AbN
automation

MEAN WELL

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

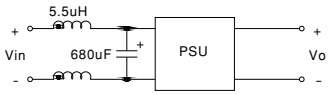
BS EN/EN62368-1 TPTC004 IEC62368-1

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℃							
	WORKING HUMIDITY	0% ~ 95% RH max.							
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 0 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/℃ (0~60℃)							
SAFETY & EMC (Note 4)	SAFETY STANDARDS	TUV BS EN/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℃/ 70% RH							
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, EAC TP TC 020							
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8; BS EN/EN55024, light industry level, criteria A, EAC TP TC 020							
OTHERS	MTBF	914.4K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	40.6*25.4*8.3mm (1.6"*1"*0.327") (L*W*H)							
	PACKING	0.007Kg; 700pcs/5.9Kg/1.23CUFT							

NOTE

1. All parameters NOT specially mentioned are measured at 12, 48VDC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
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)
5. To insure proper operation, a 47uF/100V electrolytic capacitor with Esr <1Ω must be added to the input line.
6. EMC filter suggestion(TBD):

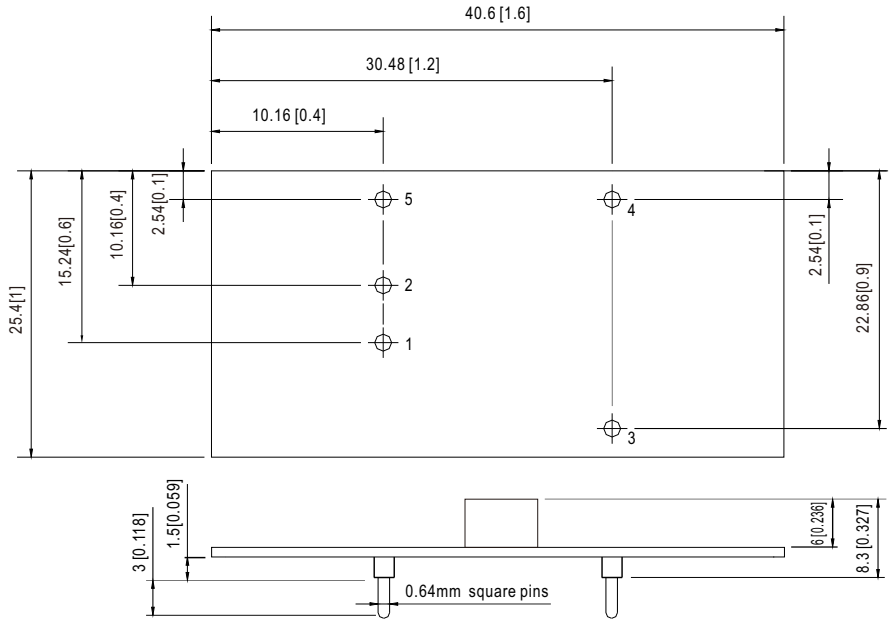


7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ Mechanical Specification

Unit:mm[inch]

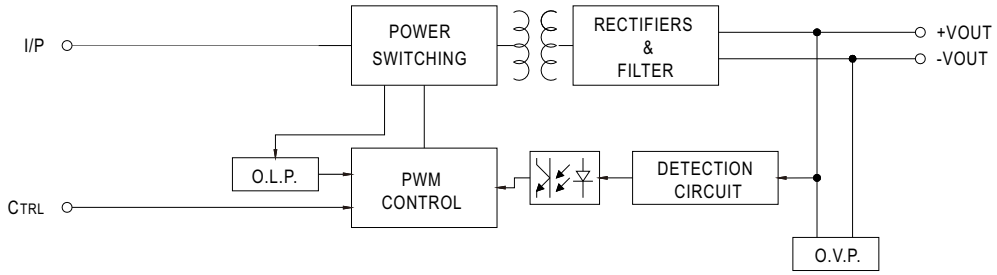


Pin No. Assignment

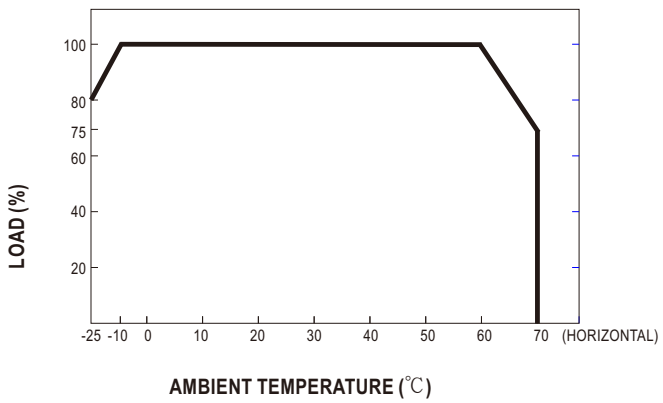
Pin No.	Assignment	Pin No.	Assignment
1	+INPUT	4	-VOUT
2	-INPUT(GND)	5	CONTROL
3	+VOUT		

■ Block Diagram

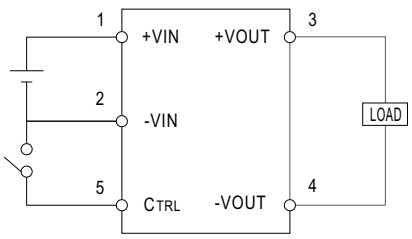
fosc : 350KHz



■ 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