



NV-175

175/180/200 Watts

AC/DC Flexible Power Solution

- High Efficiency
- High Power Density (9.3W/in³)
- Up to 5 outputs
- No minimum load
- Fits 1U applications
- Medical Approval
- 3 Year Warranty
- Temperature controlled Fan Option

Key Market Segments & Applications

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

Features and Benefits

Features

- High Efficiency
- Low profile
- High Power Density

Benefits

- Minimises heat in system
- Fits 1U applications
- Less Space

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	Fast acting (not user accessible)	Power Factor	0.97 typical
Earth Leakage Current	123µA max at 120Vac (60Hz), 257µA max at 240Vac (60Hz) Worst case leakage current is less than 300µA at 264Vac, 63Hz (normal condition, 500µA Single Fault Condition)		

AVAILABLE OUTPUTS							
Channel 1	Adjustment Range	Channel 2 ₁	Adjustment Range	Channel 3 ₃	Adjustment Range	Channel 4 ₄	Adjustment Range
5 5V / 25A ₂	5 - 5.5V	1 1.8V / 15A	0.9 - 2.5V	T 12V / 5A F 15V / 5A G 24V / 2.5A O Omit	12 - 15V 12 - 15V 18 - 24V	T -12V / 1A	Fixed
		2 2.7V / 15A	2.5 - 3.3V			F -15V / 1A	Fixed
		3 3.3V / 15A	2.5 - 3.3V			3H -3.3V / 2A ₉	Fixed
O Omit		5H -5V / 2A ₉	Fixed				
T 12V / 15A	12 - 15V ₅	5 5V / 10A ₁₀	3.3 - 5.5V			TH -12V / 2A ₉	Fixed
F 15V / 12A	12 - 15V ₆	O Omit				FH -15V / 2A ₉	Fixed
G 24V / 7.5A	24 - 28V ₇	5 5V / 8A ₈	3.3 - 5.5V	O Omit		OH Fan supply only	
		O Omit				O Omit	

1. 1.8V, 2.7V, 3.3V channel 2 only available with 5V Channel 1
5V/10A channel 2 only available with 12V or 15V Channel 1
5V/8A channel 2 only available with 24V Channel 1.
2. Maximum combined output current from Ch1 & Ch2 = 25A
Models with 5V channel 1 are limited to 175W output power
3. Follow letters in red by 'Y' for negative output channel 3.
4. Follow letters in red by 'P' for positive output channel 4.
5. 12 - 12.5V if 24V channel 3 fitted.
6. 14.5 - 15V if 24V channel 3 fitted.
7. 24 - 24.5V if 5V channel 2 fitted
24 - 26V if 24V channel 3 fitted.
8. 7A max with '-F' or '-I' option.
9. 1.5A max with '-F' or '-I' option.
10. 9A max with '-F' or '-I' option.

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

ISOLATION			
Input to Output	Reinforced	4.3kV (dc)	Note: Basic for IEC/EN/UL/CSA60601-1. Medical Reinforced version available, contact factory for details
Input to Earth	Basic	2.3 kV (dc)	Output to Earth
			200 V (dc)

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
Ripple & Noise	1%	(or 50mV if higher) pk-pk, using EIAJ test method & 20MHz bandwidth
Voltage Accuracy	±1%	±4% for Channel 4 with 'T' or 'F' type outputs, +4%/-3% for all other Ch 4
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
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	Yes	Provides a Logic 'Low' signal after Channel 1 output is within 90% (±5%) of nominal.
Peak Output Power	200W	Single output units with 12V, 15V or 24V (T, F or G). Average output power must not exceed 180W over any 5 minute period.

HOW TO CREATE A PRODUCT CODE

NV1- #o/p Ch1 Ch2 Ch3₂ Ch4₃ Global Option Case Option Connector Option

←

(Blank = standard, vertical connector)
-R = Right angled connector
 (see handbook for -R connection and mechanical details)

Number of outputs (excluding standby supply) → #o/p

Ch1 - Ch4 Letter/number from table on pg 1 to represent output voltage. → Ch1, Ch2, Ch3, Ch4

(Blank = no case)
-C = U Chassis + Cover
-U = U Chassis
-F = End fan + case,
-I = End fan + case + IEC inlet,

(Blank = no option)
-N = 5V/2A
-N1 = 12V/1A
-N2 = 13.5/1A
-N3 = 5V/2A ATX compatible
-N4 = 12V/1A ATX compatible

- Needs 0H, 3H, 5H, TH or FH type channel 4.
- The fan speed is temperature dependent, ensuring optimum cooling and lowest audible noise.**
- For Negative Output Channel 3, follow chosen letter by 'Y'. For example, TY channel 3 = -12V / 5A
- For Positive Output Channel 4, follow chosen letter by 'P'. For example, TP channel 4 = +12V / 1A

Confirm availability of created product code with the factory

QUICK SELECTOR - preferred configurations						
Model	CH1	CH2	CH3	CH4	CH5	Global Option ₁
NV1-1T000	12V / 15A	-	-	-	-	No
NV1-1G000	24V / 7.5A	-	-	-	-	No
NV1-453TT	5V / 25A	3.3V / 15A	12V / 5A	-12V / 1A	-	No
NV1-453TT-N3	5V / 25A	3.3V / 15A	12V / 5A	-12V / 1A	5V / 2A	ATX (-N3)
NV1-453FF	5V / 25A	3.3V / 15A	15V / 5A	-15V / 1A	-	No
NV1-453FF-N3	5V / 25A	3.3V / 15A	15V / 5A	-15V / 1A	5V / 2A	ATX (-N3)
NV1-4G5TT	24V / 7.5A	5V / 8A	12V / 5A	-12V / 1A	-	No
NV1-4G5TT-N3	24V / 7.5A	5V / 8A	12V / 5A	-12V / 1A	5V / 2A	ATX (-N3)
NV1-4G5FF	24V / 7.5A	5V / 8A	15V / 5A	-15V / 1A	-	No
NV1-4G5FF-N3	24V / 7.5A	5V / 8A	15V / 5A	-15V / 1A	5V / 2A	ATX (-N3)

Above Units available on rapid delivery.

Additional variants available 'Build to Order' - see above

1. see page 3 for details of global option