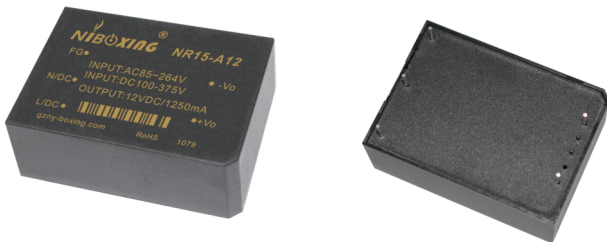
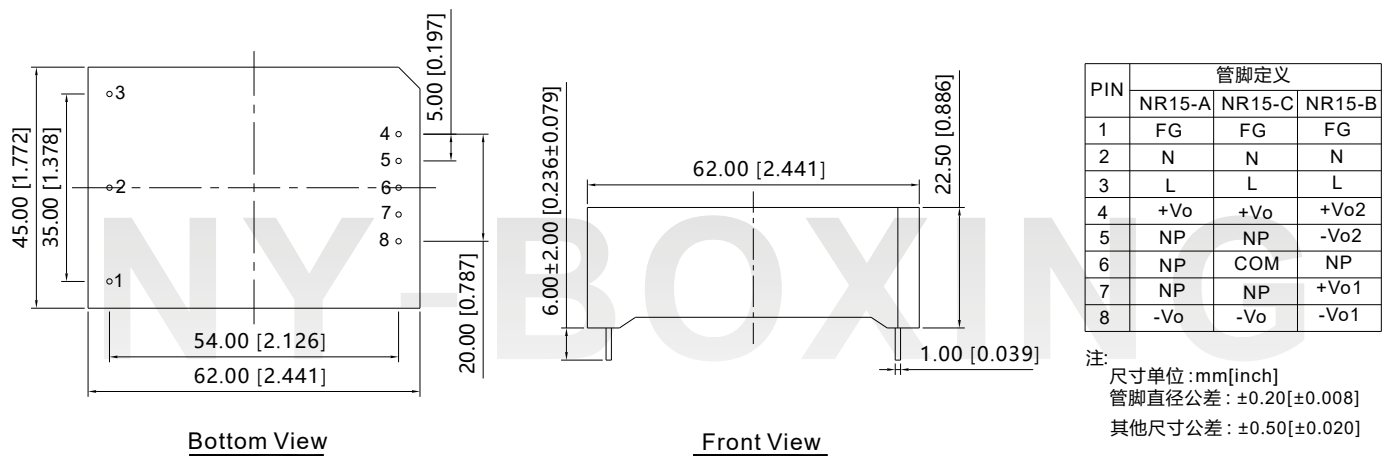


15W AC/DC SMPS
DESCRIPTION


- ★ 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

NR15-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

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			
NR15-A03	9.9W	3.3V/3000mA	--	74%	3000μF	62.0x45.0x22.5mm
NR15-A05		5V/3000mA	--	76%	3000μF	
NR15-A09		9V/1670mA	--	78%	1000μF	
NR15-A12	15W	12V/1250mA	--	80%	1000μF	
NR15-A15		15V/1000mA	--	81%	820μF	
NR15-A24		24V/620mA	--	83%	670μF	

NR15-B0505	15W	5V/2200mA	5V/800mA	70%	2000 μ F	62.0x45.0x22.5mm
NR15-B0512		5V/2000mA	12V/420mA	72%	1500 μ F	
NR15-B0515		5V/2000mA	15V/330mA	75%	1500 μ F	
NR15-B0524		5V/2000mA	24V/210mA	77%	1500 μ F	
NR15-C05	15W	+5V/1500mA	-5V/1500mA	73%	1000 μ F	62.0x45.0x22.5mm
NR15-C12		+12V/625mA	-12V/625mA	75%	560 μ F	
NR15-C15		+15V/500mA	-15V/500mA	77%	470 μ F	
NR15-C24		+24V/310mA	-24V/310mA	80%	220 μ F	

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	--	330mA	--
	230VAC	--	165mA	--

Output Specifications

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

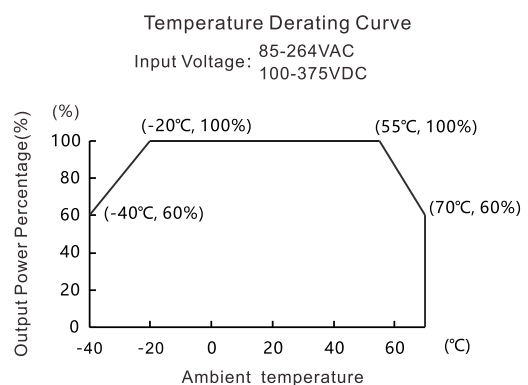
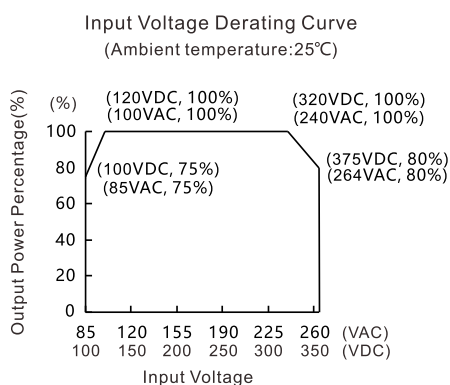
Note:^①The balanced load is that the output load of the primary output and the secondary output changes in the same proportion.

^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	--	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

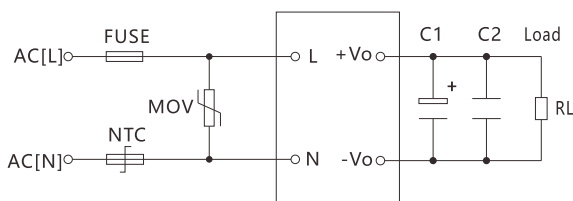


Fig. 1: NR15-Axx typical circuit diagram

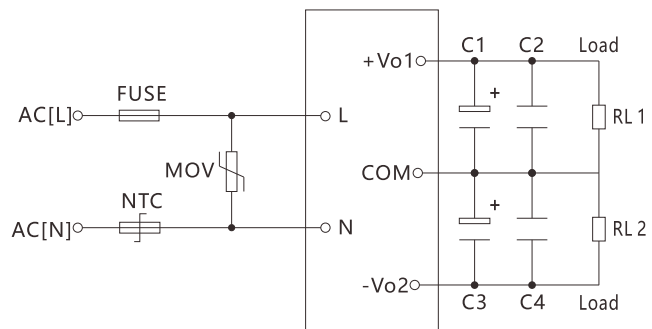


Fig. 2: NR15-Bxx typical circuit diagram

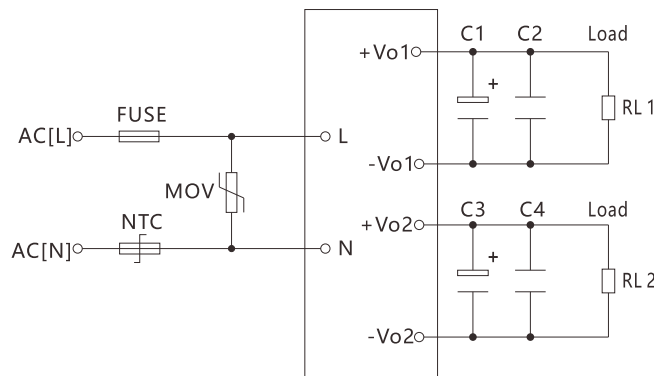


Fig. 3: NR15-Cxx typical circuit diagram

2 EMC compliance recommended circuit

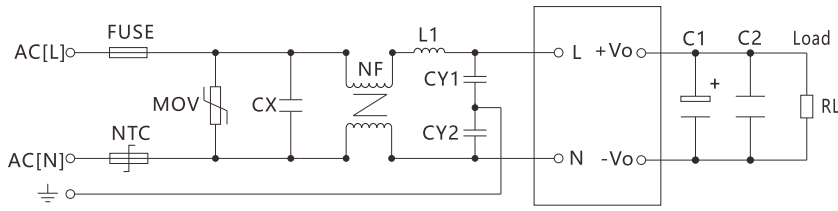


Fig 4:NR15-Axx EMC application circuit with higher requirements

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.

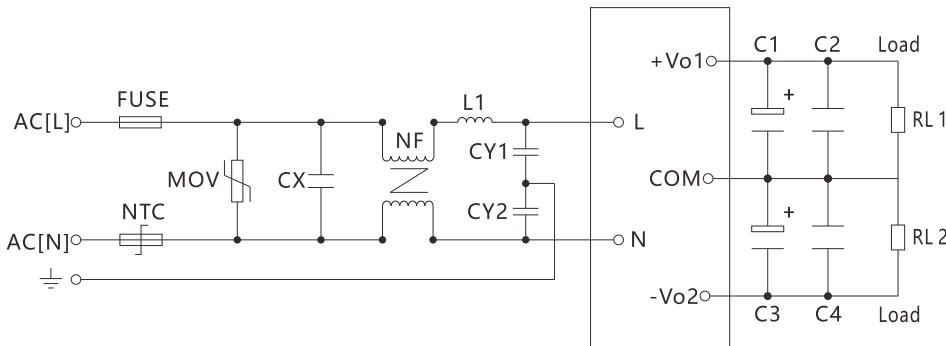


Fig 5:NR15-Bxx EMC application circuit with higher requirements

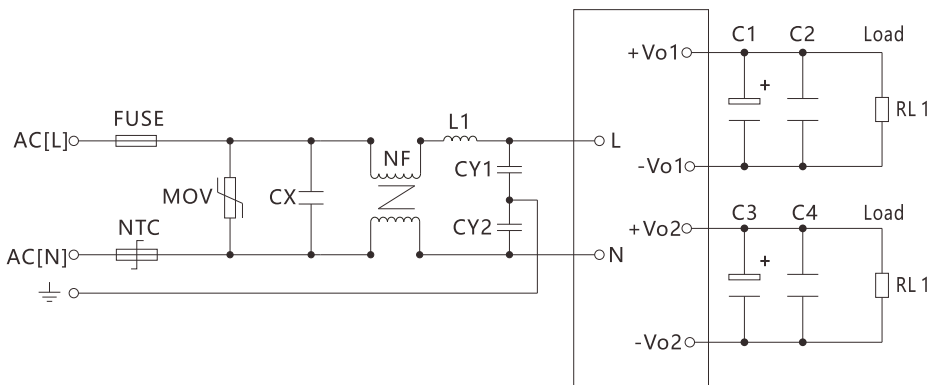


Fig 6:NR15-Cxx EMC application circuit with higher requirements

3 Input part: parameter recommendation

Component	Recommended value
FUSE	1.0A/250VAC,slow-blow required)
NTC	5D-9
MOV	471KD10
CX	0.1 μ F/275VAC
L1	330 μ H
NF	10mH-30mH
CY1,CY2	1000pF/250V

4 Output part: parameter recommendation

Output Voltage	3.3V	5V	9V	12V	15V	24V
C1,C3	680 μ F/10V		330 μ F/25V			220 μ F/35V
C2,C4	1 μ F/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) .