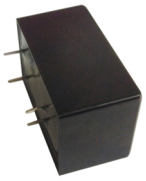
25W AC/DC SMPS

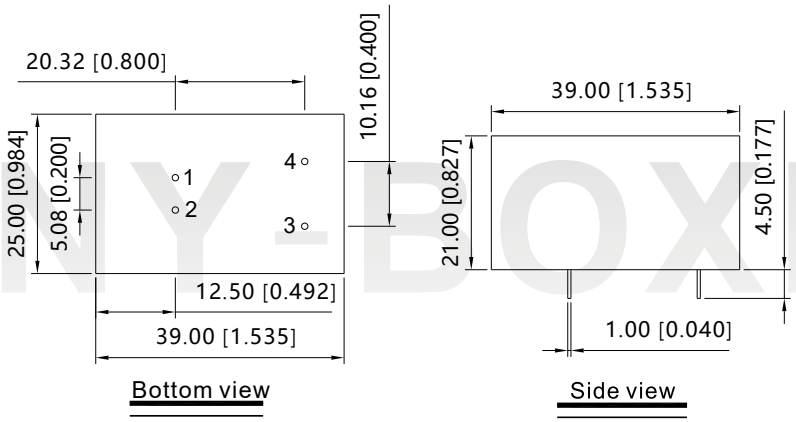


DESCRIPTION

- ★ Wide input：AC85~465V & DC100~650V
- ★ Output short circuit, over-current protection
- ★ Compact size, high power density
- ★ I/O isolation test voltage 3k VAC
- ★ Low ripple & noise
- ★ RoHS Compliant
- ★ Industrial grade, high reliability
- ★ Three-year quality assurance

NV25Axx series is one of Nyboxing's highly efficient green power AC-DC Converter series. They feature ultra-wide wide input range accepting either AC or DC voltage, high efficiency, low power consumption and Class II reinforced insulation.

Dimensions



PIN	Function	
	AC IN	DC IN
1	L	DC
2	N	DC
3	+Vo	+Vo
4	-Vo	-Vo

Note:
Unit:mm[inch]
Pin diameter tolerances:±0.20[±0.008]
General tolerances:±0.50[±0.020]

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current	Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.	Dimensions (L×W×H)
NV25A03	9.9W	3.3V/3000mA	80%	2000μF	39.0×25.0×21.0mm
NV25A05	15W	5V/3000mA	84%	2000μF	
NV25A09	25W	9V/2780mA	84%	2000μF	
NV25A12		12V/2100mA	85%	2000μF	
NV25A15		15V/1670mA	86%	2000μF	
NV25A24		24V/1050mA	87%	1000μF	

Input Specifications

Item	Operating Conditions	Min	Typ	Max
Input Voltage Range	AC input	85VAC	--	465VAC
	DC input	100VDC	--	650VDC
Input Frequency		47Hz	--	63Hz

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Stand-by Power Consumption		--	0.1W	--
Input Current	230VAC	--	250mA	--
	380VAC	--	150mA	--

Output Specifications

Item	Operating Conditions		Min	Typ	Max
Output Voltage Accuracy			--	±1%	--
Line Regulation	Full load		--	±1.5%	--
Load Regulation	10%~100% Load		--	±2.5%	--
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	3.3V,5V Output	--	150mV	--
		9V,12V,15V Output	--	750mV	--
		24V Output	--	800mV	--
Short Circuit Protection	Hiccup, continuous, self-recovery				
Over-current Protection	≥110%Io				
Minimum Load			0	--	--
Start delay time			--	500ms	--
Hold-up Time			--	10ms	--

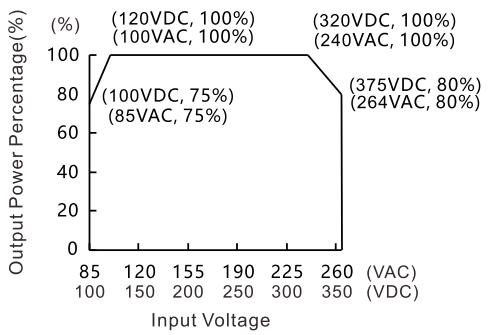
Note: * The “parallel cable” method is used for Ripple and noise test, please refer to AC-DC Converter Application Notes for specific information.

General Specifications

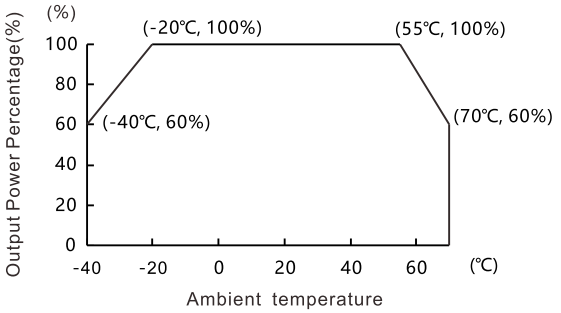
Item	Operating Conditions	Min	Typ	Max
Isolation	Input-Output, Test for 1min	--	3000VAC	--
Operating Temperature		-40℃	--	+70℃
Storage Temperature		-40℃		+105℃
Storage Humidity		--	--	95%RH
Working frequency		--	65KHz	--
MTBF	MIL-HDBK-217F, 25°C		215,000h	
Casing Material	Metal aluminum shell			

Product Characteristic Curve

Input Voltage Derating Curve
(Ambient temperature:25℃)



Temperature Derating Curve
Input Voltage: 85-264VAC
100-375VDC



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Design Reference

1 Typical application

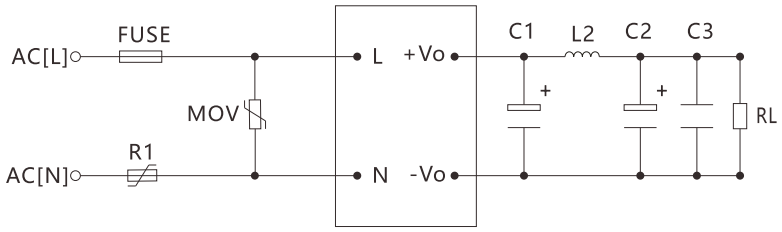

Fig. 1: Typical circuit diagram

Note

We recommend using an electrolytic capacitor with high frequency, and low ESR rating for C1 (refer to manufactur-e's datasheet). Choose a Capacitor voltage rating with at least 20% margin, in other words not exceeding 80%. C2 is a ceramic capacitor used for filtering high-frequency noise.

2 EMC compliance recommended circuit

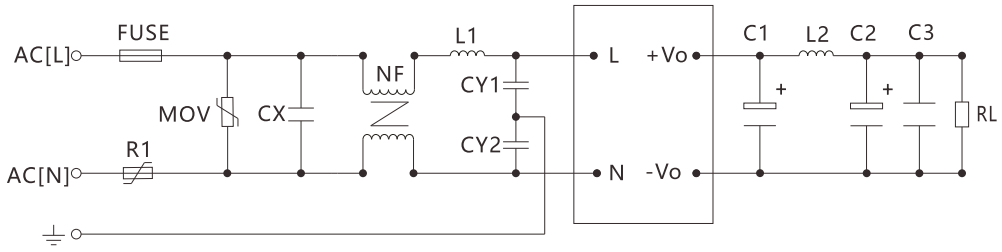

Fig 2: EMC application circuit with higher requirements

3 Input part: parameter recommendation

Component	Recommended value
FUSE	3.15A/250VAC slow-blow required
R1	5D-9
MOV	821KD10
CX	0.33μF/550VAC
L1	330μH
NF	10mH-30mH
CY1,CY2	1000pF/250V

4 Output part: parameter recommendation

Output Voltage	3.3V	5V	9V	12V	15V	24V
C1	2200μF/10V		1000μF/25V			680μF/35V
C2	1000μF/10V		680μF/25V			470μF/35V
C3	1μF/50V					
L2	2μF(Wire diameter greater than 1mm)					

Safety precautions

1.If the product is not operated within the required load range, the product performance cannot be guaranteed to comply with all parameters in the datasheet;

2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75% with nominal input voltage and rated output load;

3. All index testing methods in this datasheet are based on our Company's corporate standards;

4. We can provide product customization service, please contact our technicians directly for specific information;

5. For more product information, please visit our official website (www.gzny-boxing.com) or email us (sales@gzny-boxing.com) .

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