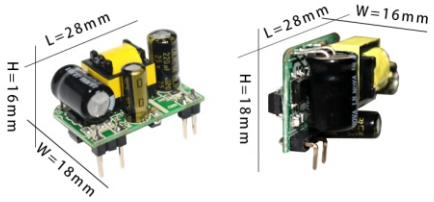
2W AC/DC SMPS



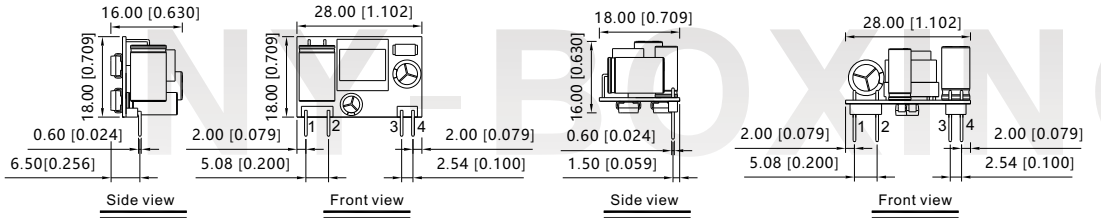
LOW NJ02-A__L HIGH NJ02-A__H

DESCRIPTION

- ★ 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

NJ02-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



NJ02-AxxH(HIGHT) NJ02-AxxL(LOW)

PIN	Function
1	N
2	L
3	-Vo
4	+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)
NJ02-A05HS	2W	5V/400mA	68%	470μF	28.0×16.0×18.0mm (HIGH)
NJ02-A12HS		12V/166mA	70%	220μF	
NJ02-A24HS		24V/83mA	73%	68μF	
NJ02-A05LS	2W	5V/400mA	68%	470μF	28.0×18.0×16.0mm (LOW)
NJ02-A12LS		12V/166mA	70%	220μF	
NJ02-A24LS		24V/83mA	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

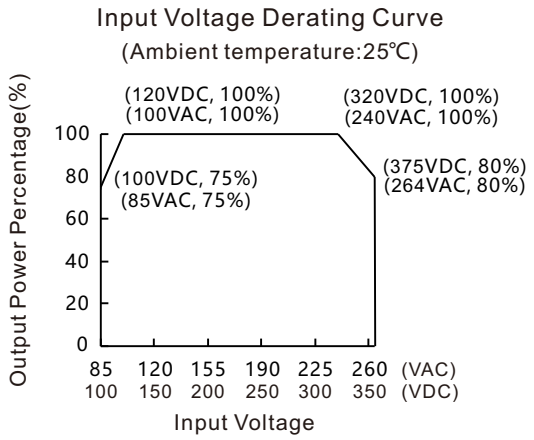
Item	Operating Conditions		Min	Typ	Max
Output Voltage Accuracy			--	±3%	--
Line Regulation	Full load		--	±2%	--
Load Regulation	10%~100% Load		--	±3%	--
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	5V Output	--	250mV	--
		12V Output	--	150mV	--
		24V Output	--	250mV	--
Short Circuit Protection	Hiccup, continuous, self-recovery				
Over-current Protection	≥110%Io				
Minimum Load			0	--	--
Start delay time			--	500ms	--
Hold-up Time			--	10ms	--

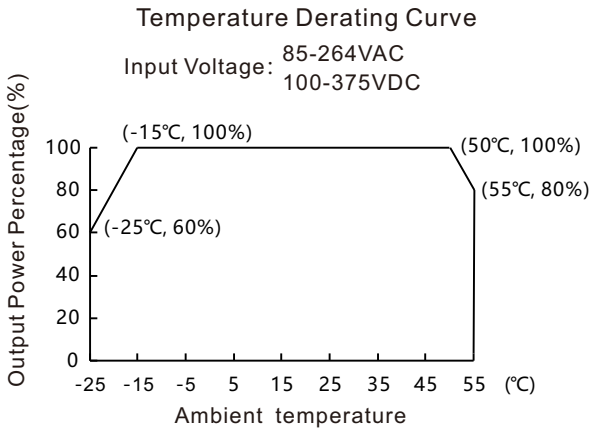
Note: * The “parallel cable” method is used for Ripple and noise test, please refer to AC-DC Converter Application Notes for specific information.

General Specifications

Item	Operating Conditions	Min	Typ	Max
Isolation	Input-Output, Test for 1min	--	3000VAC	--
Operating Temperature	1minleakage current <5mA	-25℃	--	+55℃
Storage Temperature		-40℃	--	+105℃
Storage Humidity		--	--	85%RH
Working frequency		--	65KHz	--
MTBF	MIL-HDBK-217F, 25°C		215,000h	

Product Characteristic Curve





Design Reference

1 Typical application

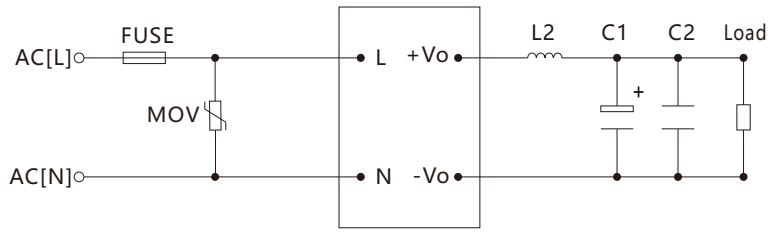


Fig. 1: Typical circuit diagram

Note

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

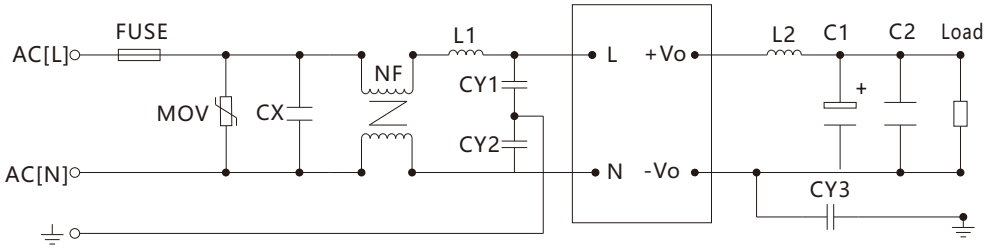


Fig 2: EMC application circuit with higher requirements

3 Input part: parameter recommendation

Component	Recommended value
FUSE	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℃, 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) .