

# NEV600 SERIES

AC / DC Single & Multi Output: 100 ~ 600 Watts



## Features

- High Power Density 5" x 3" x 1U Footprint – 600 watts
- Field configurable
- One to four isolated outputs
- Zero load operation
- High efficiency up to 89%
- Universal input 85 ~ 264VAC
- Remote current / voltage programming
- Accurate current sharing between modules
- Current output signal
- International safety approvals
- **Medical approved models** - Option
- CE compliant

## General Specifications

<b>Input Voltage</b>	85 ~ 264VAC ( 120 ~ 370VDC ) 85 ~ 264VAC ( 120 ~ 300VDC Medical )
<b>Frequency</b>	47 ~ 63Hz ( contact office for 400Hz )
<b>Output Power</b>	600 watts at input >180VAC 380 watts at 120VAC
<b>Input Current</b>	4A at 180VAC input and 600W load
<b>Leakage Current</b>	1500µA ( industrial grade ) 300µA ( medical option )
<b>Input Fuse</b>	5A fast acting
<b>Efficiency</b>	Typically 86%, max 89%
<b>Input Idle Power</b>	23 watts ( all outputs fitted & disabled )
<b>Power Factor</b>	0.96 Typ, 0.99 maximum
<b>Hold up Time</b>	20mS at 180V input and 600W load
<b>UVLO</b>	78 ~ 84VAC Turn on only
<b>Over Temperature Protection</b>	Internally monitored, Latching 115 - 125°C
<b>Reliability</b>	Input module: 2FPMH ( 80% load 40°C ) Output modules: 1FP mH
<b>Isolation</b>	Input – Output: 4000vac Input – Chassis: 1500vac Output-Chassis / Output-Output: 250vdc
<b>Operating Temp.</b>	-20°C to +50°C at 100% load, derate to 300W at 70°C
<b>Humidity</b>	5-95% Non-condensing
<b>Noise Level</b>	45dBA at 1m from fan intake
<b>Shock</b>	3000 bumps at 10G ( 10ms ) half sine wave
<b>Vibration</b>	1.5G 10-200Hz sine wave, 20G for 15min in 3 axis random.
<b>Cooling</b>	On board fan
<b>Safety</b>	EN60950-1, UL60950-1, CSA60950-1
<b>EMC</b>	Radiated EN55011, EN55022 Level B Conducted: EN55011, EN55022 Level B
<b>Harmonics</b>	EN61000-3-2
<b>Flicker</b>	EN61000-3-3
<b>Electrostatic Discharge</b>	EN61000-4-2 ( 15kv air, 8kv contact )
<b>Radiated RFI</b>	EN61000-4-3

## Description

The **NEV** Series is a 600 watt modular and configurable power supply, offering unrivalled performance and flexibility.

Delivering up to 600 watts in a 5 x 3in x 1U package, the NEV is the ultimate power solution for applications where size and weight are vital factors.

Each unit consists of an input module, together with up to four isolated output modules.

These modules are fully isolated and have wide output voltage adjustment for further flexibility. In turn, these modules can be connected in series with other modules or in parallel to provide an unlimited number of single or multi output solutions.

Complete units therefore can be ordered and shipped within the same day, totally configured to customer specifications.

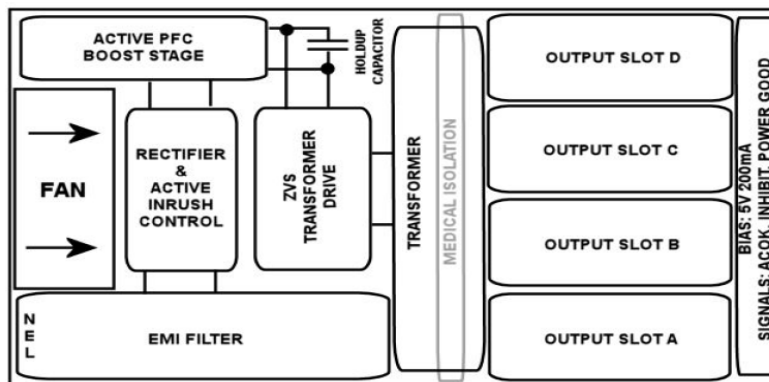
- **For more detailed information on the NEV series, consult our office.**

<b>Fast Transients</b>	EN61000-4-4
<b>Input Line Surge</b>	EN61000-4-5 ( 2KV L-E )
<b>Conducted RFI</b>	EN61000-4-6 ( 10KV )
<b>Voltage Dips</b>	EN61000-4-11 ( EN55024 )
<b>Dimensions</b>	138 x 77 x 41mm ( includes output spade terminals )
<b>Weight</b>	0.650Kg ( fully loaded )
<b>Signals</b>	
Bias Voltage:	5Vdc
Bias Current:	200mA
Power Good V	PNP open collector 10V
Power Good A	20mA
Inhibit V	2-15V
Inhibit A	0.2 -1.5mA
Global Inhibit V	3 – 15V
Global Inhibit A	0.6 – 3mA
AC_OK V	1- 4V
AC_OK A	10-20mA
AC_OK warning	5mS ( refer to manual )

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Output Module Specifications	Module 1	Module 2	Module 3	Module 4
Output Voltage ( Range )	5V ( 1.5 ~ 7.5 )	12V ( 4.5 ~ 15 )	24V ( 9 ~ 30 )	48V ( 18 ~ 58 )
Output Current	25A	15A	7.5A	3.75A
Output Power	125 watts	150 watts	150 watts	150 watts
Remote voltage programming: ref to manual	0% ~300% V nom	0% ~300% V nom	0% ~300% V nom	0% ~300% V nom
Peak Output Power ( 50% duty cycle )	187 watts < 5 secs	225 watts<5 secs	225 watts<5 secs	225 watts<5 secs
Load Regulation	50mV	100mV	150mV	300mV
Line Regulation: 25~75% load	0.1% of V nom	0.1% of V nom	0.1% of V nom	0.1% of V nom
Minimum Load	Zero	Zero	Zero	Zero
Temp. Coefficient	0.02% per °C	0.02% per °C	0.02% per °C	0.02% per °C
Ripple & Noise: 20MHz BW pk-pk	1% V nom	1% V nom	1% V nom	1% V nom
Transient Response 1A/μs recovery to within10% of Vset.	100μs	100μs	100μs	100μs
Turn on rise time / Overshoot	3.5ms max / 0.1%V	3.5ms max / 0.1%V	3.5ms max / 0.1%V	3.5ms max / 0.1%V
Current share accuracy	5% I <sub>max</sub>	5% I <sub>max</sub>	5% I <sub>max</sub>	5% I <sub>max</sub>
Holdup voltage	6V	12.5V	25V	50V
Isolation to Ground	250vdc	250vdc	250vdc	250vdc
Over current protection	105~125% of I <sub>max</sub>	105~125% of I <sub>max</sub>	105~125% of I <sub>max</sub>	105~125% of I <sub>max</sub>
Reverse voltage & current protection	Zero	Zero	Zero	Zero
Short circuit protection 3% duty cycle	Hiccup mode	Hiccup mode	Hiccup mode	Hiccup mode
Over voltage protection ( latching )	9.5V	18V	36V	66V
Over Temperature protection ( latching )	115~125°C	115~125°C	115~125°C	115~125°C
Remote Sense	Yes +2V / -1V max	Yes +2V / -1V max	Yes +2V / -1V max	Yes +2V / -1V max
Parallel Operation ( refer to manual )	Yes	Yes	Yes	Yes
Series Operation ( refer to manual )	Yes	Yes	Yes	Yes
Bias Supply ( 10mA max )	4.5 ~ 5.2V	4.5 ~ 5.2V	4.5 ~ 5.2V	4.5 ~ 5.2V
Power Good threshold	90% V set	90% V set	90% V set	90% V set
Wire Size	10 AWG	10 AWG	10 AWG	10 AWG
Size	60 x 35 x 17mm	60 x 35 x 17mm	60 x 35 x 17mm	60 x 35 x 17mm



NEV600	S	1	2	3	4	-	Factory use
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Leakage Current  
**S** = Standard  
**M** = Medical

Slot **A** Output Module 1

Slot **B** Output Module 2

For Factory set voltages a special part no will be allocated **Nxxx**

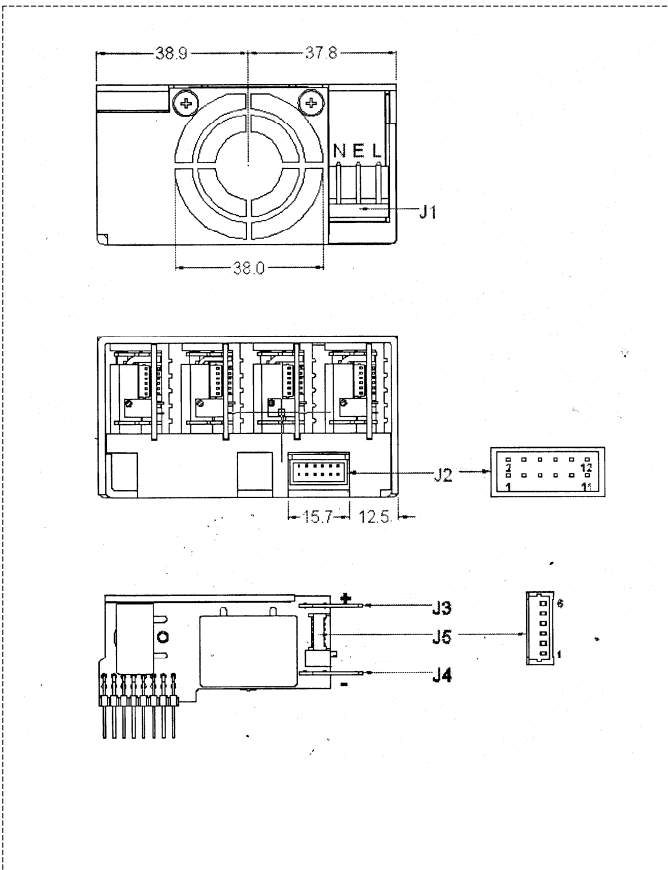
Output Module **4** Slot **D**

Output Module **3** Slot **C**

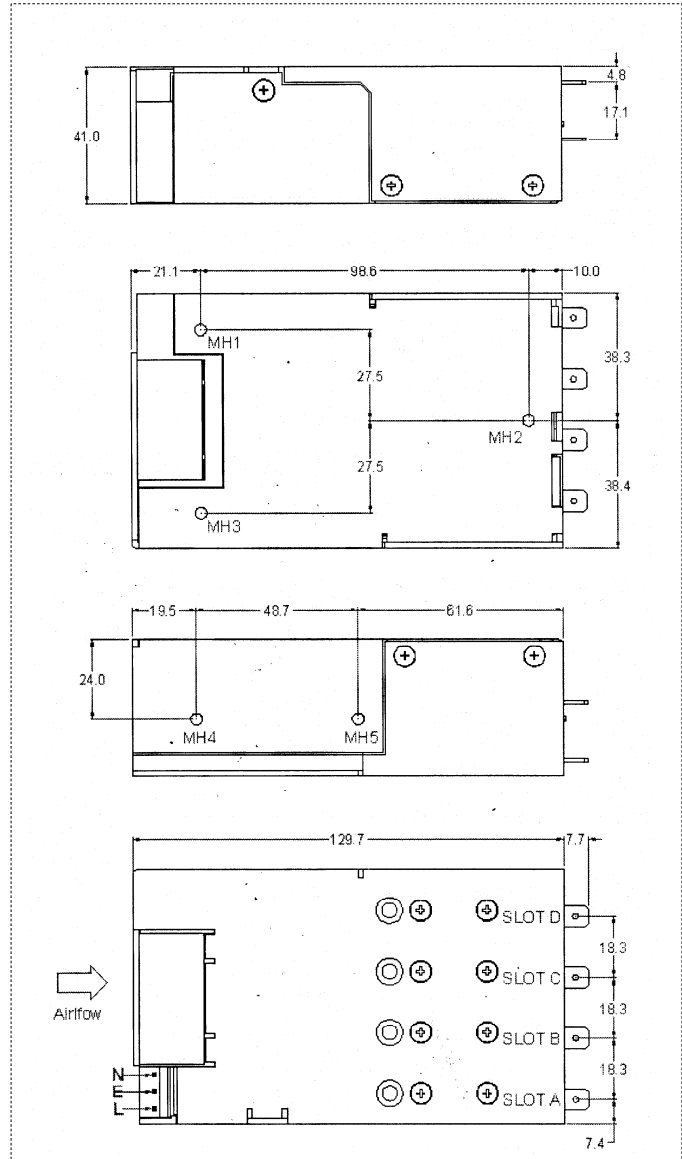
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## Output Module Details



## NEV600 Mechanical Details



### Module Pin Assignment

#### J1: Input AC

1	Live AC
2	Earth
3	Neutral AC

#### J2: Signals ( Main Chassis )

1	Power Good	Slot AA/BB/CC/DD
2	Inhibit	Slot AA/BB/CC/DD
3	Power Good	Slot AA/BB/CC/DD
4	Inhibit	Slot AA/BB/CC/DD
5	Power Good	Slot AA/BB/CC/DD
6	Inhibit	Slot AA/BB/CC/DD
7	Power Good	Slot AA/BB/CC/DD
8	Inhibit	Slot AA/BB/CC/DD
9	Global Inhibit	
10	AC OK	
11	+5V 200mA Bias Supply	
12	COM	

#### J3: DC +VE out

#### J4: DC -VE out

#### J5: Signals ( Modules )

1	- Sense
2	+ Sense
3	Voltage Control
4	Current Control / Share / Out
5	COM
6	+5V local bias supply

### Screw / Connector Details

	Manufacturer	Housing	Terminal
J1	Molex	10013036	8701031
J2	Molex	511101260	503948051
J3 / J4	N/A	6.35mm Spade	
J5	Molex	1510210600	50058800

Mounting Screws: M4 x 4mm maximum depth  
All dimensions shown in mm

**Note:** Refer to Instruction Manual for complete information and safety related notes