

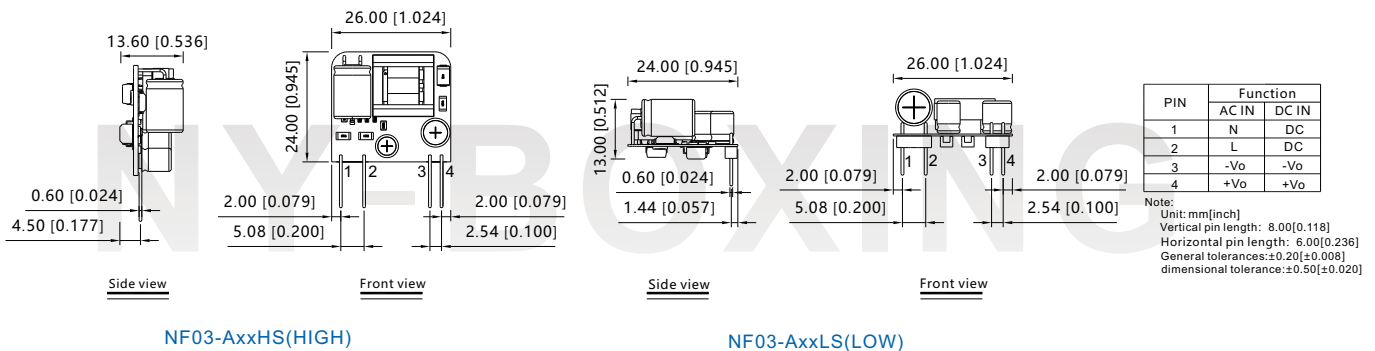
3W AC/DC SMPS
DESCRIPTION


NF03-AxxHS(HIGH)

NF03-AxxLS(LOW)

- ★ 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
- ★ Three-year quality assurance

NF03-AxxH(L) 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


NF03-AxxHS(HIGH)

NF03-AxxLS(LOW)

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current	Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.	Dimensions (L×W×H)
NF03-A03HS	3W	3.3V/800mA	68%	470μF	26.0x 13.0x24.0mm (HIGH)
NF03-A05HS		5V/600mA	70%	330μF	
NF03-A12HS		12V/250mA	72%	220μF	
NF03-A15HS		15V/200mA	73%	220μF	
NF03-A24HS		24V/125mA	74%	100μF	
NF03-A03LS	3W	3.3V/800mA	68%	470μF	26.0x24.0x 13.0mm (LOW)
NF03-A05LS		5V/600mA	70%	330μF	
NF03-A12LS		12V/250mA	72%	220μF	
NF03-A15LS		15V/200mA	73%	220μF	
NF03-A24LS		24V/125mA	74%	100μF	

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		--	0.1W	--
Input Current	115VAC	--	70mA	--
	230VAC	--	35mA	--

Output Specifications

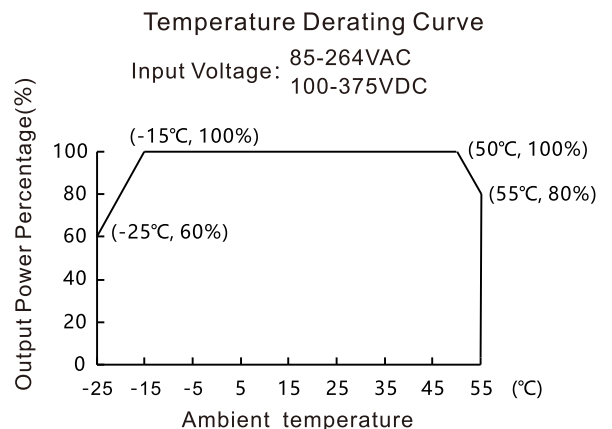
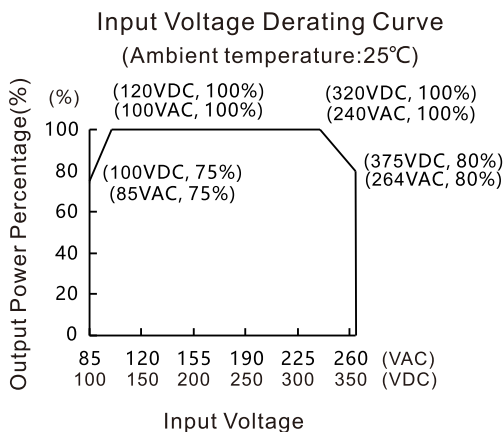
Item	Operating Conditions	Min	Typ	Max	
Output Voltage Accuracy		--	±3%	--	
Line Regulation	Full load	--	±2%	--	
Load Regulation	10%~100% Load	--	±3%	--	
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	3.3V 5V Output	--	250mV	--
		12V 15V Output	--	150mV	--
		24V Output	--	250mV	--
Short Circuit Protection	Hiccup, continuous, self-recovery				
Over-current Protection	≥ 110%Io				
Minimum Load		0	--	--	
Start delay time		--	500ms	--	
Hold-up Time		--	10ms	--	
Minimum load		0%			

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		-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

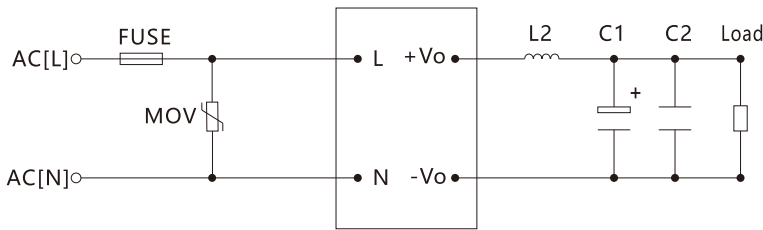


Fig. 1: Typical circuit diagram

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

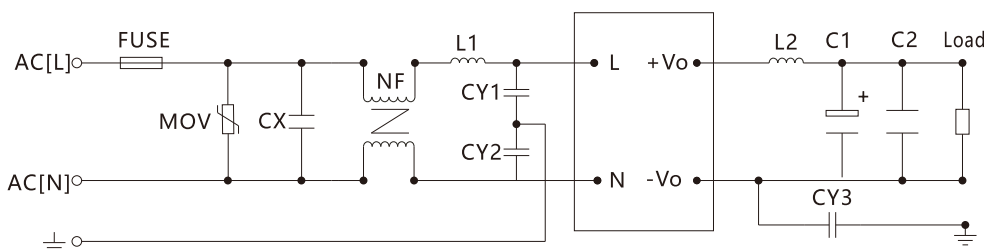


Fig 2: EMC application circuit with higher requirements

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/250V

4 Output part: parameter recommendation

Output Voltage	3.3V	5V	12V	15V	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 $T_a=25^{\circ}\text{C}$, 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) or email us (sales@gzny-boxing.com).