

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 | | 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 516.5, Pro I, IV, VI; EN60068-2-6, IEC68-2-6 |
| Shock | - | Conforms to MIL-STD-810E/F, Method 514.4, Pro I, Cat 1,9; 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

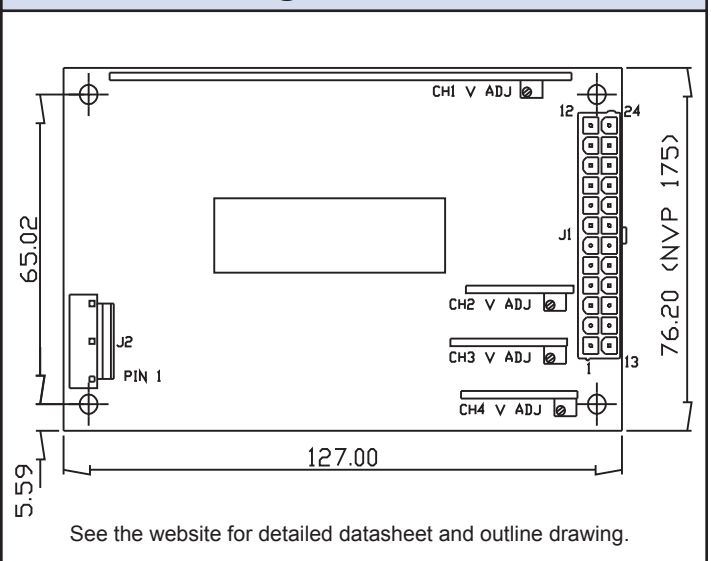
Stocked Models Quick Selector

| 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) Code | Adjust. Range | CH2 CH2(5) Code | Adjust. Range | CH3 CH3 Code | Adjust. Range | CH4 CH4 Code | Adjust. Range |
|--------------------------|-------------|------------------------------|--|------------------|---|--|------------------|---------------------------------------|
| +5V / 25A | 5 | 5 - 5.5V | +1.8V / 15A +2.7V / 15A +3.3V / 15A No output | 1 2 3 0 | 0.9 - 3.3V 2.5 - 3.3V 2.5 - 3.3V - | +12V / 5A +15V / 5A +24V / 2.5A No output | T F G 0 | 12 - 15V 12 - 15V 18 - 24V - |
| +12V / 15A +15V / 12A | T F | 12 - 15V (8) 12 - 15V (9) | +5V / 10A No output | 5 0 | 3.3 - 5.5V - | | | |
| +24V / 7.5A | G | 24 - 28V (10) | +5V / 8A No output | 5 0 | 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 |
|------|-------------------------|----------|----------|----------|----------|---------------|-------------|

| | | | |
|--|-------|-------|---------------------------|
| No Option | Blank | Blank | No Case |
| AC Fail, Remote On/Off, 5V/2A Standby, CH1 DC Good | N | U | U Chassis |
| AC Fail, Remote On/Off, 12V/1A Standby, CH1 DC Good | N1 | C | U Chassis with Cover |
| AC Fail, Remote On/Off, 13.5V/1A Standby, CH1 DC Good | N2 | F | U Chassis, Cover and Fan* |
| ATX AC Fail+Remote On/Off, 5V/2A Standby, CH1 DC Good | N3 | I | U Chassis, Cover and Fan* |
| ATX AC Fail+Remote On/Off, 12V/1A Standby, CH1 DC Good | N4 | | and IEC inlet |

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

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



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