



**Automatización Eléctrica**

Especialistas en Automatización

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■ Features :

- Wide 4:1 DC input range
- Protections: Short circuit / Overload / Over voltage
- 1000VDC I/O isolation
- Built-in EMI filter
- Cooling by free air convection
- Built-in remote ON-OFF control
- 100% full load burn-in test
- Lost cost
- High reliability
- 2 years warranty

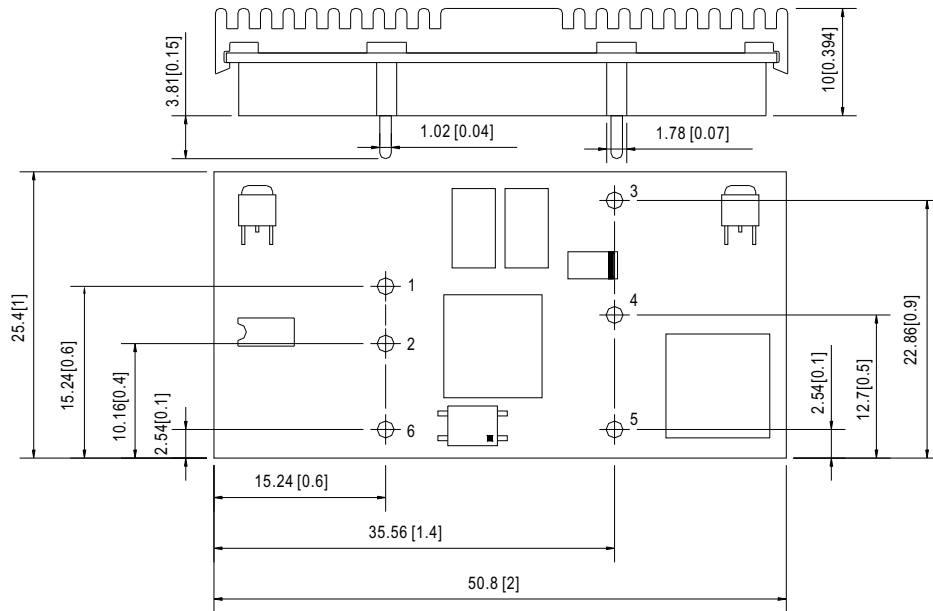


**SPECIFICATION**

| MODEL                 | NSD10-12D5   |   | NSD10-12D12   |              | NSD10-12D15  |               | NSD10-48D5     |             | NSD10-48D12   |              | NSD10-48D15  |               |                |
|-----------------------|--|---|---------------|--------------|--------------|---------------|----------------|-------------|---------------|--------------|--------------|---------------|----------------|
| OUTPUT                | DC VOLTAGE   | 5V  | -5V           | 12V          | -12V         | 15V           | -15V           | 5V          | -5V           | 12V          | -12V         | 15V           | -15V           |
|                       | RATED CURRENT  | 1A  | 1A            | 0.42A        | 0.42A        | 0.33A         | 0.33A          | 1A          | 1A            | 0.42A        | 0.42A        | 0.33A         | 0.33A          |
|                       | CURRENT RANGE  | 0.05 ~ 1A   | 0.05 ~ 1A     | 0.02 ~ 0.42A | 0.02 ~ 0.42A | 0.016 ~ 0.33A | 0.016 ~ 0.33A  | 0.05 ~ 1A   | 0.05 ~ 1A     | 0.02 ~ 0.42A | 0.02 ~ 0.42A | 0.016 ~ 0.33A | 0.016 ~ 0.33A  |
|                       | RATED POWER  | 10W   |               |              |              |               |                |             |               |              |              |               |                |
|                       | CAPACITIVE LOAD (max.)   | ±1000uF   |               |              |              |               |                |             |               |              |              |               |                |
|                       | RIPPLE & NOISE (max.) Note.2   | 75mVp-p(10% ~ 100% load)  |               |              |              |               |                |             |               |              |              |               |                |
|                       | VOLTAGE TOLERANCE Note.3   | ±4.0%   |               | ±2.0%        |              | ±2.0%         |                | ±3.0%       |               | ±2.0%        |              | ±2.0%         |                |
|                       | LINE REGULATION  | ±1.0%   |               |              |              |               |                |             |               |              |              |               |                |
| LOAD REGULATION       | ±3.0%  |   | ±2.0%         |              | ±1.0%        |               | ±2.0%          |             | ±2.0%         |              | ±1.0%        |               |                |
| INPUT                 | RATED DC INPUT   | 12VDC   |               |              |              |               |                | 48VDC       |               |              |              |               |                |
|                       | VOLTAGE RANGE  | 9.8 ~ 36VDC   |               |              |              |               |                | 22 ~ 72VDC  |               |              |              |               |                |
|                       | EFFICIENCY (Typ.)  | 76%   |               | 77%          |              | 77%           |                | 78%         |               | 77%          |              | 77%           |                |
|                       | DC CURRENT   | 1.4A/12VDC  |               |              |              |               |                | 0.4A/48VDC  |               |              |              |               |                |
|                       | SHUTDOWN IDLE CURRENT  | 20mA/12VDC  |               |              |              |               |                |             |               |              |              |               |                |
| PROTECTION            | OVERLOAD   | Above 105% rated output power<br>Protection type : Over power limiting, recovers automatically after fault condition is removed |               |              |              |               |                |             |               |              |              |               |                |
|                       | OVER VOLTAGE(CLAMP)  | 5.75 ~ 7.5V   | -5.75 ~ -7.5V | 13.8 ~ 18V   | -13.8 ~ -18V | 17.3 ~ 22.5V  | -17.3 ~ -22.5V | 5.75 ~ 7.5V | -5.75 ~ -7.5V | 13.8 ~ 18V   | -13.8 ~ -18V | 17.3 ~ 22.5V  | -17.3 ~ -22.5V |
|                       | SHORT CIRCUIT Note.4   | Recovers automatically after fault condition is removed   |               |              |              |               |                |             |               |              |              |               |                |
| FUNCTION              | ON/OFF CONTROL   | Logic "1" OPEN: ON logic "0" GND: OFF   |               |              |              |               |                |             |               |              |              |               |                |
| ENVIRONMENT           | WORKING TEMP.  | -25 ~ +70°C   |               |              |              |               |                |             |               |              |              |               |                |
|                       | WORKING HUMIDITY   | 0% ~ 95% RH max.  |               |              |              |               |                |             |               |              |              |               |                |
|                       | STORAGE TEMP., HUMIDITY  | -40 ~ +85°C, 0 ~ 95% RH   |               |              |              |               |                |             |               |              |              |               |                |
|                       | TEMP. COEFFICIENT  | ±0.03%/°C (0~60°C)  |               |              |              |               |                |             |               |              |              |               |                |
| SAFETY & EMC (Note 5) | SAFETY STANDARDS   | UL60950-1 approved, Design refer to TUV EN60950-1   |               |              |              |               |                |             |               |              |              |               |                |
|                       | ISOLATION VOLTAGE  | I/P-O/P:1KVDC   |               |              |              |               |                |             |               |              |              |               |                |
|                       | ISOLATION RESISTANCE   | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH  |               |              |              |               |                |             |               |              |              |               |                |
|                       | EMI CONDUCTION & RADIATION   | Compliance to EN55022 (CISPR22) Class B   |               |              |              |               |                |             |               |              |              |               |                |
| OTHERS                | EMS IMMUNITY   | Compliance to EN61000-4-2,3,4,6,8; EN55024, light industry level, criteria A  |               |              |              |               |                |             |               |              |              |               |                |
|                       | MTBF   | 1878.5K hrs min. MIL-HDBK-217F (25°C)   |               |              |              |               |                |             |               |              |              |               |                |
|                       | DIMENSION  | 50.8*25.4*10mm (2**1**0.394") (L*W*H)   |               |              |              |               |                |             |               |              |              |               |                |
|                       | PACKING  | 0.02Kg; 300pcs/7Kg/0.97CUFT   |               |              |              |               |                |             |               |              |              |               |                |
| NOTE                  | <p>1. All parameters NOT specially mentioned are measured at 12, 48VDC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 47uF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Short circuit not more than 60 seconds.</p> <p>5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p> <p>6. To insure proper operation, a 220uF/100V electrolytic capacitor with ESR &lt;1 Ω must be added to the input line.</p> <p>7. EMC filter suggestion:</p> |   |               |              |              |               |                |             |               |              |              |               |                |
|                       |  |   |               |              |              |               |                |             |               |              |              |               |                |

### Mechanical Specification

Unit:mm[inch]

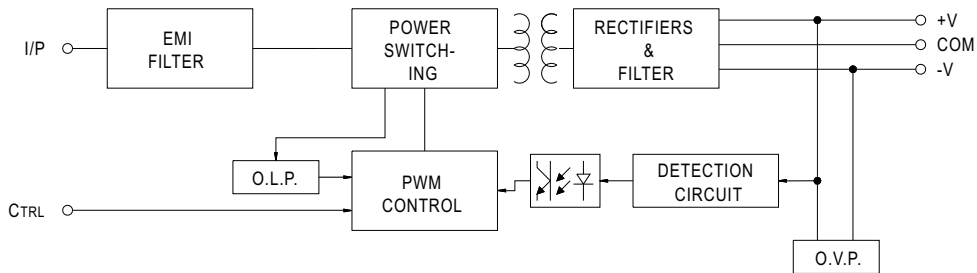


Pin. No Assignment

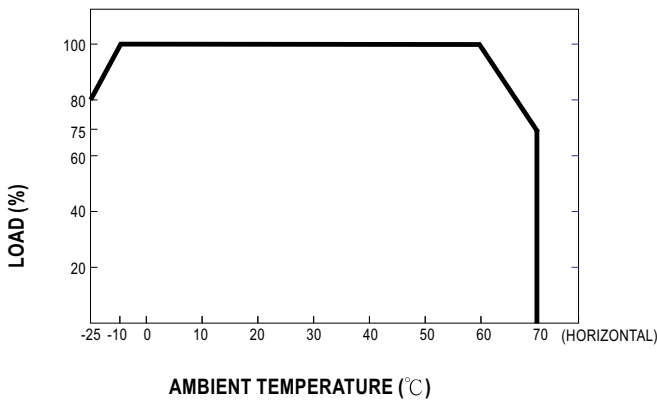
| Pin No. | Assignment  | Pin No. | Assignment |
|---------|-------------|---------|------------|
| 1       | +INPUT      | 4       | COMMON     |
| 2       | -INPUT(GND) | 5       | -OUT       |
| 3       | +OUT        | 6       | CONTROL    |

### Block Diagram

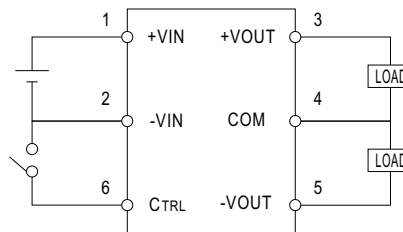
fosc : 350KHz



### Derating Curve



### ON/OFF Control



- CONTROL INPUT.....PIN6
- CONTROL COMMON.....PIN2
- LOGIC COMPATIBILITY.....CMOS OR OPEN COLLECTOR TTL
- CONTROL VOLTAGE
- ON.....+5.5VDC min. OR OPEN CIRCUIT
- OFF.....+2.5VDC max. OR SHORT TO PIN2



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