

NFS80 Series Quad output

Total Power: 80 - 110W
Input Voltage: 90 - 264VAC
120 - 370VDC
of Outputs: Quad

Special Features

- 7.0 x 4.25 x 1.8 inch package
- Overvoltage and short circuit protection
- 80 W with free air convection
- Adjustable outputs
- Isolated output
- Floating fourth output
- EN55022, EN55011 conducted emissions level B
- UL, VDE and CSA safety approvals
- Available RoHS compliant
- 2 year warranty

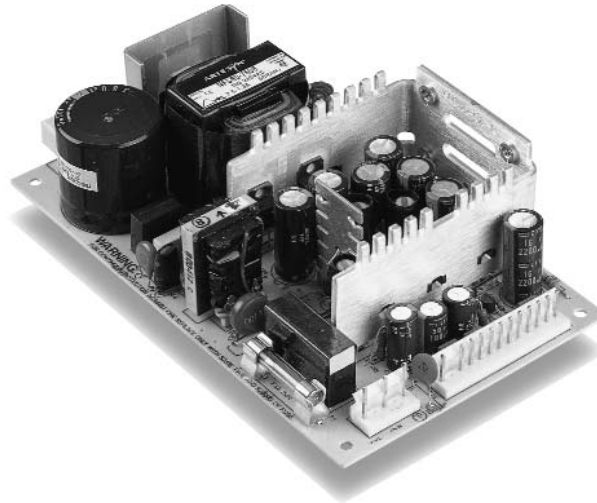
Safety

VDE0805/EN60950/
IEC950/IEC1010
File No. 10401-3336-0213

Licence No. 40014677

UL1950 File No. E136005

CSA C22.2 No. 950
File No. LR41062C



Rev.02.16.07
NFS80 Series
1 of 4

The NFS80 series is a 80 W universal input ac-dc power supply on a 7 x 4.25 inch card. The NFS80 series has two quad output models with a very high peak capability on the auxiliary outputs for drive and motor applications. The NFS80 provides 80 W of output power with free air convection cooling which can be boosted to 110 W with 20 CFM of forced air. Standard features include overvoltage and short-circuit protection. The series, with full international safety approval and the CE mark, meets conducted emissions EN55022 level B. The NFS80 series is designed for use in low power data networking, computer, telecom and industrial applications such as servers, PABX's, storage devices, vending machines and printers.



Specifications

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS

| | | |
|--|---|-----------------------------------|
| Output voltage adjustability | +5 V output on multi's Vout on singles | ±3.0% |
| Line regulation LL to HL, FL | Main output Auxiliary outputs | ±0.1% max. ±0.1% max. |
| Total regulation | (See Note 5) | See table |
| Overshoot/undershoot | At turn-on | 0% |
| Transient response | +5 V (1 A to 12 A) | ±150 mV peak 1 ms recovery |
| Temperature coefficient | All outputs | ±0.02%/°C |
| Overvoltage protection | +5 V output | 140% Vout max. |
| Minimum output current See derating curve | Main output Auxiliary output | 1 A 0 A |
| Output power limit | Primary power limit | 160 W Pin max. 110 W Pout min. |
| Short circuit protection | Yes with auto recovery | |

INPUT SPECIFICATIONS

| | | |
|----------------------------------|--|---------------------------|
| Input voltage range | Universal input | 90-264 Vac 120-370 Vdc |
| Input frequency range | 47-440 Hz | |
| Input surge current | 115 Vac, cold start 230 Vac, cold start | 19 A 38 A |
| Safety ground leakage current | 110 Vac, 60 Hz 230 Vac, 50 Hz | 0.2 mA 0.4 mA |

EMC CHARACTERISTICS ^(11,12)

| | | |
|---------------------|----------------------|------------------|
| Conducted emissions | EN55022,FCC part 15 | Level B |
| Radiated emissions | EN55022 FCC part 15 | Level B |
| ESD air | EN61000-4-2, level 3 | Perf. criteria 1 |
| ESD contact | EN61000-4-2, level 4 | Perf. criteria 1 |

EMC CHARACTERISTICS ^(11,12)

| | | |
|--------------------|----------------------|------------------|
| Surge | EN61000-4-5, level 3 | Perf. criteria 1 |
| Fast transients | EN61000-4-4, level 3 | Perf. criteria 1 |
| Radiated immunity | EN61000-4-3, level 3 | Perf. criteria 1 |
| Conducted immunity | EN61000-4-6, level 3 | Perf. criteria 1 |

GENERAL SPECIFICATIONS

| | | |
|--|--|------------------------------------|
| Hold-up time | 110 Vac, @ 80 W 110 Vac, @ 110 W 230 Vac, @ 80 W 230 Vac, @ 110 W | 35 ms 17 ms 140 ms 100 ms |
| Efficiency | 70% typical | |
| Isolation voltage | Input/output Input/chassis | 3000 Vac 1500 Vac |
| Switching frequency | 20-70 kHz | |
| Approvals and standards (See Note 10) | VDE0805, EN60950, IEC950 IEC1010, UL1950 CSA C22.2 No. 950 | |
| Weight | 600 g (21.18 oz) | |
| MTBF (See Note 7) | MIL-HDBK-217E @ 25 °C | 250,000 hours |

ENVIRONMENTAL SPECIFICATIONS

| | | |
|------------------------|--|---|
| Thermal performance | Operating, see curve Non-operating 50 °C to +70 °C natural convection 50 °C to +70 °C 20 CFM forced air cooling | 0 °C to +70 °C -40 °C to +85 °C Derate 2 W/°C Derate 2.75 W/°C |
| Relative humidity | 5% to 95% RH | |
| Altitude | Operating Non-operating | 10,000 feet max. 30,000 feet max. |
| Vibration (See Note 9) | 5-500 Hz | 2.4 G rms approx. |

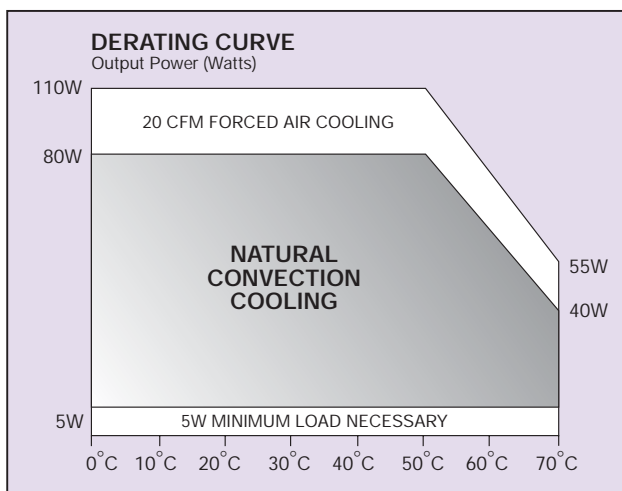
Specifications Contd.

Rev.02.16.07
NFS80 Series
3 of 4

| OUTPUT VOLTAGE | OUTPUT CURRENTS | | | RIPPLE ⁽⁴⁾ | TOTAL REGULATION ⁽⁵⁾ | MODEL NUMBER ^(12,13,E) |
|-------------------------|--------------------|---------------------|--------------------|-----------------------|---------------------------------|-----------------------------------|
| | MAX ⁽¹⁾ | PEAK ⁽²⁾ | FAN ⁽³⁾ | | | |
| +5 V (I _A) | 8 A | 20 A | 15 A | 50 mV | ±2.0% | NFS80-7602J |
| +24 V (I _B) | 2 A | 3 A | 2.5 A | 240 mV | +10.0/-5.0% | |
| +12 V | 2.5 A | 6 A | 3 A | 120 mV | ±3.0% | |
| ±12 V ⁽⁶⁾ | 2.5 A | 6 A | 3 A | 120 mV | ±3.0% | |
| +5 V (I _A) | 8 A | 20 A | 15 A | 50 mV | ±2.0% | NFS80-7606J |
| +24 V (I _B) | 2 A | 3 A | 2.5 A | 240 mV | +10.0/-5.0% | |
| +15 V | 2.5 A | 6 A | 3 A | 150 mV | ±3.0% | |
| ±15 V ⁽⁶⁾ | 2.5 A | 6 A | 3 A | 150 mV | ±3.0% | |

Notes

- 1 Natural convection cooling.
- 2 Peak output current lasting less than 60 seconds with duty cycle ≤ 10%. During peak loading, outputs may exceed total regulation limits.
- 3 Forced air cooling, 20 CFM @ 1 atmosphere.
- 4 50 MHz bandwidth, peak-to-peak, measured differentially.
- 5 Total regulation is defined as the static output regulation at 25 °C, including initial tolerance, line voltage within stated limits, load currents within stated limits, and output voltages adjusted to their factory settings. Also, for stated regulation on the +24 V output, I_A / I_B ≤ 5.
- 6 Pins 10 and 11 are a floating output, which can be referenced as either positive or negative. Pin 10 is positive with respect to pin 11. Either pin 10 or 11 must be connected to return (pins 4-7) for proper operation.
- 7 Derating curve is application specific for ambient temperatures > 50 °C, for optimum reliability, no part of the heatsink should exceed 110 °C and no semiconductor case temperature should exceed 115 °C.
- 8 Caution: Allow a minimum of 1 second after disconnecting the power when making thermal measurements.
- 9 Three orthogonal axes, random vibration, 10 minute test for each axis.
- 10 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 11 For EMI compliance unit may need to be mounted on a metal chassis.
- 12 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant. TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- 13 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at <http://www.artesyn.com/powergroup/products.htm> to find a suitable alternative.



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