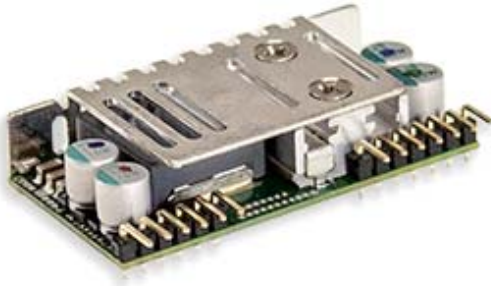




100W DC-DC Non-Isolated Regulated Converter

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 BS EN/EN55032 ClassA without additional components
- Trimming output (optional)
- 3 years warranty

■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

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 | | |
| | 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 (PIN5,6,7,8 & PIN13) | | | | | | | | |
| ENVIRONMENT | SAFETY STANDARDS | EAC TP TC 004 approved | | | | | | | | |
| | WORKING TEMP. | -30 ~ +85°C (Refer to "Derating Curve") | | | | | | | | |
| | WORKING HUMIDITY | 20% ~ 85% RH non-condensing | | | | | | | | |
| | STORAGE TEMP. | -30 ~ +105°C | | | | | | | | |
| | TEMP. COEFFICIENT | ±0.03% / °C (0 ~ 50°C) | | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes | | | | | | | | |
| SAFETY & EMC | SAFETY STANDARD | BS EN/EN62368-1(LVD) | | | | | | | | |
| | EMC EMISSION | Parameter | Standard | | Test Level / Note | | | | | |
| | | Conducted | BS EN/EN55032 | | Class A without external components, Class B with external components | | | | | |
| | Radiated | BS EN/EN55032 | | Class A without external components, Class B with external components | | | | | | |
| | EMC IMMUNITY | BS EN/EN55035 | | | | | | | | |
| | | Parameter | Standard | | Test Level / Note | | | | | |
| | | Radiated | BS EN/EN61000-4-3 | | Level 2, 3V/m ; criteria A | | | | | |
| | | EFT / Burst | BS EN/EN61000-4-4 | | Level 2, 1KV ; criteria A | | | | | |
| Surge | | BS EN/EN61000-4-5 | | Level 2, 1KV/Line-Line, criteria A | | | | | | |
| Conducted | BS EN/EN61000-4-6 | | Level 2, 3V ; criteria A | | | | | | | |
| OTHERS | MTBF | 17290.5K hrs min. Telcordia SR-332 (Bellcore) ; 1000.6K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | |
| | DIMENSION | 50.8*27.5*12mm or 2.0*1.082*0.472" inch (L*W*H) | | | | | | | | |
| | WEIGHT | 35g;280psc/10.8Kg/0.94CUFT | | | | | | | | |
| NOTE | 1.All parameters are specified at normal input, rated load, 25°C 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. ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | | | | | | | | |

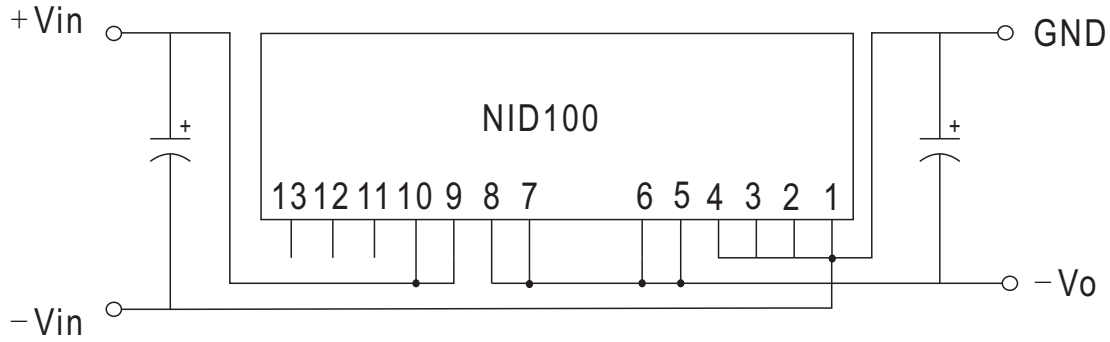


100W DC-DC Non-Isolated Regulated Converter

NID100 series

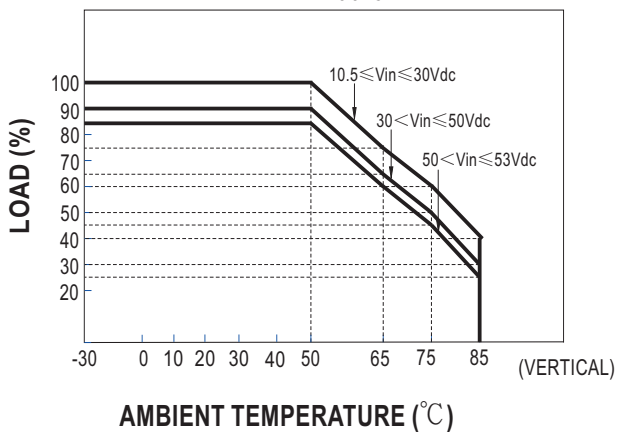
■ Connection diagram to obtain negative output voltage

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

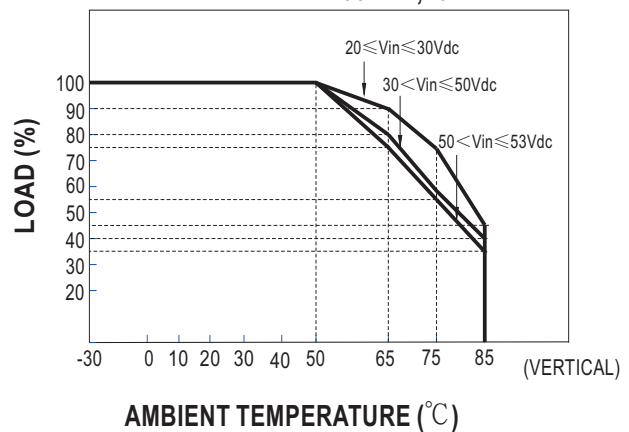


■ Derating Curve

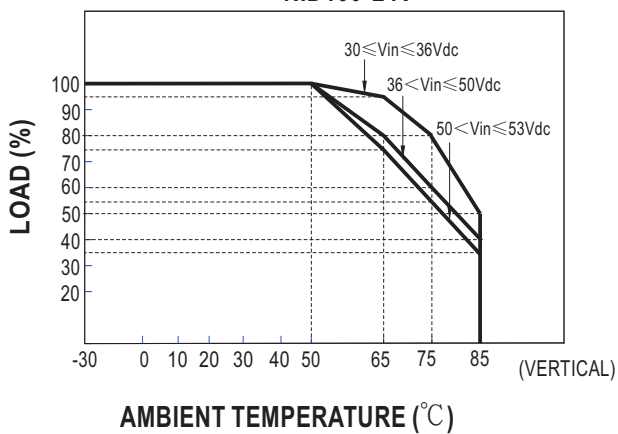
NID100-5V



NID100-12V,15V



NID100-24V



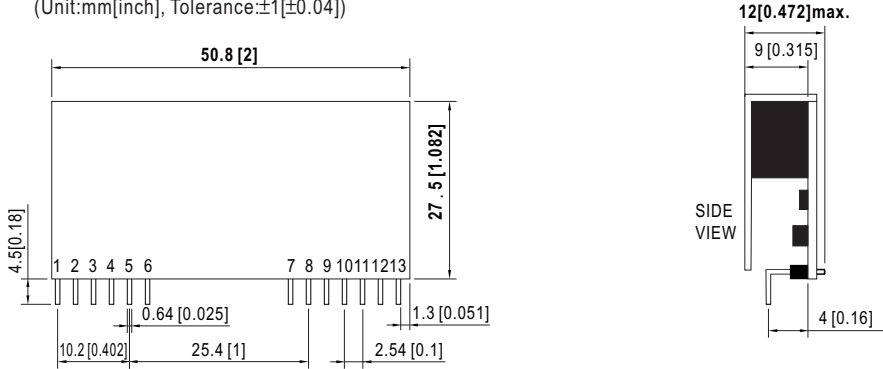


100W DC-DC Non-Isolated Regulated Converter

NID100 series

Mechanical Specification

(Unit:mm[inch], Tolerance:±1[±0.04])

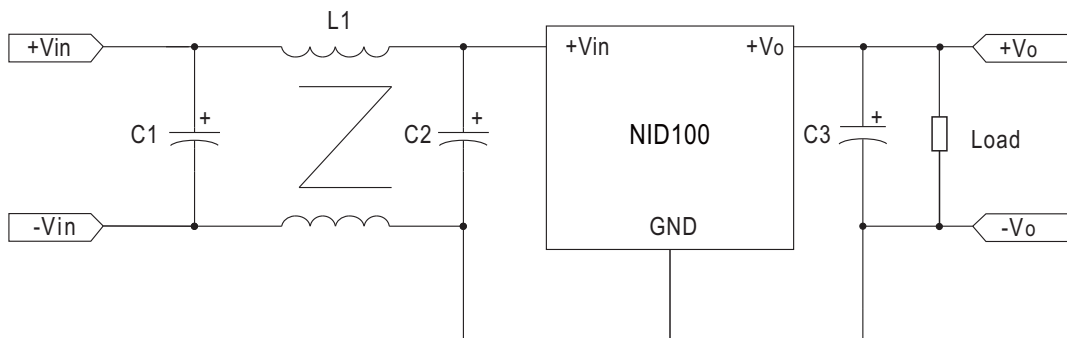


Pin Configuration

| 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 emisson are as below:



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