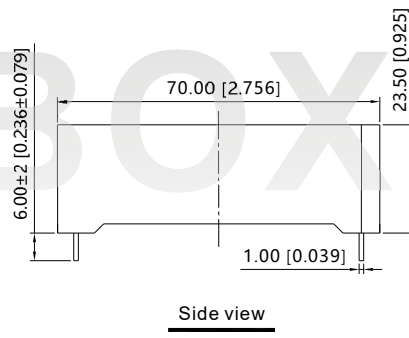
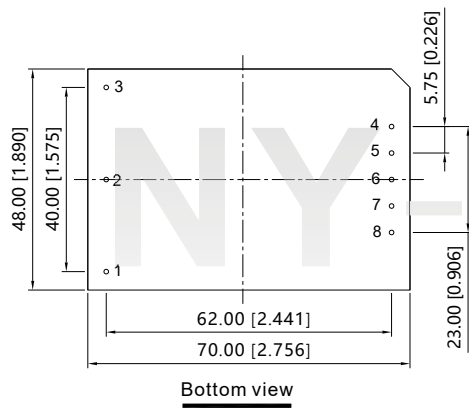


25W AC/DC SMPS
DESCRIPTION


- ★ 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
- ★ Single output, double output, positive and negative output

NR25-A,B,Cxx 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		
	NR25-A	NR25-C	NR25-B
1	FG	FG	FG
2	N	N	N
3	L	L	L
4	+Vo	+Vo	+Vo2
5	NP	NP	-Vo2
6	NP	COM	NP
7	NP	NP	+Vo1
8	-Vo	-Vo	-Vo1

Note:
 Unit: mm[inch]
 Pin length: 6.0[0.236]
 Pin diameter tolerances:±0.20[±0.008]
 General tolerances:±0.50[±0.020]
 NP:NO PIN
 FG:No Function

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current		Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.	Dimensions (L×W×H)
		Vo1/Io1	Vo2/Io2			
NR25-A03	16.5W	3.3V/5000mA	--	77%	3000μF	70.0×48.0×23.5mm
NR25-A05		5V/5000mA	--	78%	3000μF	
NR25-A09		9V/2800mA	--	78%	2000μF	
NR25-A12	25W	12V/2100mA	--	80%	2000μF	
NR25-A15		15V/1660mA	--	81%	1000μF	
NR25-A24		24V/1050mA	--	84%	820μF	

NR25-C05	25W	+5V/2500mA	-5V/2500mA	75%	1000μF	70.0×48.0×23.5mm
NR25-C12		+12V/1050mA	-12V/1050mA	77%	560μF	
NR25-C15		+15V/830mA	-15V/830mA	78%	470μF	
NR25-C24		+24V/520mA	-24V/520mA	80%	220μF	
NR25-B0505	25W	5V/4000mA	5V/1000mA	75%	2000μF	70.0×48.0×23.5mm
NR25-B0512		5V/4000mA	12V/420mA	76%	1500μF	
NR25-B0515		5V/4000mA	15V/330mA	77%	1500μF	
NR25-B0524		5V/4000mA	24V/210mA	78%	1500μF	

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	--	520mA	--
	230VAC	--	260mA	--

Output Specifications

Item	Operating Conditions	Min	Typ	Max	
Output Voltage Accuracy	3.3V Output	--	±3%	--	
	Other Output	--	±1%	--	
Line Regulation	Full load	Primary output	--	±1%	--
		Secondary output	--	±3%	--
Load Regulation	10%~100% Load	Single output	--	±3%	--
		Dual output (balanced load) ^①	--	±10%	--
Ripple & Noise ^②	20MHz bandwidth (peak-to-peak value)	3.3V Output	--	120mV	--
		5V Output	--	100	--
		Other Output	--	80	--
Short Circuit Protection		Hiccup, continuous, self-recovery			
Over-current Protection		≥110%Io			
Minimum Load		0	--	--	
Start delay time		--	1s	--	
Hold-up Time		--	20ms	--	

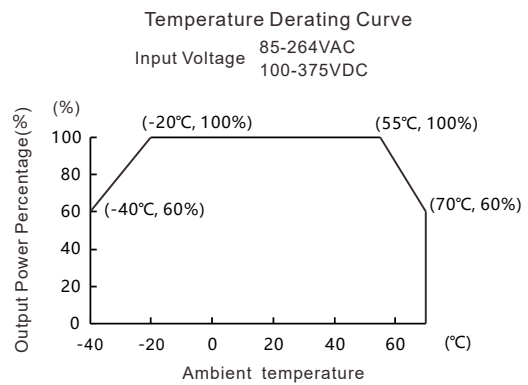
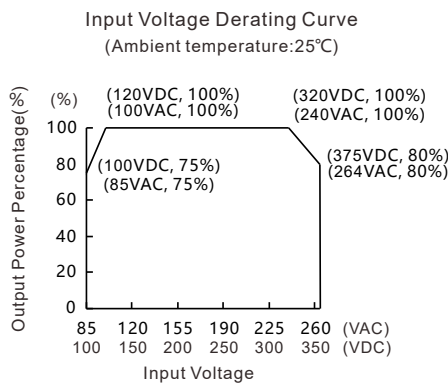
Note:^①The balanced load is that the output load of the primary output and the secondary output changes in the same proportion.

^②The "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	Electric Strength Test for 1min., leakage current <5mA	--	3000VAC	--
Operating Temperature		-40°C	--	+70°C
Storage Temperature		-40°C	--	+105°C
Storage Humidity		--	--	95%RH
Working frequency		--	65KHz	--
MTBF	MIL-HDBK-217F, 25°C		215,000h	
Casing Material	Black flame-retardant and heat-resistant plastic (UL94-V0)			

Product Characteristic Curve



Design Reference

1 Typical application

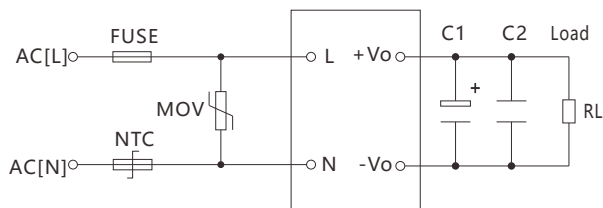


Fig. 1: NR25-Axx typical circuit diagram

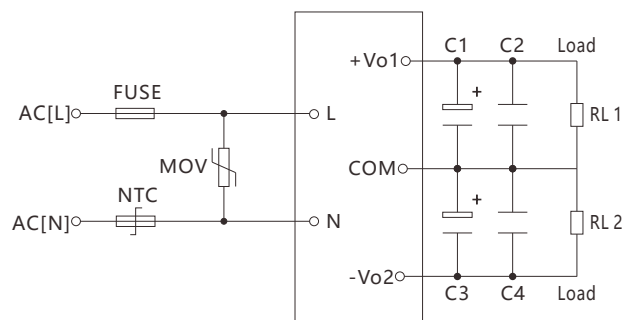


Fig. 2: NR25-Cxx typical circuit diagram

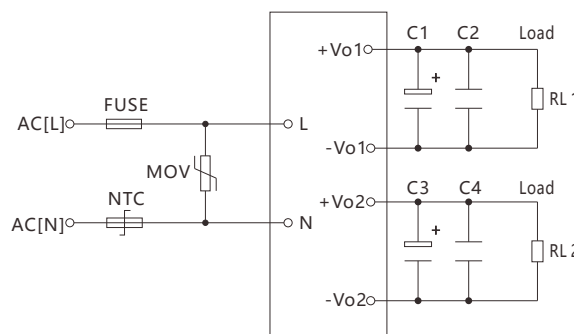


Fig. 3: NR25-Bxx typical circuit diagram

2 EMC compliance recommended circuit

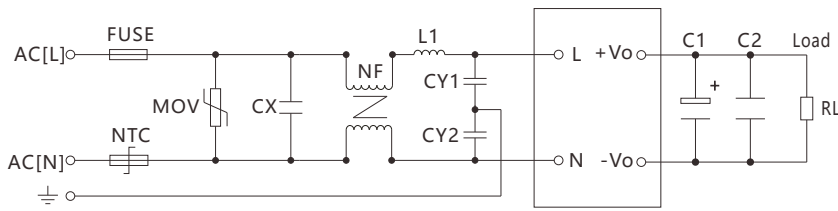


Fig 4: NR25-Axx EMC application circuit with higher requirements

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.

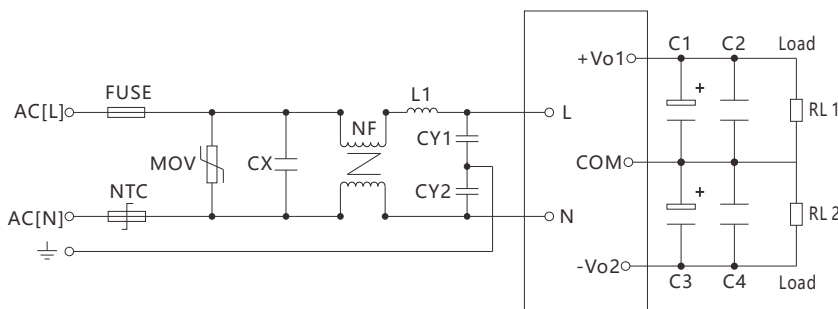


Fig 5: NR25-Cxx EMC application circuit with higher requirements

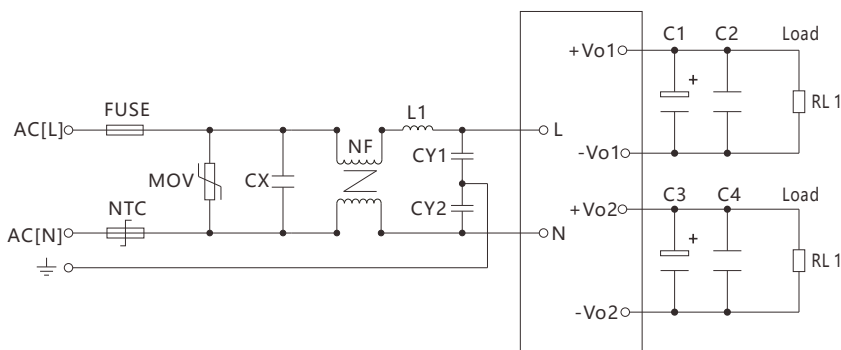


Fig 5: NR25-Bxx EMC application circuit with higher requirements

3 Input part: parameter recommendation

Component	Recommended value
FUSE	3.15A/250V slow-blow required
NTC	5D-9
MOV	471KD10
CX	0.33 μ F/275VAC
L1	330 μ H
NF	10mH-30mH
CY1,CY2	1000pF/400V

4 Output part: parameter recommendation

Output Voltage	3.3V	5V	9V	12V	15V	24V
C1	470μF/10V		330μF/25V			220μF/35V
C2	1μF/50V					

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 or email us (sales@gzny-boxing.com) .