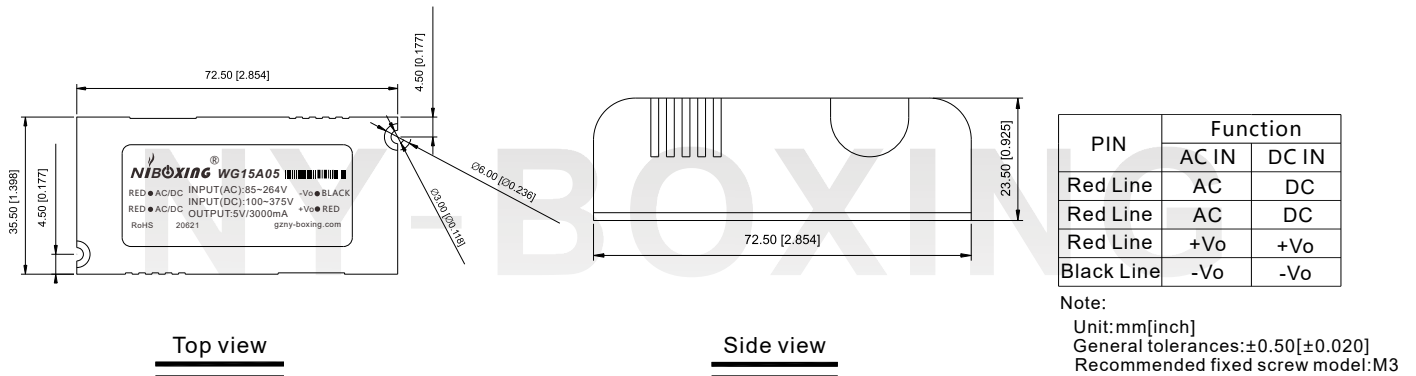


**15W AC/DC SMPS**
**DESCRIPTION**


- ★ 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

WG15Axx 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)
WG15A03	9.9W	3.3V/3000mA	78%	2200μF	72.5×35.5×23.5mm
WG15A05		5V/3000mA	79%	2200μF	
WG15A09		9V/1670mA	80%	1000μF	
WG15A12	15W	12V/1250mA	82%	1000μF	
WG15A15		15V/1000mA	84%	680μF	
WG15A24		24V/625mA	86%	470μF	

**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	--	300mA	--
	230VAC	--	150mA	--

## Output Specifications

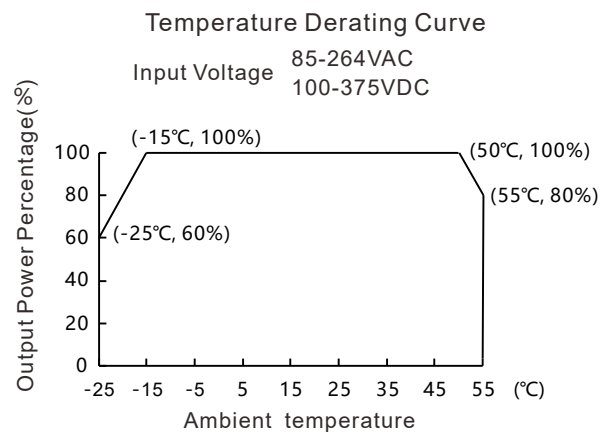
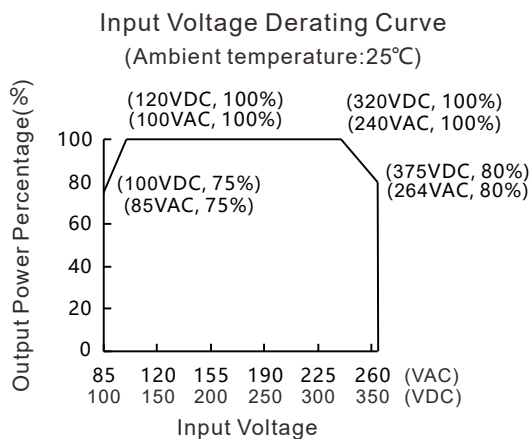
Item	Operating Conditions	Min	Typ	Max
Output Voltage Accuracy		--	±3%	--
Line Regulation	Full load	--	±1.5%	--
Load Regulation	10%~100% Load	--	±3%	--
Output ripple noise	20MHz bandwidth	--	280mV	--
Short Circuit Protection	(Peak-to-peak)	Hiccup, continuous, self-recovery		
Over-current Protection		≥115%Io		
Minimum Load		0	--	--
Start delay time		--	500ms	--
Hold-up Time		--	10ms	--

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℃	--	+55℃
Storage Temperature		-40℃		+105℃
Storage Humidity		--	--	95%RH
Working frequency		--	65KHz	--
MTBF	MIL-HDBK-217F, 25℃		215,000h	

## Product Characteristic Curve



## Design Reference

### 1 Typical application

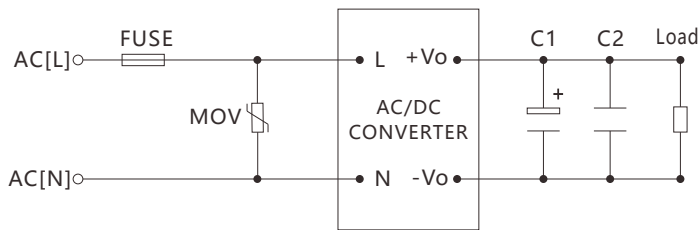


Fig. 1: Typical circuit diagram

#### 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

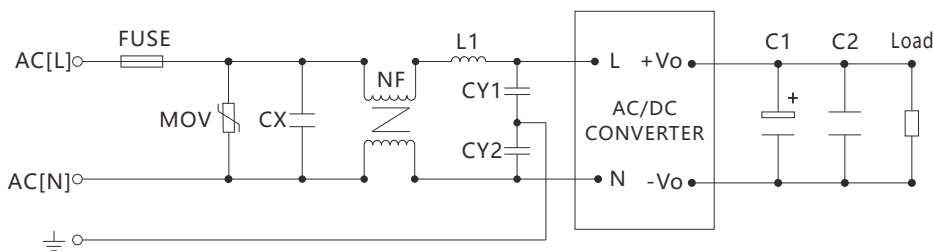


Fig 2: EMC application circuit with higher requirements

### 3 Input part: parameter recommendation

Component	Recommended value
FUSE	2A/250V slow-blow required
MOV	471KD10
CX	0.1 $\mu$ F/275VAC
L1	470 $\mu$ H
NF	10mH-30mH
CY1,CY2	1000pF/250V

### 4 Output part: parameter recommendation

Output Voltage	3.3V	5V	9V	12V	15V	24V
C1	220 $\mu$ F/10V		100 $\mu$ F/25V			68 $\mu$ F/35V
C2	1 $\mu$ 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  $T_a=25^{\circ}\text{C}$ , 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](http://www.gzny-boxing.com) or email us ( [sales@gzny-boxing.com](mailto:sales@gzny-boxing.com) ).