



**THE DATASHEET OF  
NSD05-12S12**





■ 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

■ GTIN CODE

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



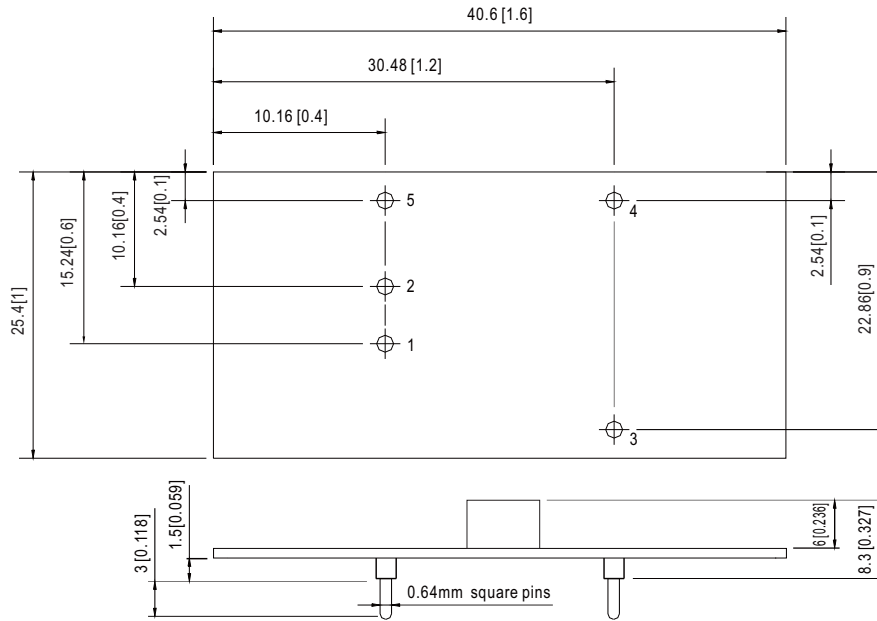
BS EN/EN62368-1 TPTC004 IEC62368-1

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°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 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°C / 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/EN55035, light industry level, EAC TP TC 020								
OTHERS	MTBF	11455.9K hrs min. Telcordia SR-332 (Bellcore) ; 1734.0K 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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μ F &amp; 47 μ F 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 <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> )</p> <p>5. To insure proper operation, a 47uF/100V electrolytic capacitor with Esr &lt;1Ω must be added to the input line.</p> <p>6. EMC filter suggestion(TBD):</p> <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 <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>									

### Mechanical Specification

Unit:mm[inch]

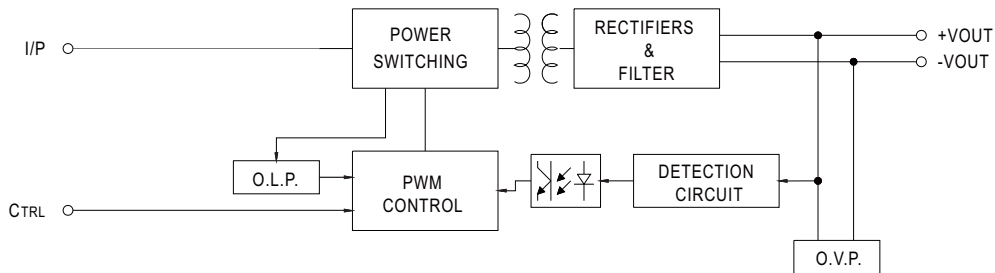


Pin No. Assignment

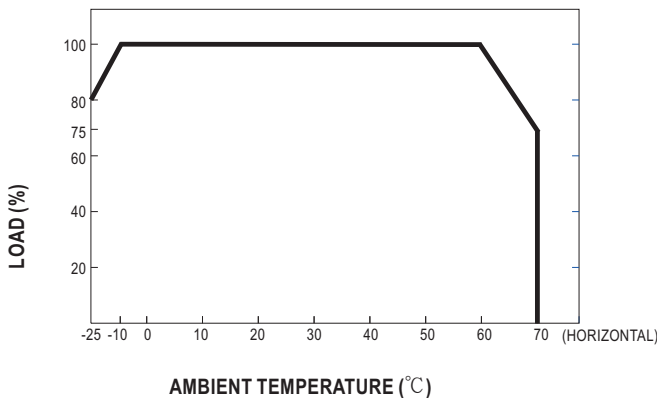
Pin No.	Assignment	Pin No.	Assignment
1	+INPUT	4	-VOUT
2	-INPUT(GND)	5	CONTROL
3	+VOUT		

### Block Diagram

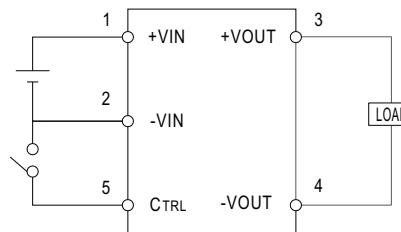
fosc : 350KHz



### 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

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