NLP25 Series

Single, dual and triple output

ARTESYN TECHNOLOGIES

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

The NLP25 series is a 25W 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 25W of output power with free air convection cooling which can peak at 30W 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 5V 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., 1ms 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 to 264VAC 127 to 375VDC
Input frequency range		47Hz to 440Hz
Input current	90VAC 230VAC	0.75A rms max. 0.35A rms max.
Safety ground leakage current	120VAC, 60Hz 230VAC, 50Hz	0.2mA 0.4mA

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	110VAC @ full load	5ms typ.
Efficiency	110VAC @ full load	70% typ.
Isolation voltage	Input/output Input/chassis	3000VAC 1500VAC
Switching frequency	Fixed	60kHz, ±10kHz
Approvals and standards (See Notes 4, 8)		EN60950, IEC950 VDE0805, UL1950 CSA C22.2 No. 950
Weight		115g (4oz)
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)	5Hz to 500Hz	2.4G rms peak
Shock	MIL-STD-810E	516.4 Part IV

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ARTESYN TECHNOLOGIES

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

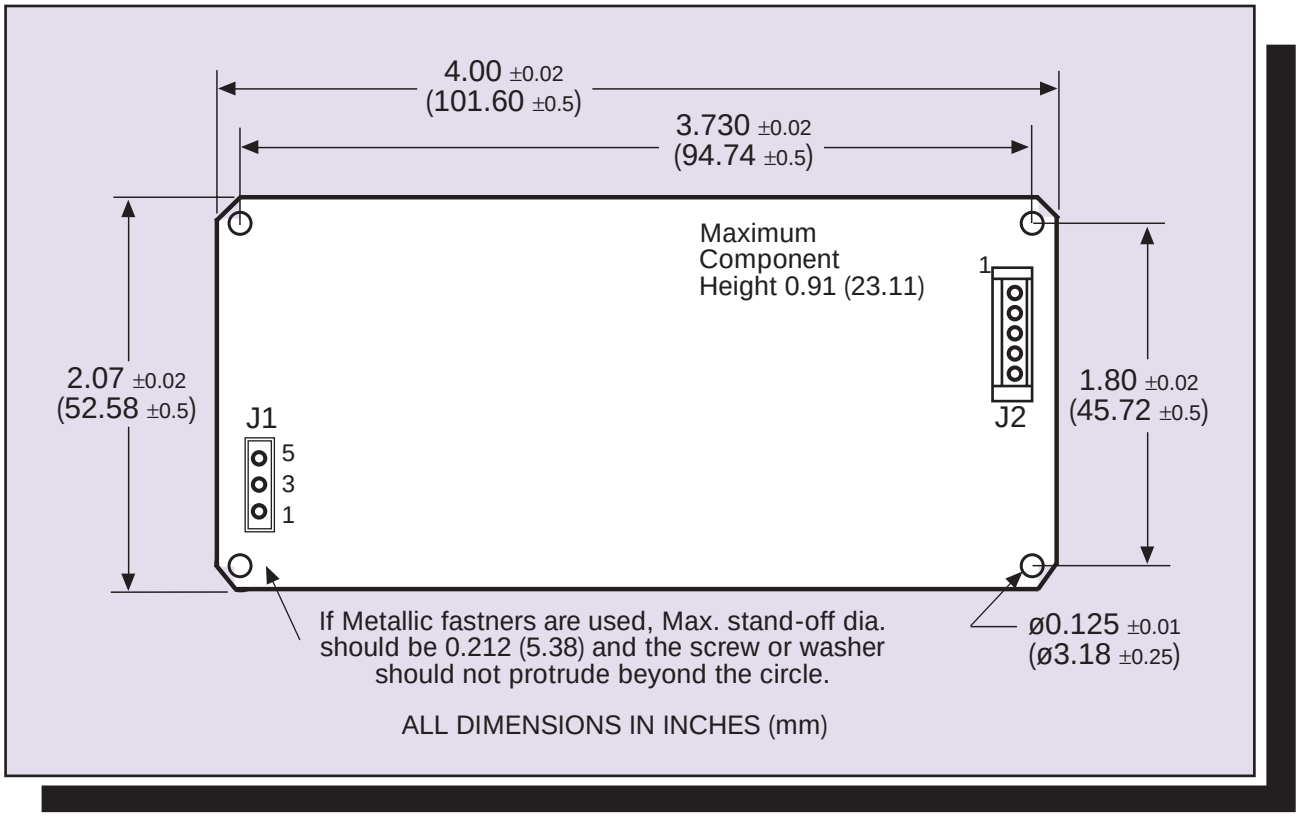
OUTPUT POWER	OUTPUT VOLTAGE	OUTPUT CURRENT MIN (3)	OUTPUT CURRENT MAX	OUTPUT CURRENT PEAK (1)	RIPPLE (2)	OVP THRESHOLD (5)	TOTAL REGULATION (3)	MODEL NUMBER
20.8W	+5V (I_A)	0.2A	2.0A	2.5A	50mV	5.6V to 6.9V	±2.0%	NLP25-7608
	+12V (I_B)	0.1A	0.8A	1.2A	120mV		±5.0%	
	–12V (I_C)	0A	0.1A	0.15A	50mV		±5.0%	
20.1W	+5V (I_A)	0.2A	2.0A	2.5A	50mV	5.6V to 6.9V	±2.0%	NLP25-7607
	+12V (I_B)	0.1A	0.8A	1.2A	120mV		±5.0%	
	–5V (I_C)	0A	0.1A	0.15A	50mV		±5.0%	
19.6W	+5V (I_A)	0.2A	2.0A	2.5A	50mV	5.6V to 6.9V	±2.0%	NLP25-7629
	+12V (I_B)	0.1A	0.8A	1.2A	120mV		±5.0%	
25W	+5V	0A	5.0A	6.0A	50mV	5.6V to 6.9V	±2.0%	NLP25-7605
25W	+12V	0A	2.08A	2.5A	120mV	14V to 16.7V	±2.0%	NLP25-7612
25W	+24V	0A	1.04A	1.25A	150mV	29V to 34.2V	±2.0%	NLP25-7624
25W	+48V	0A	0.52A	0.6A	150mV	55V to 60V	±2.0%	NLP25-7617

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. 20MHz bandwidth, peak to peak, measured differentially with a 12 inch twisted pair of number 16 AWG copper wire, terminated with a 47µF 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, 2.4G rms 5Hz to 500Hz.
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.

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

UL1950 File No. E136005

CSA C22.2 No. 950 File No. LR41062