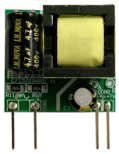
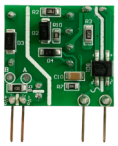
5W AC/DC SMPS



NF05-AxxH(HIGH)



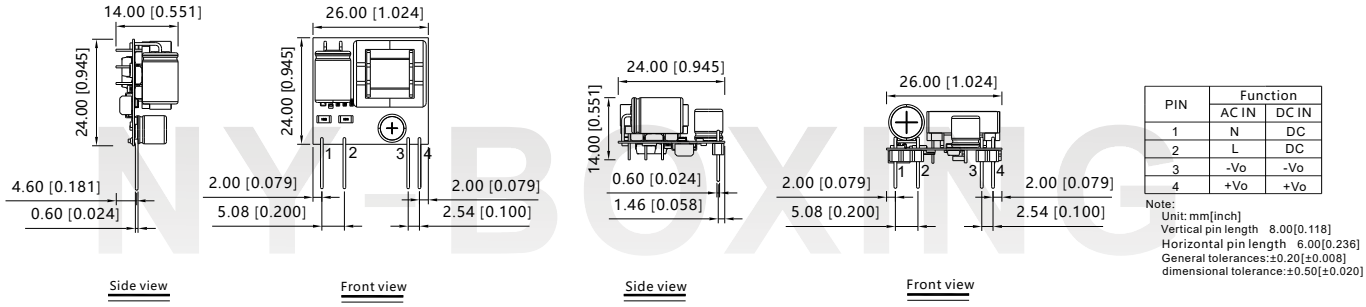
NF05-AxxL(LOW)

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
- ★ Three-year quality assurance

NF05-AxxH(L) series is one of Nyboxing's highly efficient green power AC-DC Converter series. They fea ture ultra-wide wide input range accepting either AC or DC voltage, high efficiency, low power consumptio n and Class II reinforced insulation.

Dimensions



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

Note:
Unit: mm[inch]
Vertical pin length 8.00[0.118]
Horizontal pin length 6.00[0.236]
General tolerances:±0.20[±0.008]
dimensional tolerance:±0.50[±0.020]

NF05-AxxH(HIGH)

NF05-AxxL(LOW)

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current	Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.	Dimensions (L×W×H)
NF05-A03H	4W	3.3V/1200mA	68%	470μF	26.0×14.0×24.0mm (HIGH)
NF05-A05H	5W	5V/1000mA	72%	330μF	
NF05-A12H		12V/420mA	74%	220μF	
NF05-A15H		15V/330mA	75%	220μF	
NF05-A24H		24V/210mA	77%	100μF	
NF05-A03L	4W	3.3V/1200mA	68%	470μF	26.0×24.0×14.0mm (LOW)
NF05-A05L	5W	5V/1000mA	72%	330μF	
NF05-A12L		12V/420mA	74%	220μF	
NF05-A15L		15V/330mA	75%	220μF	
NF05-A24L		24V/210mA	77%	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	--	115mA	--
	230VAC	--	55mA	--

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	150mV	
		12V 15V Output	350mV	
		24V Output	400mV	
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 test method of ripple noise adopts parallel line test method.

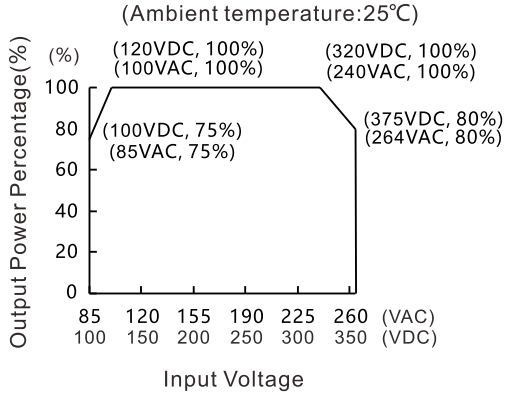
General Specifications

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

Product Characteristic Curve

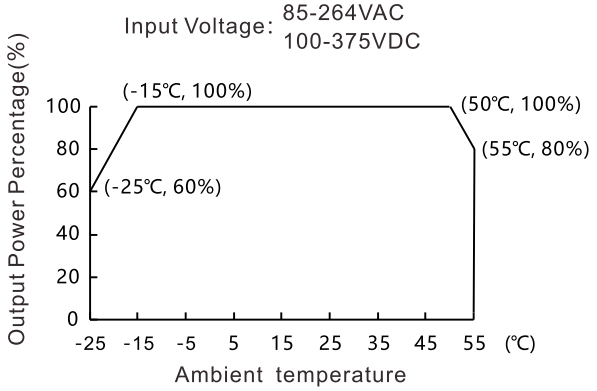
Input Voltage Derating Curve

(Ambient temperature:25℃)



Temperature Derating Curve

Input Voltage: 85-264VAC
100-375VDC



Design Reference

1 Typical application

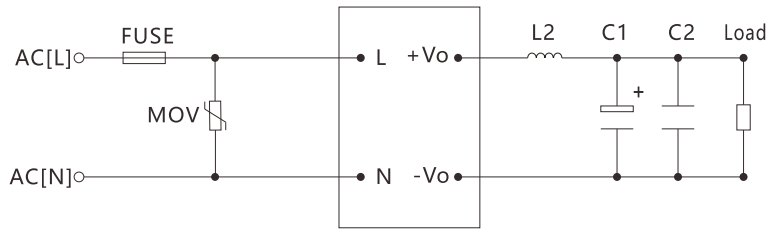


Fig. 1: Typical circuit diagram

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

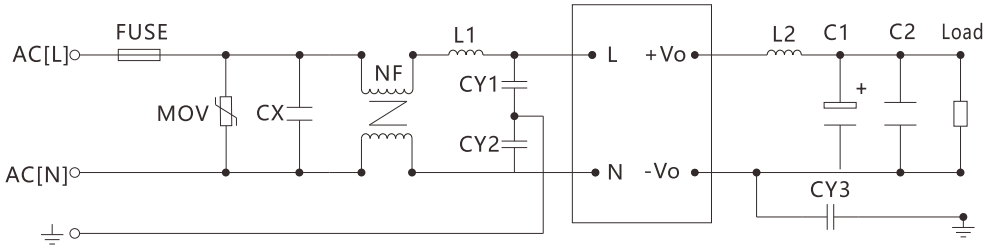


Fig 2: EMC application circuit with higher requirements

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/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 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) .