



5W DC-DC Regulated Single Output

NSD05-S series

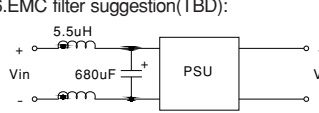


■ Features :

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

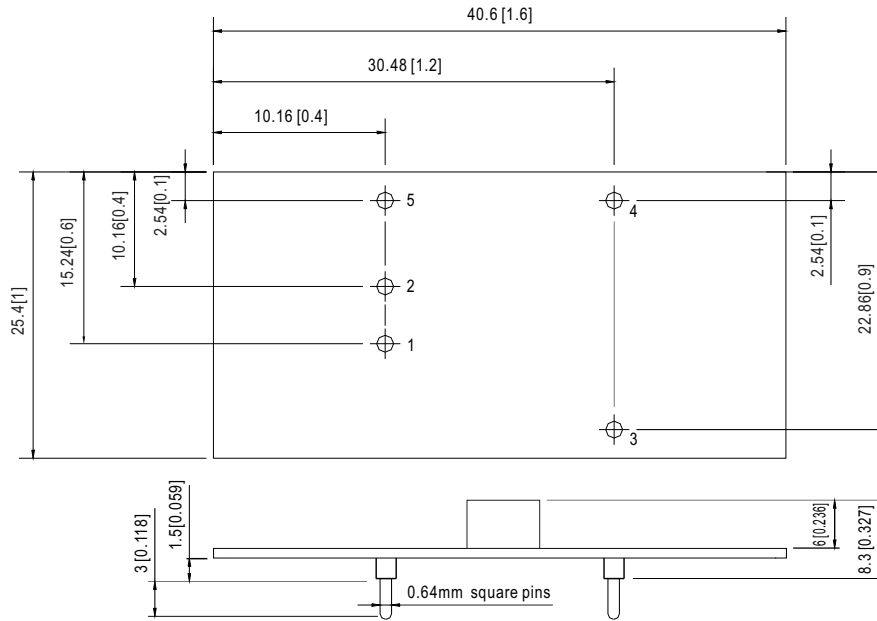


SPECIFICATION

| MODEL | NSD05-12S3 | NSD05-12S5 | NSD05-12S12 | NSD05-12S15 | NSD05-48S3 | NSD05-48S5 | NSD05-48S12 | NSD05-48S15 | | |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------|------------|-------------|--------------|--------------|--|
| OUTPUT | DC VOLTAGE | 3.3V | 5V | 12V | 15V | 3.3V | 5V | 12V | 15V | |
| | RATED CURRENT | 1.2A | 1A | 0.42A | 0.33A | 1.2A | 1A | 0.42A | 0.33A | |
| | CURRENT RANGE | 0 ~ 1.2A | 0 ~ 1A | 0 ~ 0.42A | 0 ~ 0.33A | 0 ~ 1.2A | 0 ~ 1A | 0 ~ 0.42A | 0 ~ 0.33A | |
| | RATED POWER | 3.96W | 5W | 5.04W | 4.95W | 3.96W | 5W | 5.04W | 4.95W | |
| | CAPACITIVE LOAD (max.) | 1000uF | 1000uF | 120uF | 120uF | 1000uF | 1000uF | 120uF | 120uF | |
| | RIPPLE & NOISE (max.) Note.2 | 75mVp-p | | | | | | | | |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% max. | | | | | | | | |
| | LINE REGULATION | ±1.0% | | | | | | | | |
| | LOAD REGULATION | ±2.0% | ±1.0% | ±1.0% | ±1.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% | |
| SETUP TIME | 80ms/RATED DC INPUT at full Load | | | | | | | | | |
| INPUT | RATED DC INPUT | 12VDC | | | | 48VDC | | | | |
| | VOLTAGE RANGE | 9.2 ~ 36VDC | | | | 18 ~ 72VDC | | | | |
| | EFFICIENCY (Typ.) | 72% | 76% | 82% | 83% | 75% | 78% | 83% | 85% | |
| | DC CURRENT | 0.7A/12VDC | | | | 0.2A/48VDC | | | | |
| | SHUTDOWN IDLE CURRENT | 5mA/12VDC | | | | 5mA/48VDC | | | | |
| PROTECTION | OVERLOAD | Above 105% rated output power Protection type : Over power limiting, recovers automatically after fault condition is removed | | | | | | | | |
| | OVER VOLTAGE(CLAMP) | 3.8 ~ 4.6V | 5.6 ~ 6.8V | 13.5 ~ 16.5V | 16.2 ~ 19.8V | 3.8 ~ 4.6V | 5.6 ~ 6.8V | 13.5 ~ 16.5V | 16.2 ~ 19.8V | |
| | SHORT CIRCUIT | Recovers automatically after fault condition is removed | | | | | | | | |
| FUNCTION | ON/OFF CONTROL | Logic "1" or open circuit : ON Logic "0" or short to PIN2 : 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 4) | SAFETY STANDARDS | TUV EN62368-1, IEC62368-1 CB approved by TUV, EAC TP TC 004 approved | | | | | | | | |
| | ISOLATION VOLTAGE | I/P-O/P:1KVDC | | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH | | | | | | | | |
| | EMC EMISSION | Compliance to EN55032 (CISPR32) Class B, EAC TP TC 020 | | | | | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8; EN55024, light industry level, criteria A, EAC TP TC 020 | | | | | | | | |
| OTHERS | MTBF | 914.4K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | |
| | DIMENSION | 40.6*25.4*8.3mm (1.6**1**0.327") (L*W*H) | | | | | | | | |
| | PACKING | 0.007Kg; 700pcs/5.9Kg/1.23CUFT | | | | | | | | |
| 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 & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 230mm*230mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)</p> <p>5. To insure proper operation, a 47uF/100V electrolytic capacitor with Esr <1Ω must be added to the input line.</p> <p>6. EMC filter suggestion(TBD):</p> <div style="text-align: center;">  </div> <p>7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | | | | | | | |

Mechanical Specification

Unit:mm[inch]

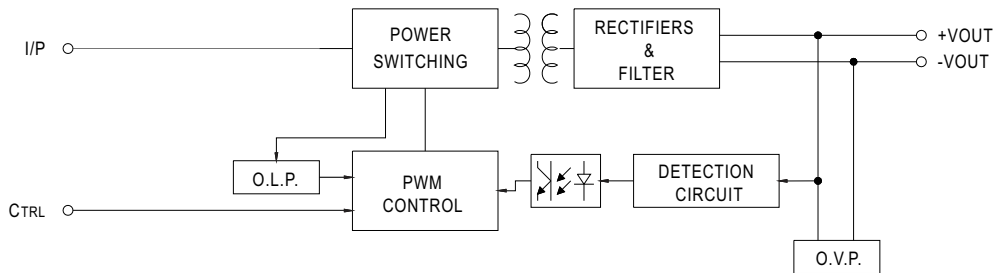


Pin No. Assignment

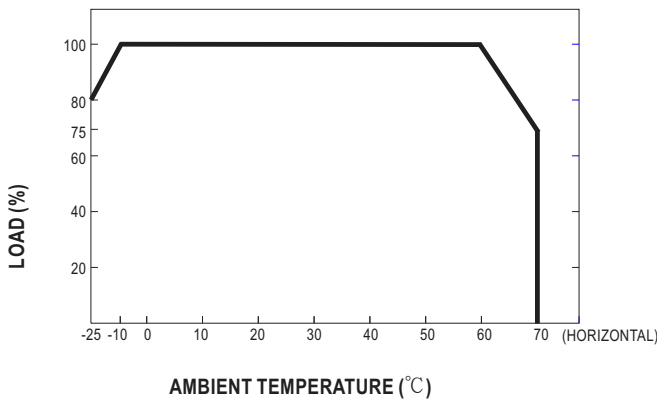
| Pin No. | Assignment | Pin No. | Assignment |
|---------|-------------|---------|------------|
| 1 | +INPUT | 4 | -VOUT |
| 2 | -INPUT(GND) | 5 | CONTROL |
| 3 | +VOUT | | |

Block Diagram

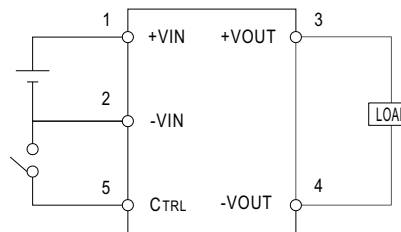
fosc : 350KHz



Derating Curve



ON/OFF Control



- CONTROL INPUT.....PIN5
- 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