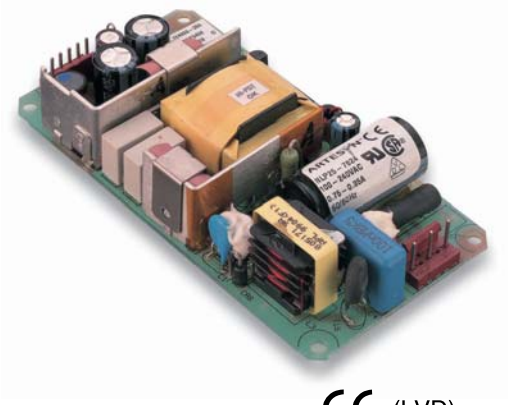
NLP25 Series

Single, dual and triple output

- **4.00 x 2.07 x 0.91 inch package**
- **Overvoltage protection and short circuit protection**
- **25 W with free air convection cooling**
- **EN55022, EN55011 conducted emissions level B**
- **UL, VDE, CSA and CCC safety approvals**
- **Available RoHS compliant**



The NLP25 series is a 25 W universal input ac-dc power supply on a 4.00 x 2.07 inch card with a profile of less than 1 inch. The availability of four single output and three multiple output models in an extremely small package size make the NLP25 ideal for use in space critical, low power communication applications requiring an off line power solution. The NLP25 provides 25 W of output power with free air convection cooling which can peak at 30 W for 60 seconds. Standard features include overvoltage and short circuit protection. The series, with full international safety approvals and the CE mark, meets conducted emissions EN55022 level B and complies to EN61000-4-2,-3,-4, -5 and -6 immunity standards. The NLP25 series is designed for use in off line, low power data networking and computer applications with limited space, such as hubs, routers, POS terminals, external disk storage and cable modems. The availability of 5 V outputs in single and multiple configurations provides a solution for a myriad of microprocessor applications.

CE (LVD)

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)	Main output Auxiliary outputs	±2.0% ±5.0%
Overshoot/undershoot	At turn-on	2.0%
Transient response	Main output 50% to 100% full load step	±5.0% max. dev., 1 ms recovery to 1.0%
Temperature coefficient		±0.02%/°C
Overvoltage protection	Main output	See table
Short circuit protection		Continuous with autorestart
Minimum output current		See table

INPUT SPECIFICATIONS

Input voltage range	Universal input	90-264 Vac 127-375 Vdc
Input frequency range		47-440 Hz
Input current	90 Vac 230 Vac	0.75 A rms max. 0.35 A rms max.
Safety ground leakage current	120 Vac, 60 Hz 230 Vac, 50 Hz	0.2 mA 0.4 mA

EMC CHARACTERISTICS

Radiated emissions	EN55022/11, FCC part 15	Level A
Conducted emissions	EN55022/11, FCC part 15	Level B
Electrostatic discharge	EN61000-4-2	Level 2
Electrical fast transients/bursts	EN61000-4-4	Level 3
Surge susceptibility	EN61000-4-5	Level 3
RF field susceptibility	EN61000-4-3	Level 3
RF conducted disturbance	EN61000-4-6	Level 3

GENERAL SPECIFICATIONS

Hold-up time	110 Vac @ full load	5 ms typ.
Efficiency	110 Vac @ full load	70% typ.
Isolation voltage	Input/output Input/chassis	3000 Vac 1500 Vac
Switching frequency	Fixed	60 kHz, ±10 kHz
Approvals and standards (See Notes 4, 8)		EN60950, IEC950 VDE0805, UL1950, CCC60950 CSA C22.2 No. 950
Weight		115 g (4 oz)
MTBF	MIL-HDBK-217F	150,000 hours min.

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Notes 7, 8)	Operating ambient, FL Non-operating 0 °C to 50 °C, ambient, convection cooled Peak	0 °C to +50 °C -40 °C to +85 °C Full load See Note 1
Relative humidity	Non-condensing	5% to 95% RH
Altitude	Operating Non-operating	10,000 feet max. 30,000 feet max.
Vibration (See Note 6)	5-500 Hz	2.4 G rms peak
Shock	MIL-STD-810E	516.4 Part IV

NLP25 Series

Single, dual and triple output

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

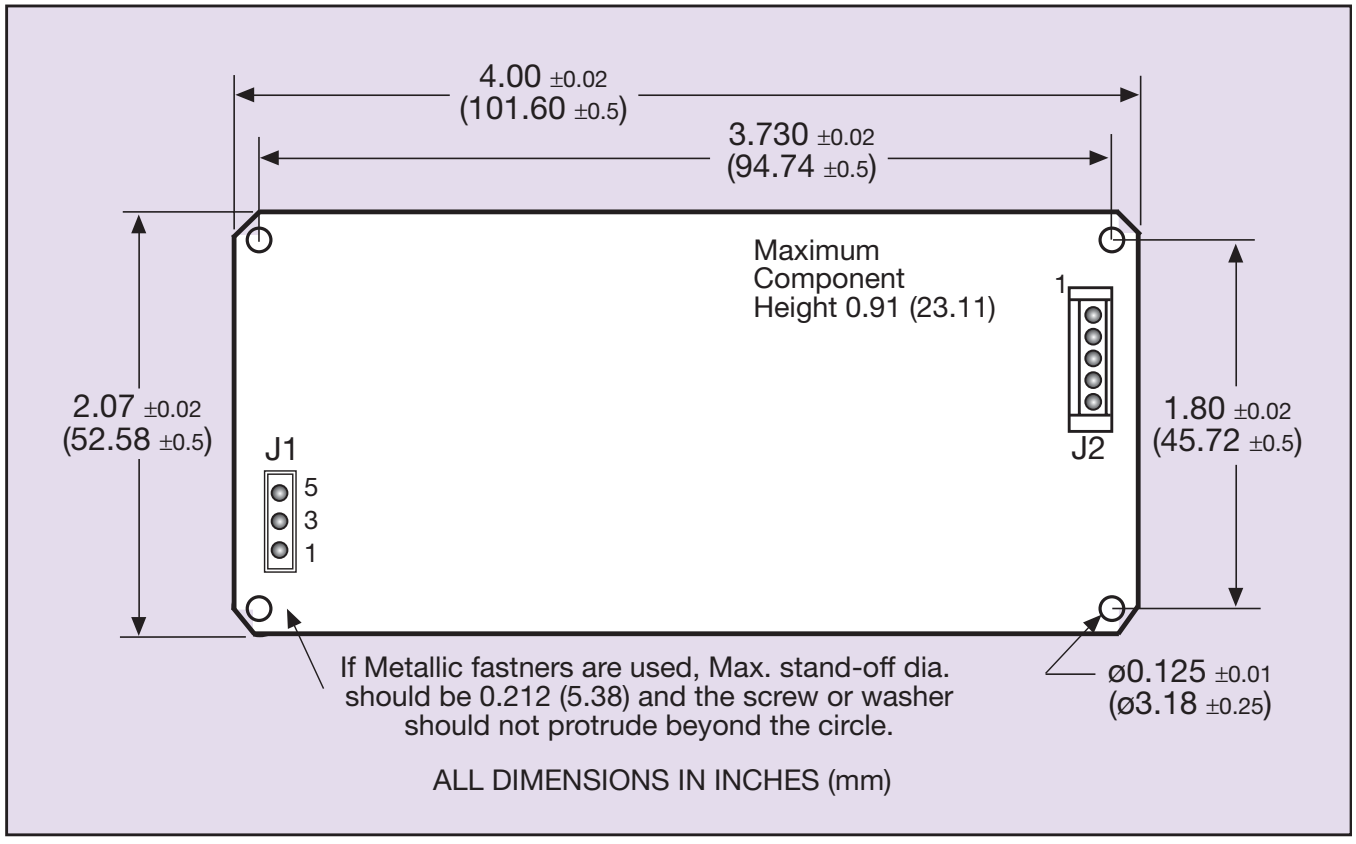
OUTPUT POWER	OUTPUT VOLTAGE	OUTPUT CURRENT MIN (3)	OUTPUT CURRENT MAX	OUTPUT CURRENT PEAK (1)	RIPPLE (2)	OVP THRESHOLD (5)	TOTAL REGULATION (3)	MODEL NUMBER (9,10,11)
20.8 W	+5 V (I_A)	0.2 A	2 A	2.5 A	50 mV	5.6-6.9 V	±2.0%	NLP25-7608J
	+12 V (I_B)	0.1 A	0.8 A	1.2 A	120 mV		±5.0%	
	–12 V (I_C)	0 A	0.1 A	0.15 A	50 mV		±5.0%	
20.1 W	+5 V (I_A)	0.2 A	2 A	2.5 A	50 mV	5.6-6.9 V	±2.0%	NLP25-7607J
	+12 V (I_B)	0.1 A	0.8 A	1.2 A	120 mV		±5.0%	
	–5 V (I_C)	0 A	0.1 A	0.15 A	50 mV		±5.0%	
19.6 W	+5 V (I_A)	0.2 A	2 A	2.5 A	50 mV	5.6-6.9 V	±2.0%	NLP25-7629J
	+12 V (I_B)	0.1 A	0.8 A	1.2 A	120 mV		±5.0%	
25 W	+5 V	0 A	5 A	6 A	50 mV	5.6-6.9 V	±2.0%	NLP25-7605J
25 W	+12 V	0 A	2.08 A	2.5 A	120 mV	14-16.7 V	±2.0%	NLP25-7612J
25 W	+24 V	0 A	1.04 A	1.25 A	150 mV	29-34.2 V	±2.0%	NLP25-7624J
25 W	+48 V	0 A	0.52 A	0.6 A	150 mV	55-60 V	±2.0%	NLP25-7617J

Notes

1. Peak output current lasting less than 60 seconds with duty cycle less than 5.0%. During peak loading, output voltage may exceed total regulation limits.
2. 20 MHz bandwidth, peak to peak, measured differentially with a 12 inch twisted pair of number 16 AWG copper wire, terminated with a 47 µF capacitor of proper polarity and voltage rating.
3. Total regulation is defined as the static output regulation at 25 °C, including initial tolerance, line voltage within stated limit, load current within stated limit, and output voltage adjusted to their factory settings. To achieve specified regulation on multiple output models, minimum loads are required on V(A) and V(B) as outlined in above table.
4. To maintain user-system safety approvals, the input power cable must be appropriately rated and approved.
5. Main output voltage is protected by a Zener diode.
6. Three orthogonal axes, random vibration 10 minutes for each axes, 2.4 G rms 5 Hz to 500 Hz.
7. CAUTION: Allow a minimum of 5 seconds after disconnecting line power when making thermal measurements.
8. This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
9. All models of the NLP25 series are floating output except for the NLP25-7612J unit. The NLP25-7612J unit has its 0 Vdc output (return on J2 pins 2 and 4) directly connected to the incoming earth/ac ground. For the NLP-7612J floating output please consult Artesyn Technologies.
10. 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.
11. 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.

OUTPUT PIN CONNECTIONS			
J2	SINGLE	DUAL	TRIPLE
Pin 1	V (A)	No Connection	V (C)
Pin 2	Return	Return	Return
Pin 3	V (A)	V (A)	V (A)
Pin 4	Return	Return	Return
Pin 5	V (A)	V (B)	V (B)

INPUT PIN CONNECTIONS J1	
Pin 1	AC Ground
Pin 3	AC Line
Pin 5	AC Neutral



Input and output connectors

AC (J1) connector type
Molex 22-23-2051 or equivalent.

DC (J2) connector type
Molex 22-23-2051 or equivalent.

Mating connectors

AC (J1) mating connector type
Molex 22-01-2057 with Molex 08-52-0123 crimp terminals or equivalent.

DC (J2) mating connector type
Molex 22-01-2057 with Molex 08-52-0123 crimp terminals or equivalent.

International Safety Standard Approvals

VDE0805/EN60950/IEC950 File No. 10401-3336-0118
Licence No. 104743

UL1950 File No. E136005

CSA C22.2 No. 950 File No. LR41062

China Compulsory Certification 60950

Datasheet © Artesyn Technologies® 2005
The information and specifications contained in this datasheet are believed to be correct at time of publication. However, Artesyn Technologies accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.