	106	kPa
	Noise Level	Unit at idle		42	dBA
		Unit at full power, 25°C Measured 1m from fan intake		61	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				

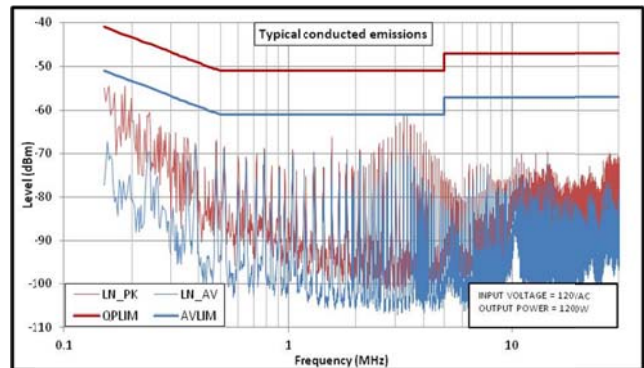
AGENCY APPROVALS

Standard	Details	File
IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2		UL: E316486
ANSI/AAMI ES 60601-1: 2005		
CSA C22.2 No. 60601-1-08		
EN 60601-1: 2006		
CE MARK - LVD 2011/65/EU		
CB certificate and report available on request		

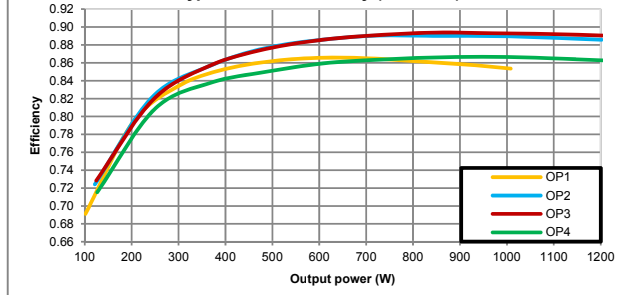
EMC

Emissions	Parameter	Standard	Level
	Radiated electric field	EN55011, EN55022, FCC	A (See Note) B
Conducted emissions	EN55011, EN55022, FCC	Compliant	
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

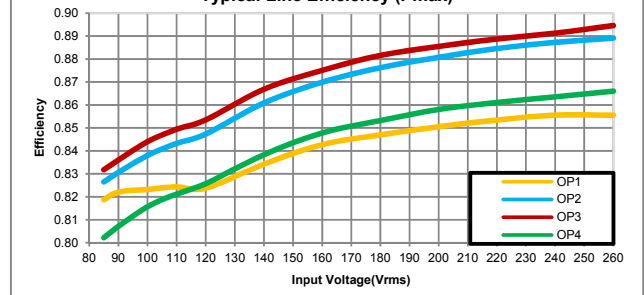
Note: To meet Class B radiated emissions the end user should add ferrites to I/P and O/P cables. Consult Vox Power for details.



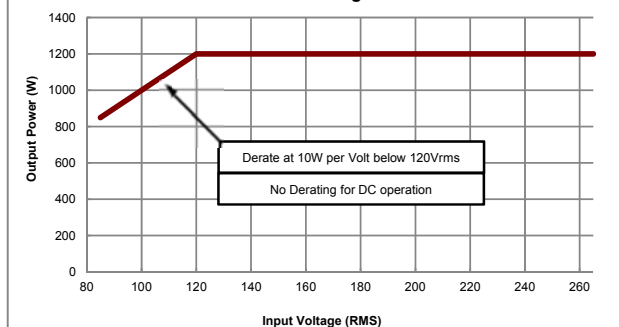
Typical Load Efficiency (220Vrms)



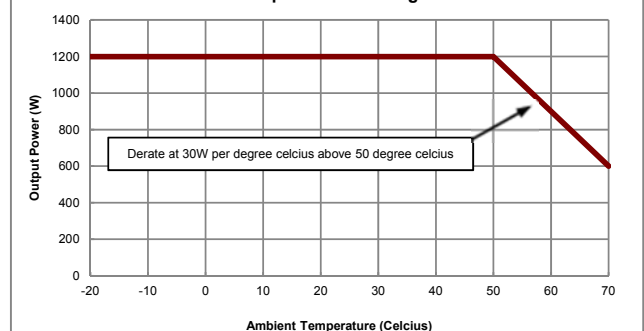
Typical Line Efficiency (Pmax)



Line Derating



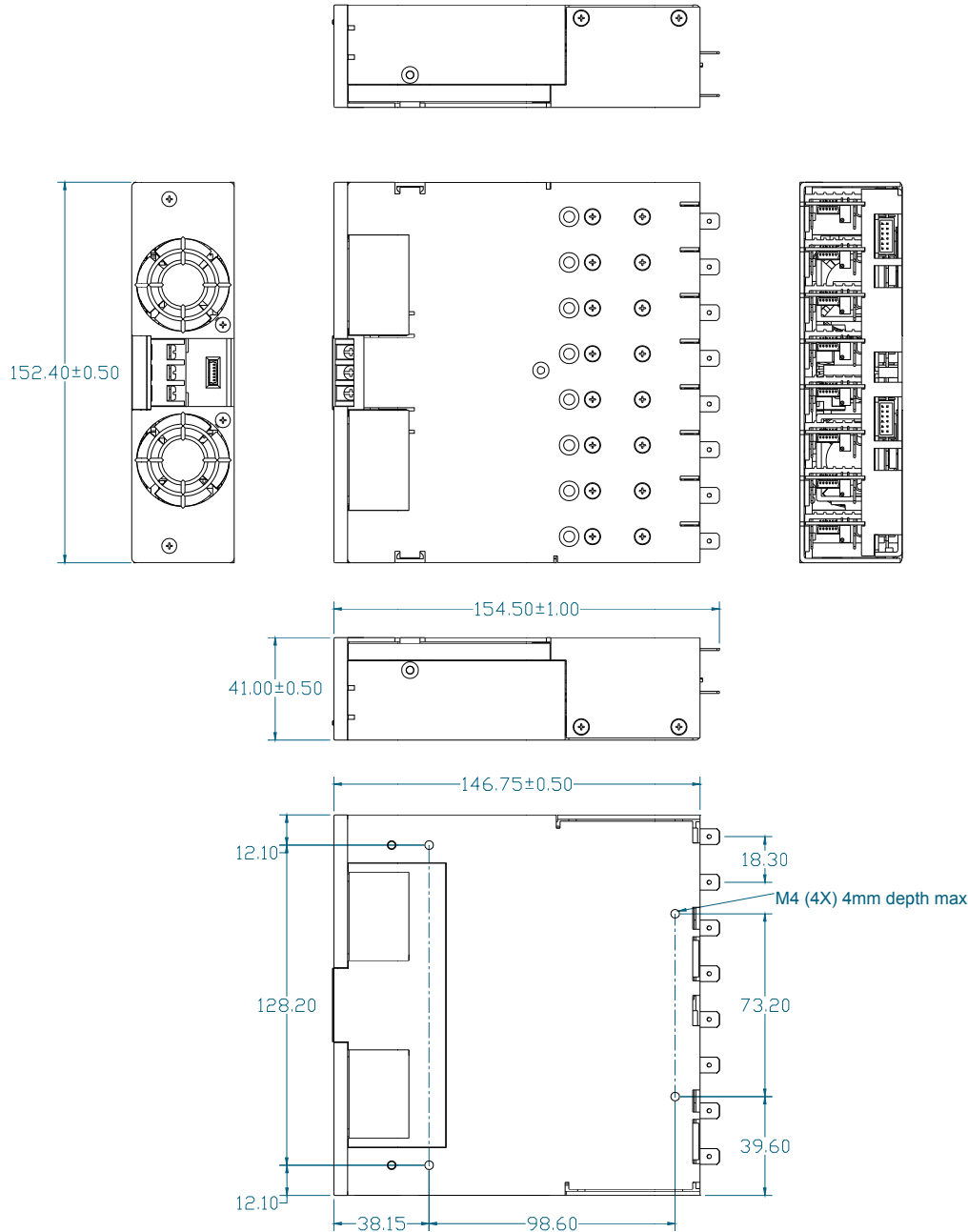
Temperature Derating



MECHANICAL DIMENSIONS AND MOUNTING SCREWS

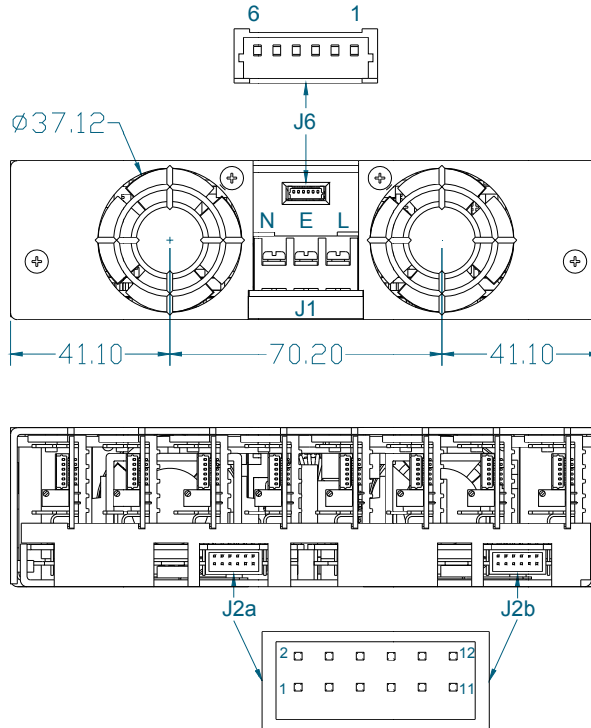
SCREWS

LOCATION	DETAILS	PENETRATION	TIGHTENING
MOUNTING	M4 x 4	4mm max, including chassis	0.75 NM
OUTPUT MODULES	M3 x 5, Countersink Posi, 16 Places	Defined by screw	0.75 NM
CHASSIS LID AND FACEPLATE	M3 x 5, Countersink Posi, 11 Places	Defined by screw	0.75 NM



CONNECTORS

PINOUTS		
J1		
Circuit	Details	
1	Live	
2	Earth	
3	Neutral	
J2a/b		
Circuit	Details	
1	Power Good	Slot A and E
2	Inhibit	Slot A and E
3	Power Good	Slot B and F
4	Inhibit	Slot B and F
5	Power Good	Slot C and G
6	Inhibit	Slot C and G
7	Power Good	Slot D and H
8	Inhibit	Slot D and H
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	

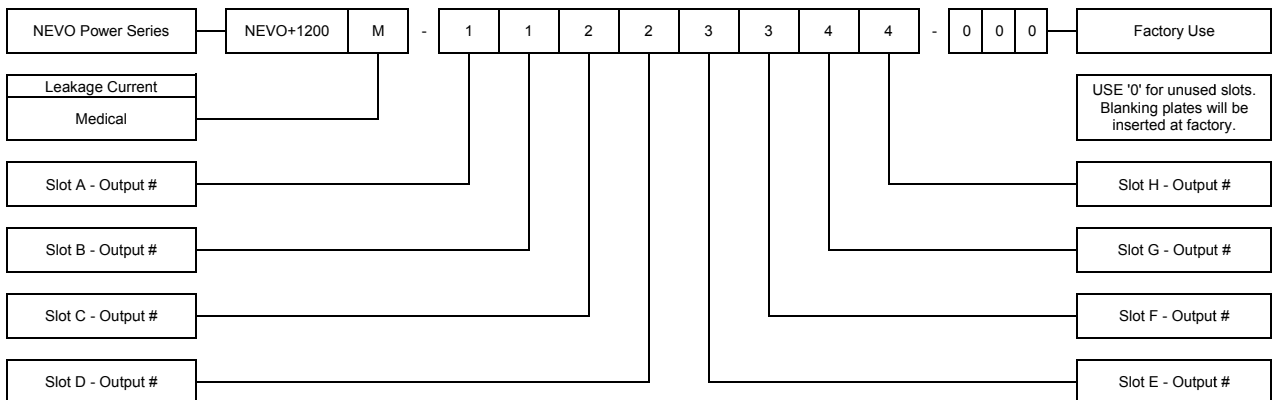


REF	DETAILS	MANUFACTURER	HOUSING	TERMINAL
J1	MAINS INPUT: 3 Pin, Barrier, 6-32 Steel Screws, 0.8 NM or 7IN LB Torque Cable 14-18AWG, 300V, 16A, 105°C, use appropriately rated fork or ring terminal.	MOLEX		
J2a/b	GLOBAL SIGNALS: 12 Pin, 2mm, with Friction Lock, 24-30 AWG	MOLEX	511101260	0503948051
J6	INPUT BIAS: OUTPUT SIGNALS: 6 Pin, 1.25mm, with Friction lock, 28-32 AWG	MOLEX	0510210600	0500588000

Notes

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

PART NUMBERING SYSTEM



Contact your Distributor or Vox Power for special configuration requirements. The factory may allocate a 3 or 4 digit suffix to identify such requirement.