

175-200W, 3" x 5" Power Supplies

Features

- ◆ 1-5 Outputs
- ◆ Up to 90% Efficient
- ◆ Active Power Factor Correction
- ◆ Universal Input (90 - 264VAC)
- ◆ No Minimum Loads
- ◆ Medical Approvals (Basic Insulation Input-Output)



Key Market Segments & Applications



Specifications		
Model		NV175
Input Voltage range	-	90 - 264VAC (47 - 63Hz, 440Hz with reduced PFC)
Inrush Current	A	<40A at 25C and 230VAC input, Cold Start
Power Factor Harmonics	-	EN61000-3-2 Compliant (0.97 typical)
Regulation Total	-	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	mV	1% or 50mV (Which ever is greater)
Efficiency	-	Up to 90%, configuration dependant
Minimum Load	A	None
Overcurrent Protection	-	>105%
Overvoltage Protection	V	CH1 & CH2, 120-130%, Cycle AC line to reset
Overtemperature Protection	-	Yes
Hold Up Time (Typ)	ms	>16ms at 90VAC Input
Leakage Current (max)	µA	123µA 120VAC 60Hz, 257µA 240VAC 60Hz, <300µA 264VAC 63Hz (Type Test results)
Remote Sense	-	On Outputs CH1 & CH2, 0.5V compensation maximum
DC Good	-	CH1 Only, High on Fail (90% of nominal ±5%)
Remote On/Off (Specify N option)	-	-N1 or -N2 option: TTL level high = Off, -N3 or -N4 option: open circuit = Off (except standby)
Operating Temperature (1)(7)	-	0 to +70°C. Derate linearly to 50% load from 50°C to 70°C
Storage Temperature	-	-40 to +85°C
Humidity (non condensing)	-	5 - 95% RH
Cooling	-	Forced air, 2m/s from input to output (Approx 10 CFM)
Isolation (4)	-	Input to Ground 2.3kVDC, Input to Output 4.3kVDC, Output to Ground 200VDC
Vibration (non operating)	-	Conforms to MIL-STD-810E, Method 514.4, Pro I, Cat 1,9; EN60068-2-6, IEC68-2-6
Shock	-	Conforms to MIL-STD-810E/F, Method 516.5, Pro I, IV, VI; EN60068-2-27, EN60068-2-47, IEC68-2-47, IEC68-2-47, JIS C0041-1987
Safety Agency Approvals	-	UL/CSA/IEC/EN 60950-1, UL/CSA/IEC/EN 60601-1, ANSI/AAMI ES60601-1, IEC/EN 61010-1, CE Mark
Immunity	-	EN61000-6-2:2001, EN61000-4-2, -3, -4, -5, -6, -8, -11
Conducted Emissions and Flicker	-	EN55022 Class B (per CISPR.22), EN61000-3-3
Radiated Emissions (2)	-	EN55022 Class A (per CISPR.22)
Weight (Typ)	g	250g
Size (without cover) (3)	in	3" x 5" x 1.25"; N option version 3.7" x 5" x 1.25"
Warranty	yrs	Three Years

(1) -20°C cold start

(2) See application note for Class B

(3) Including underside component leads

(4) Input-Output: Reinforced IEC60950-1, Basic IEC 60601-1.

See NV175-M for reinforced medical insulation

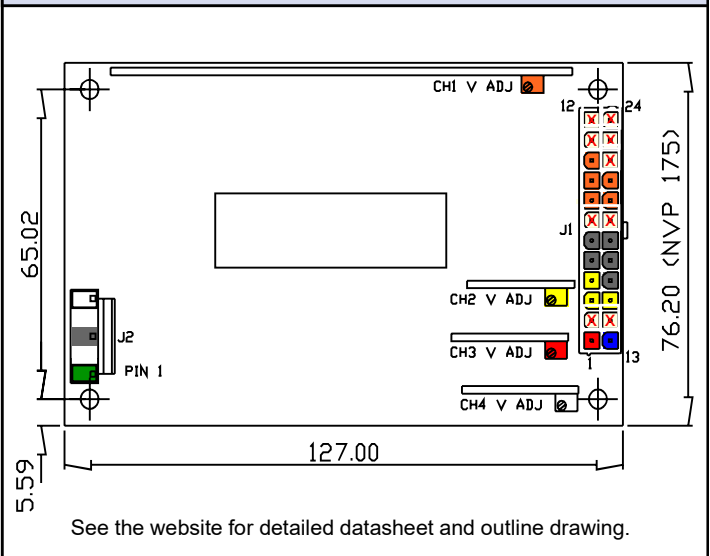
Stocked Models Quick Selector

Model	CH1 (5)	CH2 (5)	CH3	CH4	CH5 Stand By (6)	Global Option Type
NV1-1T000	12V/15A	-	-	-	-	-
NV1-1G000	24V/7.5A	-	-	-	-	-
NV1-453TT	+5V/25A	+3.3V/15A	+12V/5A	-12V/1A	-	-
NV1-453FF	+5V/25A	+3.3V/15A	+15V/5A	-15V/1A	-	-
NV1-4G5TT	+24V/7.5A	+5V/8A	+12V/5A	-12V/1A	-	-
NV1-4G5FF	+24V/7.5A	+5V/8A	+15V/5A	-15V/1A	-	-
NV1-453TT-N3	+5V/25A	+3.3V/15A	+12V/5A	-12V/1A	5V/2A	N3 (ATX)
NV1-453FF-N3	+5V/25A	+3.3V/15A	+15V/5A	-15V/1A	5V/2A	N3 (ATX)
NV1-4G5TT-N3	+24V/7.5A	+5V/8A	+12V/5A	-12V/1A	5V/2A	N3 (ATX)
NV1-4G5FF-N3	+24V/7.5A	+5V/8A	+15V/5A	-15V/1A	5V/2A	N3 (ATX)

Notes:

- (5) Maximum combined current from CH1 + CH2 = 25A
 5V CH1 models are limited to 175W max. All others 180W, 200Wpk 5 mins
 (6) CH5 is always on regardless of inhibit status. Peak rated at 2.5A, floating output
 (7) Convection cooled maximum ratings: CH1: 55W, CH2: 8.25W, CH3: 9W,
 CH4: 3W, 75.25W total. 0°C - 40°C temperature range
 (8) 12 - 12.5V if 24V CH3 is fitted.
 (9) 14.5 - 15.5V if 24V CH3 is fitted.
 (10) 24 - 24.5V if 5V CH2 is fitted.
 24 - 26V if 24V CH3 is fitted

Outline Drawing



Built to Order Model Selector

CH1	CH1(5)	Adjust.	CH2	Adjust.	CH3	Adjust.	CH4	Adjust.			
	Code	Range	CH2(5)	Code	Range						
+5V / 25A	5	5 - 5.5V	+1.8V / 15A	1	0.9 - 3.3V				-12V / 1A	T	Fixed
			+2.7V / 15A	2	2.5 - 3.3V				-15V / 1A	F	Fixed
			+3.3V / 15A	3	2.5 - 3.3V				-3.3V / 2A	3H	Fixed
			No output	0	-				-5V / 2A	5H	Fixed
						+12V / 5A	T	12 - 15V	-12V / 2A	TH	Fixed
						+15V / 5A	F	12 - 15V	-15V / 2A	FH	Fixed
						+24V / 2.5A	G	18 - 24V	Fan Supply only	0H	Fixed
+12V / 15A	T	12 - 15V (8)	+5V / 10A	5	3.3 - 5.5V	No output	0	-	No output	0	
+15V / 12A	F	12 - 15V (9)	No output	0	-	Add "Y" to code for negative polarity output			Add "P" to code for positive polarity output		
+24V / 7.5A	G	24 - 28V (10)	+5V / 8A	5	3.3 - 5.5V	Add "Y" to code for negative polarity output			Add "P" to code for positive polarity output		

How to Create a Model Number

NV1-	Enter number of outputs	CH1 Code	CH2 Code	CH3 Code	CH4 Code	Global Option	Case Option
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No Option
 AC Fail, Remote On/Off, 5V/2A Standby, CH1 DC Good
 AC Fail, Remote On/Off, 12V/1A Standby, CH1 DC Good
 AC Fail, Remote On/Off, 13.5V/1A Standby, CH1 DC Good
 ATX AC Fail+Remote On/Off, 5V/2A Standby, CH1 DC Good
 ATX AC Fail+Remote On/Off, 12V/1A Standby, CH1 DC Good

* A high output CH4 (3H, 5H, TH, FH) or fan supply 0H must be selected to provide fan option.

Blank
 N
 N1
 N2
 N3
 N4

Blank
 U
 C
 F
 I

No Case
 U Chassis
 U Chassis with Cover
 U Chassis, Cover and Fan*
 U Chassis, Cover and Fan*
 and IEC inlet

Example

NV1 3 G 5 0 3HP N C

Description: Triple output, 24V/7.5A, 5V/8A, 3.3V/2A, Global option N, U Chassis with cover.

Mating Parts (Molex)

CONN	Housing	Pins
J1	39-01-2245	45750-3112
J2	09-50-8051	08-52-0113

Other Industrial Products

NV	300 to 700W Medical, 1-6 outputs
SC40/60	40 to 80W single, dual & triple 3x5 footprint
ZWS/ZWSPAF	5 to 240W single output power supplies

For Additional Information, please visit
us.tdk-lambda.com/lp/products/nv-series.htm

