- High Efficiency
- 4 Outputs
- Fits 1U Applications
- 3 Year Warranty
- Open frame or cased

Key Market Segments & Applications

Instrumentation	Broadcast
Automation	ATE
Security	Industrial Computing
Network Servers and Routers	Lifesciences/Laboratory

NV-100

100 Watts
AC-DC flexible power solution

Features and Benefits

Features	Benefits
• UL, C-UL, VDE CE	• Easier system approvals
• 2:1 and 4:1 Range Input	• Less parts to inventory
• Low Profile	• Reduced radiated noise

INPUT			
Input Voltage	90 - 264Vac / 120 - 350Vdc	Input Frequency	45 - 63Hz (440Hz with reduced PFC - consult factory)
Input Harmonics	EN61000-3-2 compliant	Inrush Current	<40A at 25°C and 264Vac, (cold start)
Input Fuse	Time delay (not user accessible)	Power Factor	0.97 typical
Earth Leakage Current	123µA typical at 120Vac (60Hz), 257µA typical at 240Vac (60Hz)		

ISOLATION				
Input to Output	Reinforced	4.3kV (dc)		
Input to Earth	Basic	2.3 kV (dc)	Output to Earth	200 V (dc)

QUICK SELECTOR - preferred configurations

Model	CH1	CH2	CH3	CH4
NVA1-453TT	5V / 10A	3.3V / 8A	12V / 3A	-12V / 1A
NVA1-453FF	5V / 10A	3.3V / 8A	15V / 3A	-15V / 1A
NVA1-4G5TT	24V / 4A	5V / 5A	12V / 3A	-12V / 1A
NVA1-4G5FF	24V / 4A	5V / 5A	15V / 3A	-15V / 1A

Additional variants available (depending on volume) - 'Build to Order' - see below

AVAILABLE OUTPUTS

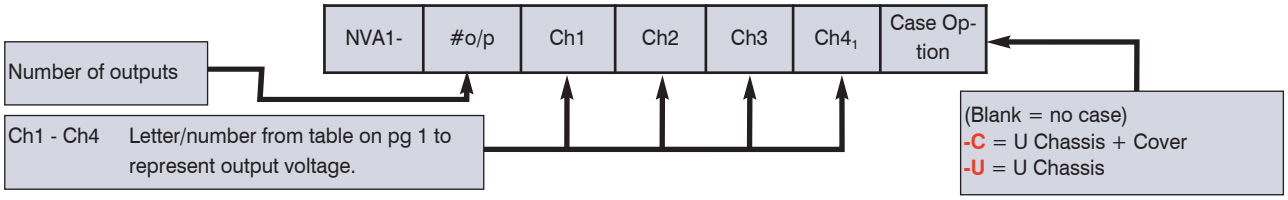
Channel 1	Adjustment Range	Channel 2	Adjustment Range	Channel 3	Adjustment Range	Channel 4[2]	Adjustment Range
5 5V / 10A[1]	4.75 - 5.25V	3 3.3V / 8A	3.14 - 3.46V	T 12V / 3A F 15V / 3A G 24.5V / 1.5A	Fixed Fixed Fixed	T -12V / 1A[3] F -15V / 1A[3]	Fixed Fixed
G 24V / 4A	23 - 25V	5 5V / 5A	3.3 - 5.5V	T 12V / 3A F 15V / 3A	Fixed Fixed	T -12V / 1A F -15V / 1A	Fixed Fixed

1. 5V ch 1/3.3V ch 2 combined power must not exceed 60W
2. Follow characters in red by 'P' for positive channel 4
3. If channel 3 = 24V (G), channel 4 must be 'P'

Other output options are available, please contact factory with your requirements.

OUTPUT SPECIFICATION		
Remote Sense	Yes	Channels 1 & 2 - Max 0.5V total line drop.
Total Regulation	1%	Including Line (for 90-264Vac input change), Load (for 0-100% load change) and Cross (for 0-100% load change on any other output) regulation. (5% for channels 3 & 4)
Ripple & Noise	1%	(or 50mV if higher) pk-pk, using EIAJ test method & 20MHz bandwidth 1.5% on channel 4 for 5V channel 1 configs.
Voltage Accuracy	±1%	±5% for Channels 3 & 4 (with Channel 1 set to nominal voltage)
Turn on Time	1.5s max	at 90 Vac & 100% rated output power
Efficiency	up to 90%	configuration dependent
Hold up	16ms min	at 90 Vac
Min Load	None	on any output. (For models with 12V or 15V Ch3, a load ≥ 1A is required on Ch3 to keep it in full regulation when Ch1+Ch2 output power ≥ 50W.)
Transient Response	<4%	of set voltage for 50% load change (in 50μs within the range 25 - 100% load)
Recovery	<500μs	for recovery to 1% of set voltage
Short circuit protection	Yes	
Over Temperature protection	Yes	
Over Voltage Protection	Yes	See Application Notes for details
Ch1 Good Signal	Optional	Contact factory for details

HOW TO CREATE A PRODUCT CODE



1. For Positive Output Channel 4, follow chosen letter by 'P'. For example, FP channel 4 = +15V / 1A

Confirm availability of created product code with the factory

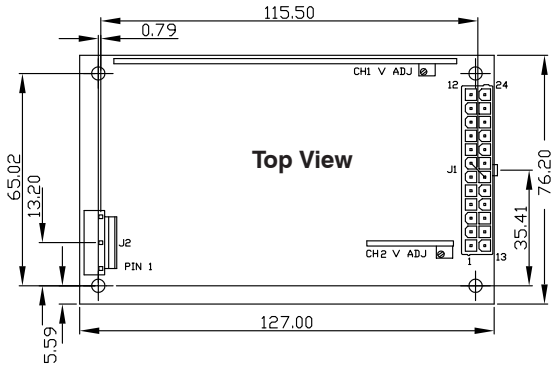
ENVIRONMENT	
Temperature	0°C to 50°C operational, -40°C to 85°C storage (max 12 months). Full load, with 2m/s air blown from input to output (approximately 10CFM)
Convection Rating	50W at 50°C. Max 50% output current on any output. See Application note for details
Derating	50°C to 70°C derate each output by 2.5% per °C
Low Temp Startup	-20°C
Humidity	5 - 95% RH non condensing
Shock	±3 x 30*g* shocks in each plane, total 18 shocks 30*g* shock = 11ms (+/-0.5msec), half sine Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987. Conforms to MIL-STD-810E/F, Method 516.5, Pro I, IV, VI
Vibration	Single axis 10 - 500 Hz at 2*g* (sweep and endurance at resonance) in all 3 planes Conforms to EN60068-2-6, IEC68-2-6 Conforms to MIL-STD-810E, Method 514.4, Pro I, Cat 1,9
Altitude	-200 to 3,000 metres operational (-200 to 5000m storage/transportation)
Pollution	Degree 2, Material group IIIb

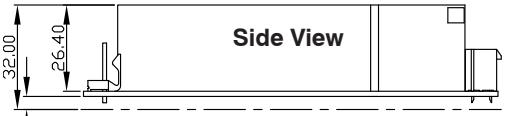
IMMUNITY EN61000-6-2:2001				Criteria
Electrostatic Discharge	EN61000-4-2	Level 4	Air discharge 15kV Contact discharge 8kV Not applicable to open frame units	A
Electromagnetic Field	EN61000-4-3	Level 3	(12V/m)	A
Fast / Burst Transient	EN61000-4-4	Level 3	ac input tested to 2.2kV dc output tested to 1.1kV	A
Surge Immunity	EN61000-4-5	Level 3	Common mode - 2.2kV Differential - 1.1kV	A
Conducted RF Immunity	EN61000-4-6	Level 3	(12V)	A
Power Frequency Magnetic Field	EN61000-4-8	Level 4	(30A/m)	A
Voltage Dips, Variations, Interruptions	EN61000-4-11	Class 3	Criteria B for 5 sec interruption	A

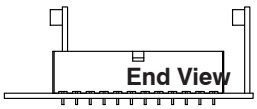
EMISSIONS EN61000-6-3:2001, EN60601-1-2:2001		
Radiated Electric Field	EN55011, EN55022	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B see application note for details
Conducted Emissions	EN55011, EN55022	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B
Conducted Harmonics	EN61000-3-2	Class A
Flicker	EN61000-3-3	Compliant - d_{max} only

SAFETY APPROVALS					
	Date	Amendments		Date	Amendments
EN 60950-1	2006		CSA 22.2 No 60950-1	2003	
UL 60950-1	2007		IEC 60950-1*	2005	
CE Mark	LV Directive 2006/95/EC (EN60950-1)				
** CB certificate and Report available on request*			*Check with factory for status of approvals*		

OUTLINE & CONNECTION DRAWINGS







J2

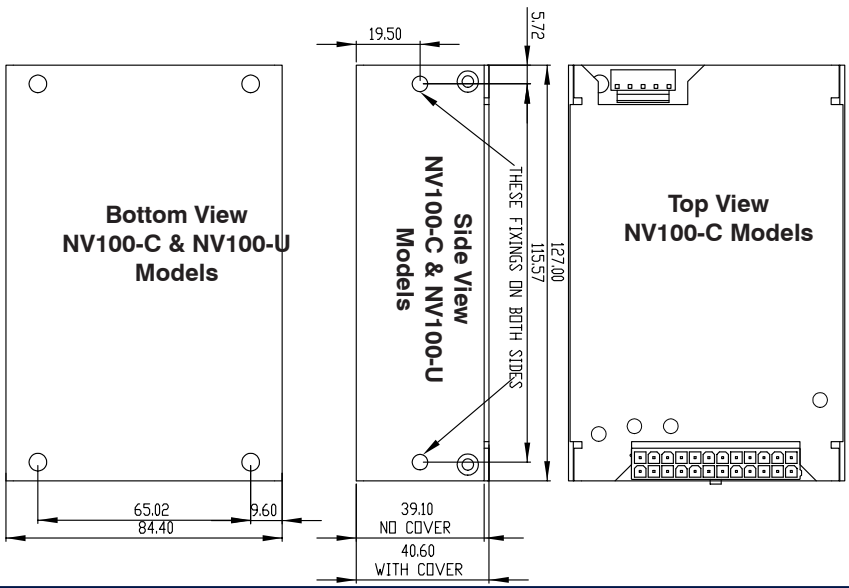
PIN	FUNCTION
1	EARTH
2	NOT CONNECTED
3	LIVE
4	NOT CONNECTED
5	NEUTRAL

J1

PIN	FUNCTION	PIN	FUNCTION
12	NOT CONNECTED	24	NOT CONNECTED
11	NOT CONNECTED	23	NOT CONNECTED
10	CH1 OUTPUT	22	CH1 POWER GOOD
9	CH1 OUTPUT	21	CH1 OUTPUT
8	CH1 OUTPUT	20	CH1 OUTPUT
7	+SENSE CH1	19	-SENSE CH1
6	0V COMMON	18	0V COMMON
5	0V COMMON	17	0V COMMON
4	CH2 OUTPUT	16	0V COMMON
3	CH2 OUTPUT	15	CH2 OUTPUT
2	+SENSE CH2	14	-SENSE CH2
1	CH3 OUTPUT	13	CH4 OUTPUT

MATING PARTS (MOLEX OR EQUIVALENT)

CONN	HOUSING	PINS
J1	39-01-2245	44476-3112
J2	09-50-8051	08-52-0113



Notes 1. All customer fixings M3 2. Maximum Penetration 4.5mm 3. Maximum torque 0.9Nm 4. All tolerances +/-0.5mm

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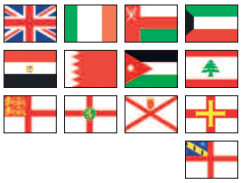

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