



NEVO 600S/M SERIES

Installation Manual

PLEASE READ THIS INSTALLATION MANUAL CAREFULLY BEFORE INSTALLING THIS PRODUCT AND KEEP THIS MANUAL FOR FUTURE REFERENCE.

WARNINGS

HIGH VOLTAGE WARNING:

Dangerous voltages are present within the power supply. Covers may only be removed by qualified personnel when the power supply has been disconnected from the mains supply voltage for more than 3 minutes. Covers must be replaced and all screws secured properly before reconnecting to the mains voltage.

FUSING WARNING:

To ensure continued protection against risk of fire fuses must be replaced with the same type and rating of fuse. Replacements should be carried out by qualified personnel only.

SPECIFICATIONS

INPUT ELECTRICAL – NEVO 600

Parameter	Details	Min	Max	Units
AC Input Voltage	Nominally 100Vrms to 240Vrms	85	264	V rms
AC Input Frequency		47	63	Hz
DC Input Voltage	Standard Medical	120 120	370 300	V dc
Power Rating			600	Watts
Input Current	600 watt output at 180Vrms		4.5	Amps
Fusing	Fast acting		5	Amps

NOTES:

- NEVO 600 inputs can only be used with NEVO series output modules and must not be used for any other purpose.
- Use only a power source of the type indicated on the product label for the NEVO 600 inputs.
- For installation relating to UL60601-1 (Medical) a suitable fuse as described above must be provided in line with the Neutral inlet.
- The NEVO 600 input module is supplied with an integrated fan. Ensure that the inlet and outlet ventilation holes are not obstructed. Ensure there is adequate ventilation provided in the enclosure wherein or near which the power supply is mounted.

OUTPUT ELECTRICAL

Output	Vmin	Vnom	Vmax	I _{max}	P _{max}	P _{pk}
1	1.5V	5V	7.5V	25A	125W	187.5W ⁽⁴⁾
2	4.5V	12V	15V	15A	150W	225W ⁽⁴⁾
3	9V	24V	30V	7.5A	150W	225W ⁽⁴⁾

NOTES:

- NEVO output modules can only be used with NEVO 600 input modules and must not be used for any other purpose.
- Take care when removing or adding output modules from the NEVO 600 input so that components are not damaged in the process.
- When the output voltage is adjusted upwards, the output current must be decreased proportionally so that the unit does not exceed the P_{max} average power rating as stated in the table above.
- Peak power up to P_{pk} is available for not more than 5 seconds at a maximum of 50% duty cycle. The maximum rated average power must not be exceeded. Please refer to the full datasheet and user manual for more information on using the P_{pk} feature.

ENVIRONMENTAL

	Parameter	Details	Min	Max	Units
Storage	Temperature		-40	85	°C
	Humidity	Relative, non condensing	5	95	%
	Altitude		-200	5000	Meters
	Air Pressure		54	106	K Pa
Operation	Temperature	Full Power De-rate input and all outputs at 2.5% / °C	-20 50	50 70	°C
	Humidity	Relative, non condensing	5	95	%
	Altitude		-200	3000	Meters
	Air Pressure		78	106	K Pa
	Noise Level	Measured 1m from fan		45	d BA
	Shock	3000 bumps at 10G (16ms) half sine wave			
Vibration	1.5G, 10 to 200Hz sine wave, 20G for 15min in 3 axes				

SAFETY

Parameter	Details	Min	Max	Units
Isolation Voltage	Input to Output		4000	V ac
	Input to Chassis		1500	V ac
	Output to Chassis		250	V dc
	Output to Output		250	V dc
Isolation Clearance	Primary to Secondary(Reinforced)	7		mm
	Primary to Chassis (Basic)	2.5		mm
Isolation Creepage	Primary to Secondary(Reinforced)	12		mm
Leakage Current	Standard: 250Vac, 60Hz, 25 °C Medical: 250Vac, 60Hz, 25 °C		1500 300	u A

GENERAL INSTALLATION

Parameter	Details	Parameter	Details
Equipment class	I	Flammability rating	94V-2
Installation category	II	IP Rating	IP 10
Pollution degree	2	RoHS Compliance	Yes
Material group	IIIb (indoor use only)		

MECHANICAL

Parameter	Details
Size	77.7mm x 129.7mm x 41.0mm (all external dimensions ± 1.0mm)
Weight	360 grams + 60 grams per output module
Mounting	Bottom or Side mounting (See diagram details)

IMPORTANT INSTALLATION NOTES

This power supply is intended for use within equipment or enclosures which restricts access to authorized personnel only. The instructions in this manual and all warning labels on the product must be followed carefully.

SAFETY

The NEVO 600S is designed in accordance with safety requirements for UL60950-1, EN60950-1, IEC60950-1, CSA22.2 no. 60950-1 and LV Directive 2006/95/EC.

The NEVO 600M is designed in accordance with safety requirements for UL60601-1, EN60601-1, EN61010-1, IEC60601-1, IEC61010-1, CSA22.2 no 601-1 and LV Directive 2006/95/EC.

All power supplies must be installed correctly in a controlled environment which restricts access to any unauthorized personnel. Equipment and system manufacturers must protect service personnel against unintentional contact with the output terminals.

DERATINGS

Temperature - Input and output power must be de-rated by 2.5%/°C above 50°C.

Input Voltage - Input and output power must be de-rated by 0.55% / Vrms below 180Vrms (402W @ 120Vrms, 303W @ 90Vrms)

Always remember to take the appropriate deratings into consideration before specifying any power supply for an application.

HAZARDS

If series and/or parallel combinations of outputs exceed safe voltage and/or energy levels, the final equipment manufacturer must provide appropriate protection for both users and service personnel.

HEALTH AND SAFETY

To comply with section 6 of the health and safety at work act, a label that is clearly visible to service personnel must be placed on the final equipment, which warns that surfaces of the power supply may be hot and should not be touched when the product is operating.

FUSING

The power supply has internal single pole fusing in the L (Live) line.

SERVICING

The power supply contains no user serviceable parts. Repairs must be carried out by authorised personnel only.

APPROVAL LIMITATIONS – NORTH AMERICA

When this product is used with 180VAC–253VAC mains where no neutral is present, connect the two live wires to L (Live) and N (Neutral) on the input connector.

COOLING

For proper cooling of the power supply, the air intake and outlet must not be impeded. Allow 50mm clearance at both ends and position cabling appropriately.

EARTH TERMINAL MARKING

To comply with the requirements of UL60950-1, EN60950-1, IEC60950-1, CSA22.2 no. 60950-1, UL60601-1, EN60601-1, EN61010-1, IEC60601-1, IEC61010-1, CSA22.2 no 601-1 where the incoming wiring earth is intended for connection as the main protective earth conductor and where the terminals for such a connection is not supplied on a component or subassembly such as a terminal block, the user shall add an appropriate label displaying a protective earth symbol in accordance with 60417-2-IEC-5019 directly adjacent to the terminal. The label should be durable and legible and should withstand the 15s rub test as per UL60950-1 section 1.7.15.

WARRANTY

Contact your sales agent or Vox Power for product repairs. See Vox Power standard terms and conditions for warranty conditions.

PRODUCT LABELS

NEVO 600M and NEVO 600S

The external product label contains information relevant to the power system. The label contains input voltage, maximum input current, input frequency, maximum output power, fuse rating and type, serial number, approvals and product part number in format NEVO 6000-0000-000.

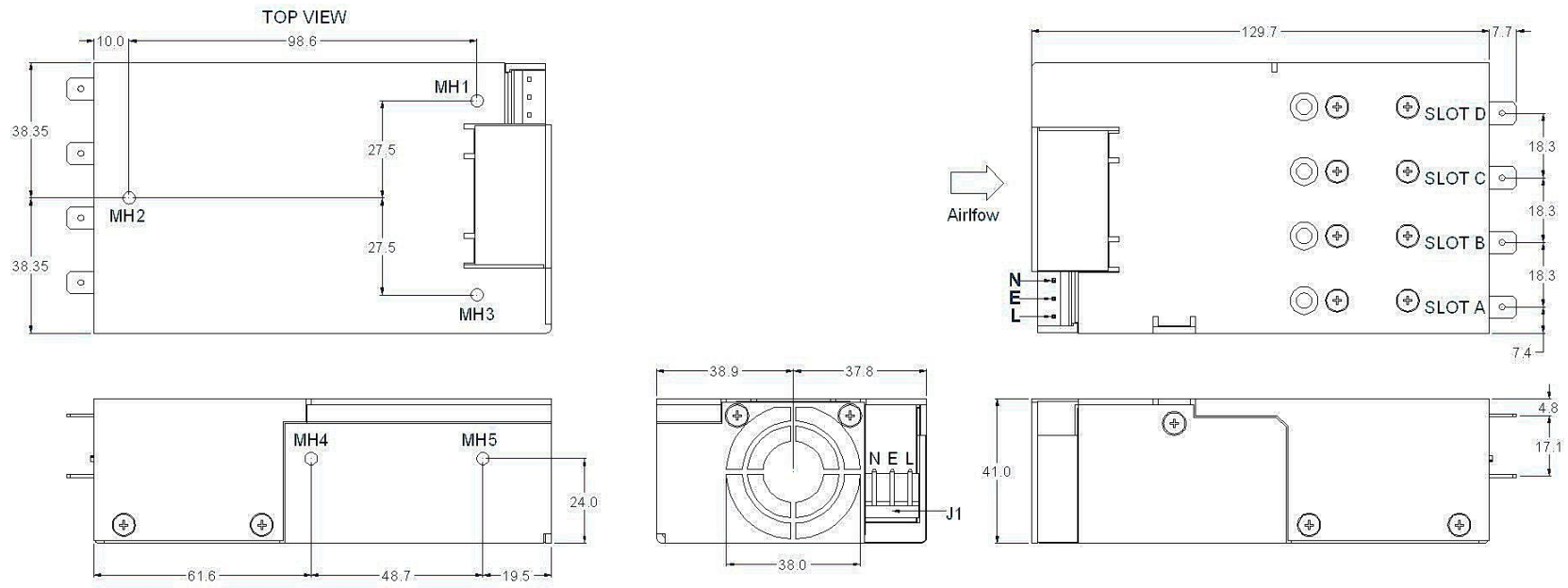
NEVO OUTPUT MODULES

Each output module label contains information relevant to that particular output. The label contains voltage adjustment range, maximum output current, serial number, approvals and part number in format OP.

OTHER

- A label warning that external surfaces are hot during operation and that the unit should be allowed to cool down properly should be placed on the unit where such a label is clearly visible.
- The NEVO 600 range is designed to comply with EMC standards but it does not imply that the end system will comply.
- To prolong the life of the unit use in dust free environment.
- Units can be damaged during transit. Contact your sales agent or Vox Power and DO NOT apply power to the unit in case of transit damage
- Always use adequately sized cables and ensure good crimp connections. Use cable supports to minimise stress on connectors.
- Avoid excessive shock or vibration.

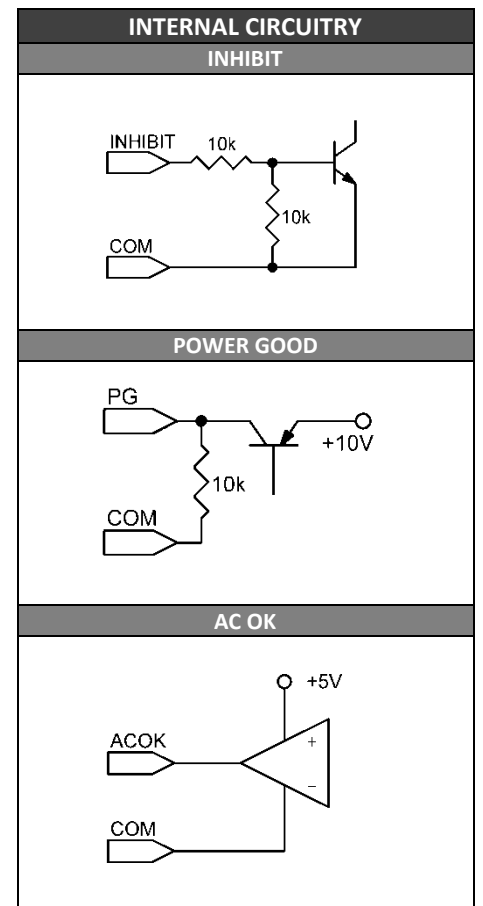
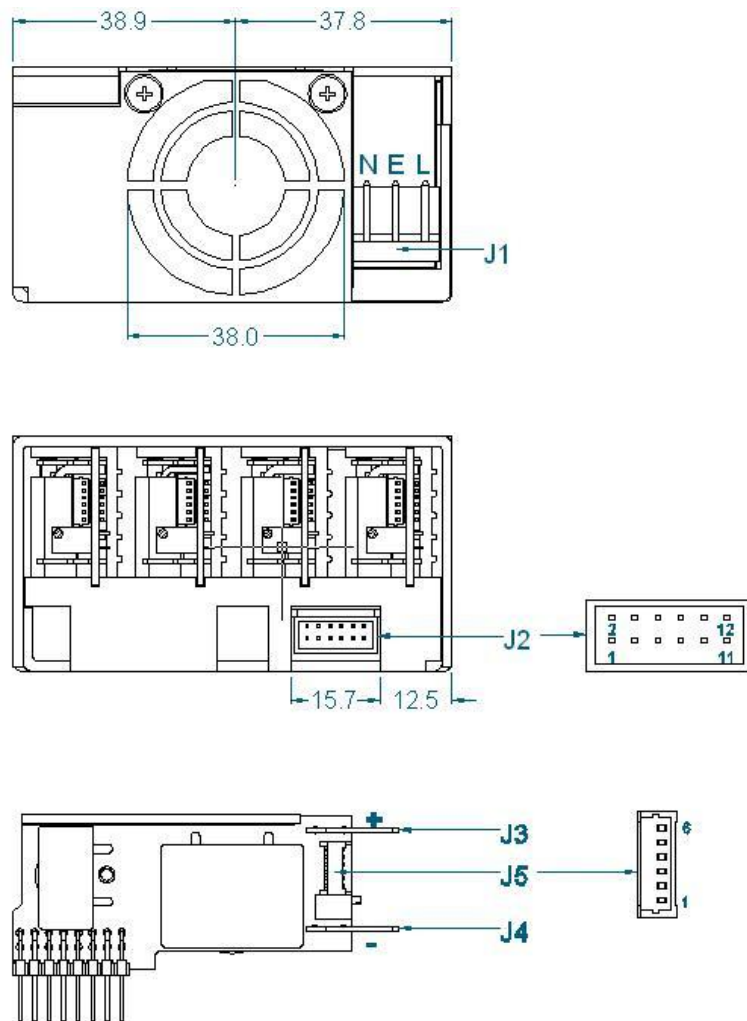
DIMENSIONS AND MOUNTING



Fixings	Details	Quantity	Type	Torque
Mounting	MH1, 2, 3, 4, 5 Mounting screws	Bottom - 3 Side - 2	M4 - Note: Maximum penetration depth is 4.00mm including chassis	1.50Nm
Outputs	Output Mounting screws	2 per Module	M3 x 5, Posi, CSK	0.75Nm
Cover	Top Cover Mounting screws	5	M3 x 5, Posi, CSK	0.75Nm
Fan	Fan Mounting screws	2	M3 x 24, Posi, CSK	0.75Nm

CONNECTORS AND PINOUTS

PINOUTS	
J1	
Circuit	Details
1	Live
2	Earth
3	Neutral
J2	
Circuit	Details
1	PG
2	Inhibit
3	PG
4	Inhibit
5	PG
6	Inhibit
7	PG
8	Inhibit
9	Global Inhibit
10	AC OK
11	+5V 200mA Bias supply
12	COM
J3	
Positive Output	
J4	
Negative Output	
J5	
Circuit	Details
1	- Sense
2	+ Sense
3	Voltage Control
4	Current Control/Share/Out
5	COM
6	+5V 10mA Bias supply

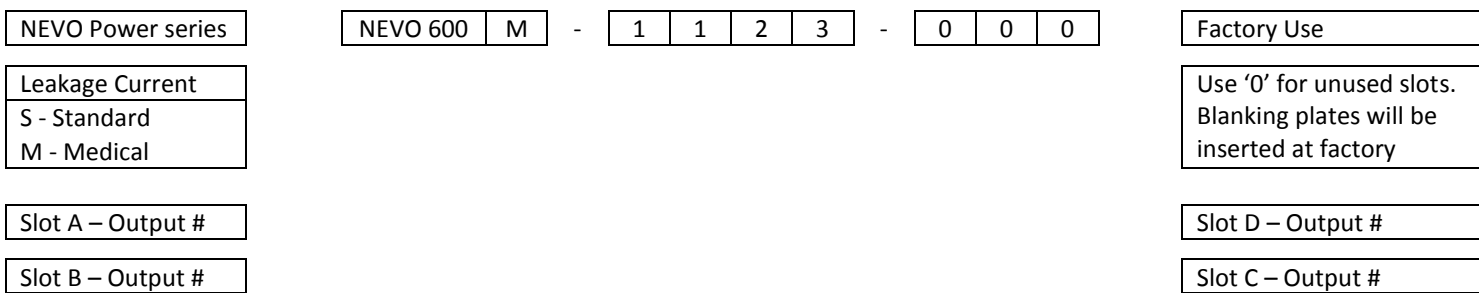


REF.	DETAILS	MANUFACTURER	HOUSING	TERMINAL
J1	Mains Input: 3 Way, 5.08mm with friction lock, 18-24AWG	Molex ⁽²⁾	0010013036	0008701031
J2	Global Signal: 12 Way, 2.00mm, 24-30 AWG	Molex ⁽²⁾	0511101260	0503948051
J2	Global Signal: IDT alternative	Molex ⁽²⁾	0875681273	N/A
J3/J4 ⁽¹⁾	Output Power tab: Tab size 6.35mm x 0.80mm	Various ⁽²⁾	N/A	N/A
J5	Output Signals: 6 Way, 1.25mm with friction lock, 28-32 AWG	Molex ⁽²⁾	01510210600	050058800

Notes:

- Terminal and wire current rating must exceed maximum short circuit output current. E.g. Output 1 = 25A * 1.25 = 31.25A
- Direct equivalents may be used
- All cables must be rated 105 °C min, equivalent to UL1015

PART NUMBERING SYSTEM



When initially ordering non-nominal voltage settings add "/Voltage" after each output # where a special voltage setting is required
E.g. If 3.30Vdc is required in slot B and all other slots require nominal voltages then use:

NEVO 600M - 1 - 1/3.30 - 2 - 3

The factory will then issue a 3 digit code for your specific configuration that can be used for all future orders of the same configuration
When ordering an input unit with no outputs inserted, simply order NEVO 600M or NEVO 600S