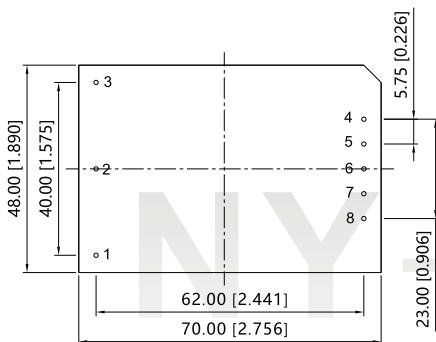
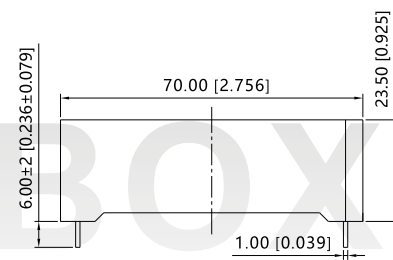


30W AC/DC SMPS
FEATURES


- ★ 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

NR30-Axx 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

Bottom view

Side view

PIN	Function
1	FG
2	N
3	L
4	+Vo
5	NP
6	NP
7	NP
8	-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)
NR30-A03	19.8W	3.3V/6000mA	78%	3000μF	70.0×48.0×23.5mm
NR30-A05		5V/6000mA	79%	3000μF	
NR30-A09		9V/3300mA	79%	2000μF	
NR30-A12	30W	12V/2500mA	81%	2000μF	
NR30-A15		15V/2000mA	82%	1000μF	
NR30-A24		24V/1250mA	85%	820μF	

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	--	620mA	--
	230VAC	--	310mA	--

Output Specifications

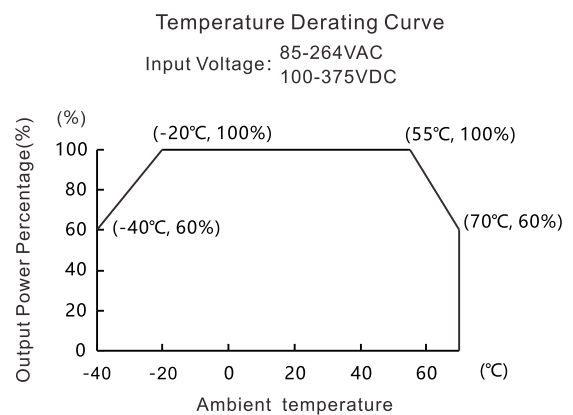
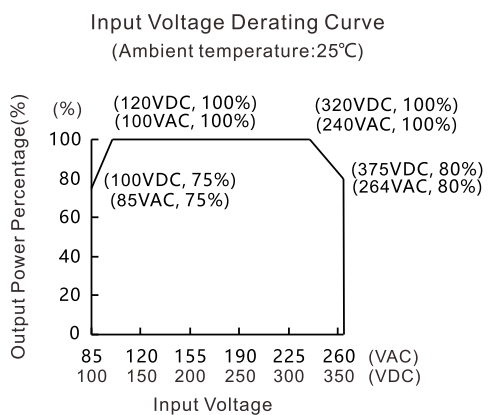
Item	Operating Conditions	Min	Typ	Max
Output Voltage Accuracy	3.3V Output	--	±3%	--
	Other Output	--	±1%	--
Line Regulation	Full load	--	±1%	--
Load Regulation	10%~100% Load	--	±3%	--
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	--	100mV	--
Short Circuit Protection	Hiccup, continuous, self-recovery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

Note: *Balanced load is that the output loads of the main and auxiliary circuits vary in the same proportion.

General Specifications

Item	Operating Conditions	Min	Typ	Max
Isolation	Input-Output, 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

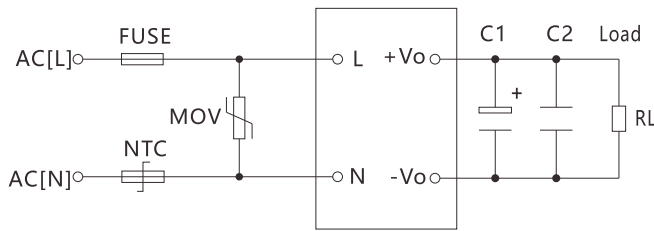


Fig. 1: Typical circuit diagram

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

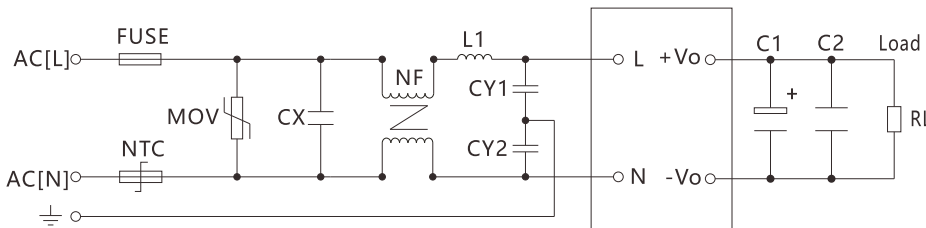


Fig 2: EMC application circuit with higher requirements

3 Input part: parameter recommendation

Component	Recommended value
FUSE	2.5A/250VAC,slow-blow required
NTC	5D-9
MOV	471KD10
CX	0.33 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	680 μ F/10V		330 μ F/25V			220 μ F/35V
C2	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).