

**3W AC/DC SMPS**
**DESCRIPTION**

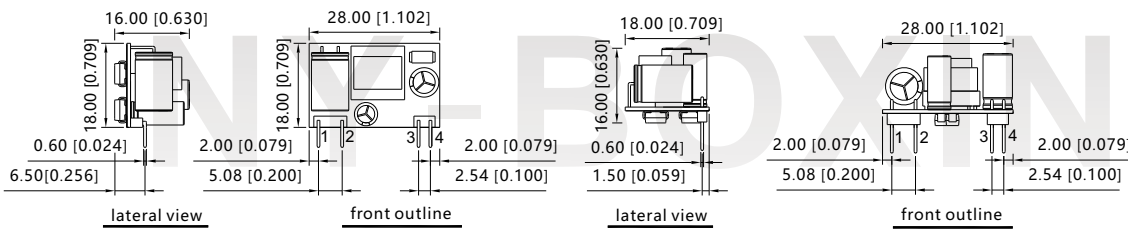

NJ03-AxxLS(horizontal type)



NJ03-AxxHS(vertical)

- ★ Wide input : AC85~264V & DC100~375V
- ★ 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

NJ03-AxxH(L)S 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**


NJ03-AxxHS(vertical)

NJ03-AxxLS(horizontal type)

PIN	Pin definition	
	AC input	DC input
1	N	DC
2	L	DC
3	-Vo	-Vo
4	+Vo	+Vo

pour:  
 Units of measurement: mm[inch]  
 Height of the legs: 3.00[0.118]  
 Horizontal tube length: 6.00[0.236]  
 Pin diameter tolerance: ±0.20[±0.008]  
 Other dimensional 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)
NJ03-A05HS	3W	5V/600mA	68%	470μF	28.0×16.0×18.0mm (HIGH)
NJ03-A12HS		12V/250mA	70%	220μF	
NJ03-A24HS		24V/125mA	73%	68μF	
NJ03-A05LS	3W	5V/600mA	68%	470μF	28.0×18.0×16.0mm (LOW)
NJ03-A12LS		12V/250mA	70%	220μF	
NJ03-A24LS		24V/125mA	73%	68μF	

**Input Specifications**

Item	Operating Conditions	Min	Typ	Max
Input Voltage Range	AC input	85VAC	--	264VAC
	DC input	100VDC	--	375VDC
Input Frequency		47Hz	-	63Hz
Stand-by Power Consumption		--	0.2W	--
Input Current	115VAC	--	60mA	--
	230VAC	--	30mA	--

### Output Specifications

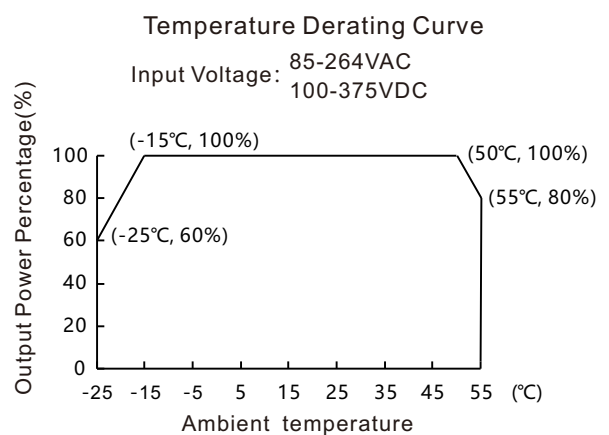
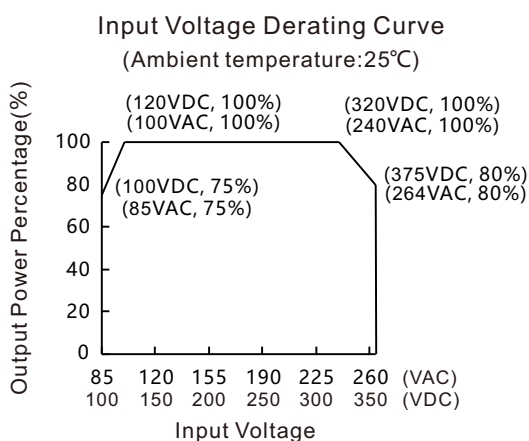
Item	Operating Conditions	Min	Typ	Max
Output Voltage Accuracy		--	±3%	--
Line Regulation	Full load	--	±2%	--
Load Regulation	10%~100% Load	--	±3%	--
Ripple & Noise*	20MHz bandwidth	5V Output	--	250mV
	(peak-to-peak value)	12V Output	--	150mV
		24V Output	--	250mV
Short Circuit Protection	Hiccup, continuous, 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	1min leakage current <5mA	-25°C	--	+55°C
Storage Temperature		-40°C	--	+105°C
Storage Humidity		--	--	85%RH
Working frequency		--	65KHz	--
MTBF	MIL-HDBK-217F, 25°C		215,000h	

### Product Characteristic Curve



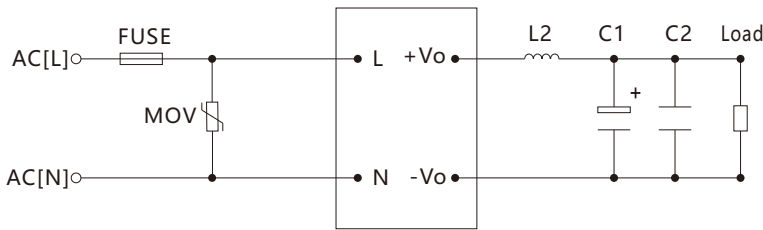
**Design Reference**
**1 Typical application**


Fig. 1: Typical circuit diagram

**Note**

We recommend using an electrolytic capacitor with high frequency, and low ESR rating for C1 (refer to manufacturer'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.

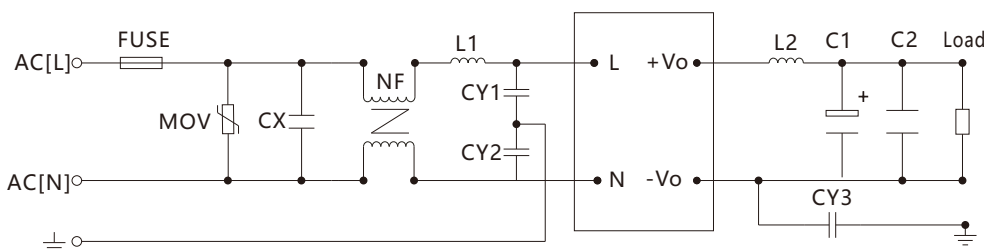
**2 EMC compliance recommended circuit**


Fig 2: EMC application circuit with higher requirements

**3 Input part: parameter recommendation**

Component	Recommended value
FUSE	10Ω/1W Safety Resistance
MOV	471KD10
CX	0.1μF/275VAC
L1	470μH
NF	10mH-30mH
CY1,CY2,CY3	1000pF/400V

**4 Output part: parameter recommendation**

Output Voltage	5V	12V	24V
C1	220μF/10V	100μF/25V	33μF/35V
C2	1μF/50V		
L2	6.8μH		

**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°C, 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](http://www.gzny-boxing.com) ) or email us ( [sales@gzny-boxing.com](mailto:sales@gzny-boxing.com) ).