

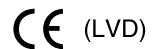
NLP65-3300J

Single output

- 5.0 x 3.0 inch card and 1.26 inch package (1U applications)
- EN61000-3-2 compliance option (HCC)
- Overvoltage and short circuit protection
- EN55022, EN55011 conducted emissions level B
- EN61000-4-2, -3, -4, -5, -6 immunity compliant
- Enclosure and cover kit options
- Available RoHS compliant



The NLP65-3300J is a 33 W universal input ac-dc power supply on a 5 x 3 inch card with a maximum component height of 1.26 inches for use in 1U applications. This model has the option of input harmonic current correction in the same package size making the series ideal for product designs that will need to comply with EN61000-3-2 legislation. The NLP65-3300J provides 33 W of output power with free air convection cooling. The NLP65, with full international safety approval and the CE mark, meets conducted emissions EN55022 level B and has immunity compliance to EN61000-4-2, -3, -4, -5, -6. The series is available in a factory installed enclosure with an IEC connector and output connector on flying leads plus a cover kit for self-installation is also available as an accessory. The NLP65 series is designed for use in low power data networking, computer and telecom applications such as hubs, routers, POS terminals, internet servers, cable modems and PABX's. This list is not exclusive as the generic feature set of the NLP65 series with industry standard output configurations provides a solution for most low power applications including many industrial applications.



2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

| | | |
|--------------------------|----------------------|-------------------------------------|
| Total regulation | Line and load | ±3.0% max. |
| Rise time | At turn-on | 1.0 s, max. @ 230 Vac |
| Transient response | Main output | 5.0% or 165 mV |
| | 25% step at 0.1 A/μs | max. dev., 1 ms max. recovery to 1% |
| Temperature coefficient | | ±0.02%/°C |
| Overvoltage protection | | 125%, ±10% |
| Short circuit protection | Cyclic operation | Yes, indefinite |
| Minimum output current | Single | (See Note 6) |

INPUT SPECIFICATIONS

| | | |
|----------------------------------|----------------------|------------------|
| Input voltage range (See Note 1) | Nominal | 85-264 Vac |
| | | 120-370 Vdc |
| Input frequency range | | 47-63 Hz |
| Input surge current (cold start) | 120 Vac | 17 A max. |
| | 230 Vac | 32 A max. |
| Safety ground leakage current | 120 Vac, 60 Hz | 0.7 mA |
| | 230 Vac, 50 Hz | 1.4 mA |
| Inrush current | 230 Vac | 32 A max. |
| Input current | 120 Vac, with PFC | 0.5 A rms |
| | 230 Vac, with PFC | 0.25 A rms |
| | 120 Vac, without PFC | 0.7 A rms |
| | 230 Vac, without PFC | 0.4 A rms |
| Input fuse | UL/IEC127 | 250 Vac S 3.15 A |

EMC CHARACTERISTICS (4, 10)

| | | |
|---------------------|--------------------------------|------------------|
| Conducted emissions | EN55022, FCC part 15, (Note 3) | Level B |
| Radiated emissions | EN55022, FCC part 15 | Level A |
| ESD air | EN61000-4-2, level 3 | Perf. criteria 1 |
| ESD contact | EN61000-4-2, level 4 | Perf. criteria 1 |
| 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 2 |
| Conducted immunity | EN61000-4-6, level 3 | Perf. criteria 2 |

GENERAL SPECIFICATIONS

| | | |
|--|----------------|---|
| Hold-up time | 230 Vac, 50 Hz | 78 ms @ 33 W |
| Efficiency | | 64% typical |
| Isolation voltage | Input/output | 3000 Vac |
| | Input/chassis | 1500 Vac |
| Switching frequency | Fixed | 100 kHz, ±5 kHz |
| Approvals and standards (See Notes 9 and 11) | | EN60950, VDE0805, IEC950 UL1950, CSA C22.2 No. 950 EN41003 (BABT) |
| Weight | | 283 g (10 oz) |
| MTBF | MIL-HDBK-217F | 150,000 hours min. |

ENVIRONMENTAL SPECIFICATIONS

| | | |
|---|---|------------------|
| Thermal performance (See Notes 1 and 2) | Operating temperature | 0 °C to +50 °C |
| | Non-operating | -40 °C to +85 °C |
| Relative humidity | 50 °C to 70 °C ambient, convection cooled | 0.65 W/°C |
| | Peak (0 °C to +50 °C, 60 s) | See table |
| Altitude | Operating | 10,000 feet max. |
| | Non-operating | 30,000 feet max. |
| Vibration (See Note 5) | 5-500 Hz | 2.4 G rms peak |
| Shock | per MIL-STD-810E | 516.4 Part IV |

NLP65-3300J

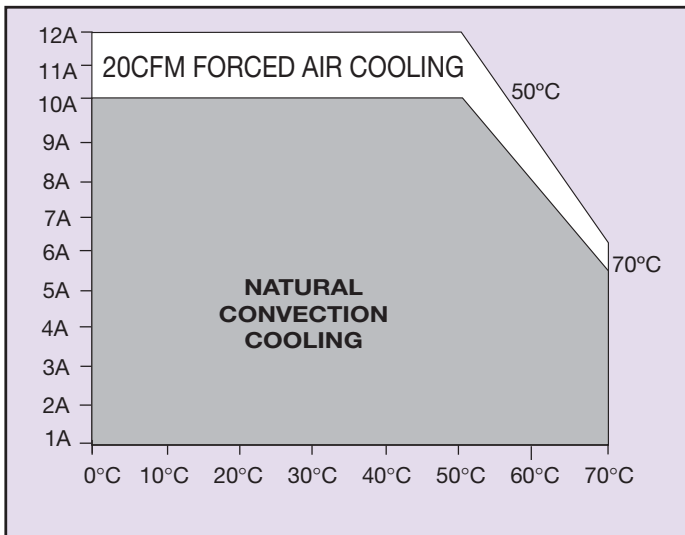
Single output

For the most current data and application support visit www.artesyn.com/powergroup/products.htm

| OUTPUT VOLTAGE | OUTPUT CURRENT | | RIPPLE ⁽³⁾ | TOTAL REGULATION | OVP | MODEL NUMBER ^(12,13) |
|----------------|----------------|---------------------|-----------------------|------------------|------------|---------------------------------|
| | MAX | PEAK ⁽²⁾ | | | | |
| +3.3 V | 10 A | 13 A | 50 mV | ±99 mV | 125%, ±10% | NLP65-3300J |

Notes

- When the input voltage is less than 90 Vac the operating temperature range is 0 °C to +40 °C. The ripple and regulation specifications may not be met.
- Peak output current lasting less than 60 seconds with duty cycle less than 5%. During peak loading, output voltage may exceed total regulation limits.
- Figure is peak-to-peak for convection power rating. Output noise measurements are made across a 20 MHz bandwidth using a 6 inch twisted pair, terminated with a 10 µF electrolytic capacitor and a 0.1 µF ceramic capacitor.
- For EMI compliance, the unit must be used in a system application where the earth pads are connected to a metal chassis.
- Three orthogonal axes, random vibration 10 minutes for each axes, 2.4 G rms 5 Hz to 500 Hz.
- To maintain stated regulation then:
 $I \geq 1.0 \text{ A}$
- For optimum reliability, no part of the heatsink should exceed 120 °C, and no semiconductor case temperature should exceed 130 °C.
- CAUTION: Allow a minimum of 1 second after disconnecting line power when making thermal measurements.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- For system EMI compliance, a ground choke may be required before connecting the ground wire to the chassis. It is recommended that, when used, this ground choke be placed as close as possible to the systems ac inlet to eliminate noise pick-up in the system.
- Require a minimum mounting stand-off of 0.25 inches (6.35 mm) in the end use product.
- 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.
- 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.



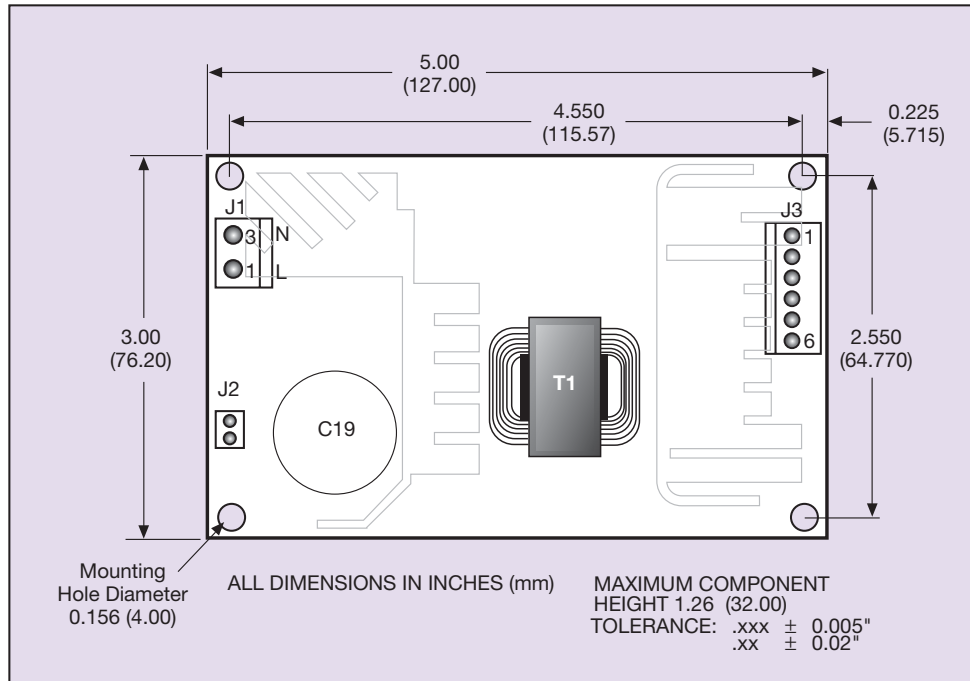
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Mechanical Notes

A All dimensions are in inches (mm).



| INPUT PIN CONNECTIONS | |
|-----------------------|---------------|
| J1 | |
| Pin 1 | AC Line |
| Pin 2 | No Pin |
| Pin 3 | AC Neutral |
| J2 | |
| Pin 1 | Safety Ground |

| OUTPUT PIN CONNECTIONS | |
|------------------------|--------|
| J3 | SINGLE |
| Pin 1 | Vout |
| Pin 2 | Vout |
| Pin 3 | Vout |
| Pin 4 | Return |
| Pin 5 | Return |
| Pin 6 | Return |

Input and output connectors

AC (J1) connector type
Molex 26-60-4030 type.

DC (J3) connector type
Molex 26-60-4060 type.

Mating connectors

AC (J1) mating connector type
Molex 09-50-3031 or equivalent with Molex 08-50-0105 or equivalent crimp terminals.

DC (J3) mating connector type
Molex 09-50-3061 with Triurcon 6838 or equivalent crimp terminals.

International Safety Standard Approvals

VDE0805/EN60950/IEC950 File No. 10401-3336-1096
Licence No. 93678

UL1950 File No. E136005

CSA C22.2 No. 950 File No. LR41062C

Designed to meet, approval pending

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