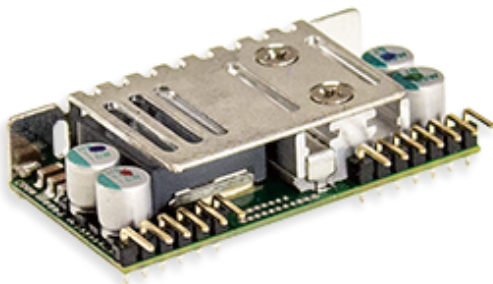




100W DC-DC Non-Isolated Regulated Converter

NID100 series



■ Features :

- Economical open frame design
- Wide input range
- High efficiency up to 97%
- Remote ON / OFF control
- Compact size 2.0"x1.082"x 0.472"(SIP package)
- Protections: Short circuit / Overload / Over voltage
- -30~+85°C wide working temperature
- Cooling by free air convection
- Comply to EN55032 ClassA without additional components
- Trimming output (optional)
- 3 years warranty

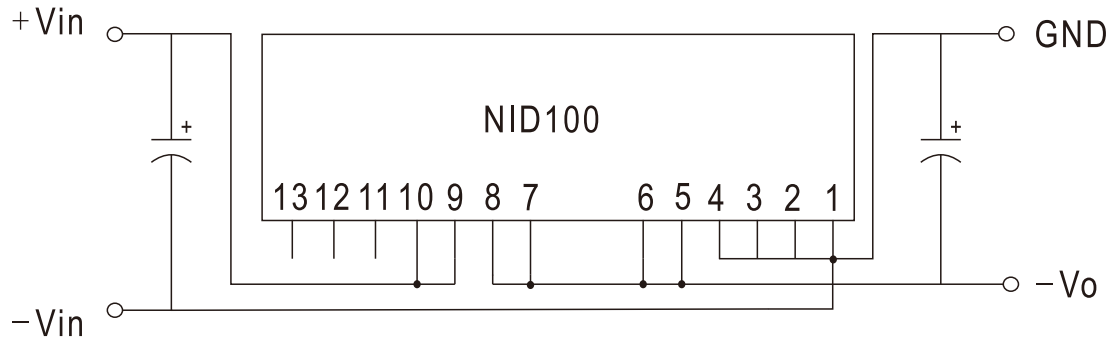


SPECIFICATION

ORDER NO.		NID100-5		NID100-12		NID100-15		NID100-24		
OUTPUT	DC VOLTAGE		5V		12V		15V		24V	
	RATED CURRENT		11A		7.5A		6.5A		4.2A	
	RATED POWER		55W		90W		97.5W		100.8W	
	RIPPLE & NOISE (max.) Note.2		100mVp-p		120mVp-p		150mVp-p		200mVp-p	
	LINE REGULATION Note.3		±0.5%		±0.5%		±0.5%		±0.5%	
	LOAD REGULATION Note.4		±0.5%		±0.5%		±0.5%		±0.5%	
	VOLTAGE TOLERANCE		±2.0%		±2.0%		±2.0%		±2.0%	
	SWITCHING FREQUENCY (Typ.)		200KHz							
EXTERNAL CAPACITANCE LOAD (max.)		100uF/16V low ESR		68uf/25V low ESR		47uf/50V low ESR		47uf/50V low ESR		
INPUT	VOLTAGE RANGE		10.5 ~ 53VDC		20 ~ 53VDC		20 ~ 53VDC		30 ~ 53VDC	
	NORMAL VOLTAGE		24VDC (or 48VDC)		24VDC (or 48VDC)		24VDC (or 48VDC)		48VDC	
	EFFICIENCY (Typ.)	24Vin	93% (12/24VDC)		96%		97%		-----	
		48Vin	92%		95%		95%		96%	
	DC CURRENT	Full load	5400mA/12VDC		4500mA/24VDC		4600mA/24VDC		2300mA/48VDC	
		No load	20mA		30mA		30mA		50mA	
PROTECTION		Fuse recommended (8A)								
PROTECTION	OVERLOAD (Typ.)		120 ~ 300% rated output power							
			Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE		6.4 ~ 7.5V		15.6~ 18V		17.5~ 21V		28~ 33V	
			Protection type : Shut off o/p voltage, clamp by TVS diode							
SHORT CIRCUIT		All output equipped with short circuit								
		Protection type : Hiccup mode, recovers automatically after fault condition is removed								
FUNCTION	REMOTE CONTROL		Power on : 1.2VDC < R.C ~ com < 12VDC or open circuit ; power off : R.C ~ com < 0.4VDC or short circuit (PIN5,6 & PIN11)							
ENVIRONMENT	SAFETY STANDARDS		EAC TP TC 004 approved							
	WORKING TEMP.		-30 ~ +85℃ (Refer to "Derating Curve")							
	WORKING HUMIDITY		20% ~ 85% RH non-condensing							
	STORAGE TEMP.		-30 ~ +105℃							
	TEMP. COEFFICIENT		±0.03% / ℃ (0 ~ 50℃)							
	VIBRATION		10 ~ 500Hz, 2G 10min./1 cycle, period for 60min, each along X, Y, Z axes							
SAFETY & EMC	SAFETY STANDARD		EN62368-1(LVD)							
	EMC EMISSION		Parameter		Standard		Test Level / Note			
			Conducted		EN55032		Class A without external components,Class B with external components			
			Radiated		EN55032		Class A without external components,Class B with external components			
	EMC IMMUNITY		Parameter		Standard		Test Level / Note			
			Radiated		EN61000-4-3		Level 2, 3V/m ; criteria A			
			EFT / Burst		EN61000-4-4		Level 2, 1KV ; criteria A			
			Surge		EN61000-4-5		Level 2, 1KV/Line-Line,criteria A			
Conducted			EN61000-4-6		Level 2, 3V ; criteria A					
OTHERS	DIMENSION		50.8*27.5*12mm or 2.0"*1.082"*0.472" inch (L*W*H)							
	WEIGHT		35g;280psc/10.8Kg/0.97CUFT							
NOTE		1.All parameters are specified at normal input, rated load, 25℃ 70% RH Ambient. 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor. 3.Line regulation is measured from low line to high line at rated load. 4.Load regulation is measured from 10% to 100% rated load.								

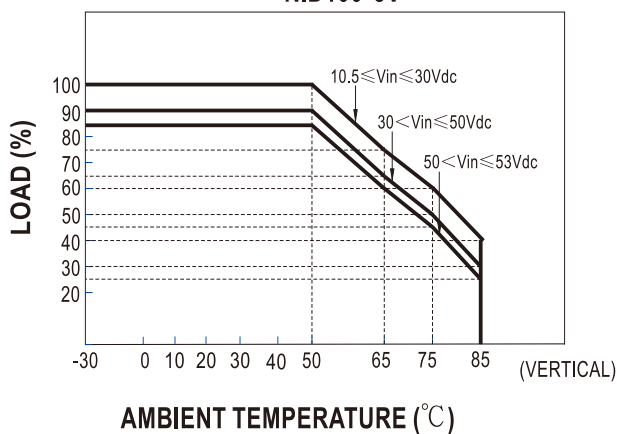
■ Connection diagram to obtain negative output voltage

Note: input voltage must be $< 30\text{VDC}$.

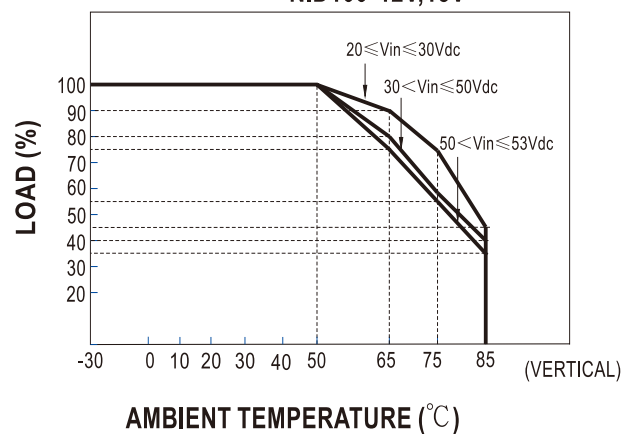


■ Derating Curve

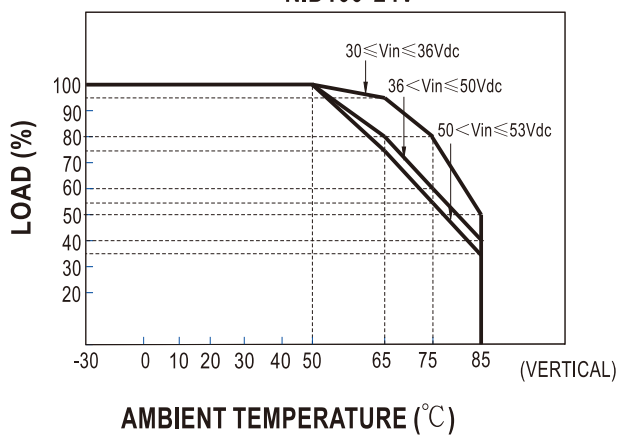
NID100-5V



NID100-12V,15V

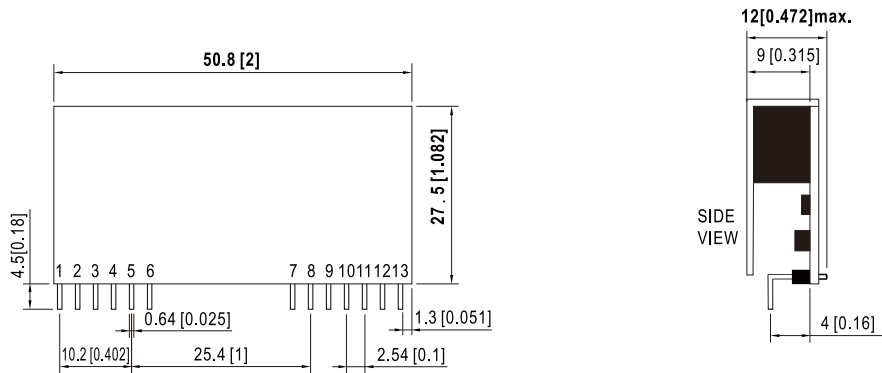


NID100-24V



Mechanical Specification

Unit:mm(inch)

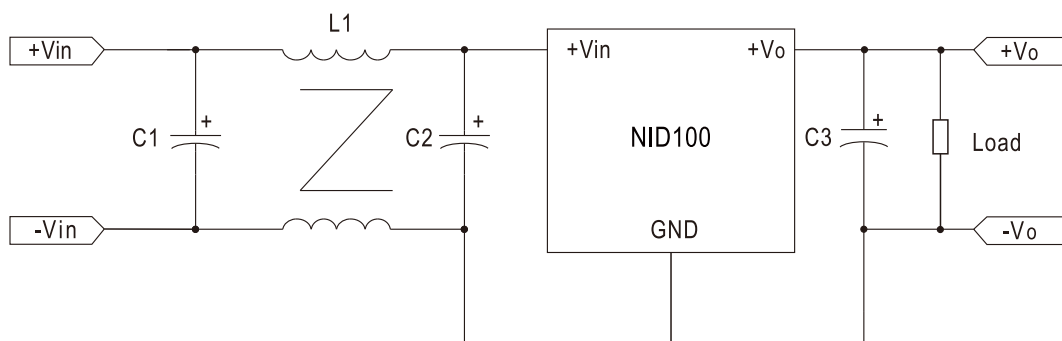


Pin Configuration

Pin No.	Pin_Out
1,2,3,4	+Vout
5,6,7,8	Com
9,10	+Vin
11	N.C.
12	Trim(optional)
13	R.C.

EMC Suggestion Circuit

※Comply to EN55032 Class A without additional componenets ,required external componenets to meet Class B emissison are as below:



C1/C2	L1	C3
120 μ F/63V	15 μ H(NiZn)	22 μ F/35V