



**10W Open Frame type DC to Dc power supply > NSD10-S**



■ 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
- Low cost
- High reliability
- 2 years warranty



**SPECIFICATION**

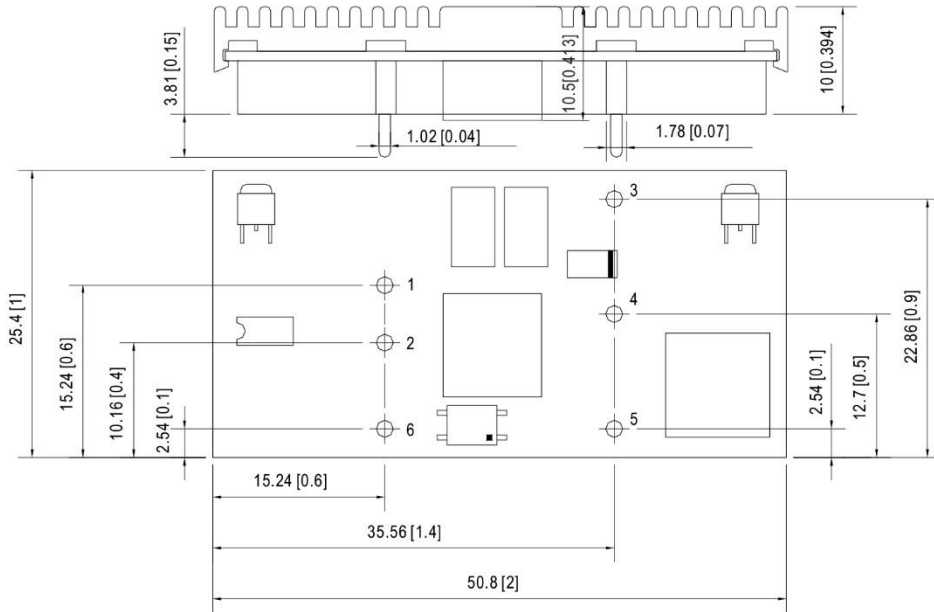
MODEL		NSD10-12S3	NSD10-12S5	NSD10-12S9	NSD10-12S12	NSD10-12S15	NSD10-48S3	NSD10-48S5	NSD10-48S9	NSD10-48S12	NSD10-48S15	
OUTPUT	DC VOLTAGE	3.3V	5V	9V	12V	15V	3.3V	5V	9V	12V	15V	
	RATED CURRENT	2.5A	2A	1.1A	0.83A	0.67A	2.5A	2A	1.1A	0.83A	0.67A	
	CURRENT RANGE	0.12 ~ 2.5A	0.1 ~ 2A	0.05 ~ 1.1A	0.04 ~ 0.83A	0.03 ~ 0.67A	0.12 ~ 2.5A	0.1 ~ 2A	0.05 ~ 1.1A	0.04 ~ 0.83A	0.03 ~ 0.67A	
	RATED POWER	8.25W	10W	9.9W	9.96W	10.05W	8.25W	10W	9.9W	9.96W	10.05W	
	CAPACITIVE LOAD (max.)	3300uF										
	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%	±1.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
SETUP TIME	100ms/RATED DC INPUT at full Load											
INPUT	RATED DC INPUT	12VDC					48VDC					
	VOLTAGE RANGE	9.8 ~ 36VDC					22 ~ 72VDC					
	EFFICIENCY (Typ.)	72%	75%	78%	79%	80%	74%	77%	78%	79%	80%	
	DC CURRENT	1.4A/12VDC					0.4A/48VDC					
	SHUTDOWN IDLE CURRENT	20mA/12VDC										
PROTECTION	OVERLOAD	Above 105% rated output power Protection type : Over power limiting, recovers automatically after fault condition is removed										
	OVER VOLTAGE(CLAMP)	3.8 ~ 4.95V	5.75 ~ 7.5V	10.4 ~ 13.5V	13.8 ~ 18V	17.3 ~ 22.5V	3.8 ~ 4.95V	5.75 ~ 7.5V	10.4 ~ 13.5V	13.8 ~ 18V	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	UL62368-1, EAC TP TC 004 approved, Design refer to TUV EN62368-1										
	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										
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,6,8; EN55024, light industry level, criteria A, EAC TP TC 020										
	MTBF	2138.2K 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/0.94CUFT										
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 12, 48VDC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Short circuit not more than 60 seconds.</li> <li>5. 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."</li> <li>6. To insure proper operation, a 220uF/100V electrolytic capacitor with ESR &lt;1Ω must be added to the input line.</li> <li>7. EMC filter suggestion:           <div style="text-align: center;"> </div> </li> <li>8. 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).</li> </ol>											



**10W Open Frame type DC to Dc power supply > NSD10-S**

**Mechanical Specification**

Unit:mm[inch]

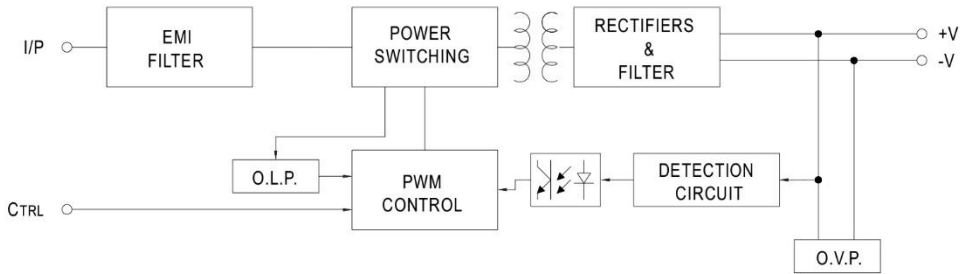


Pin. No Assignment

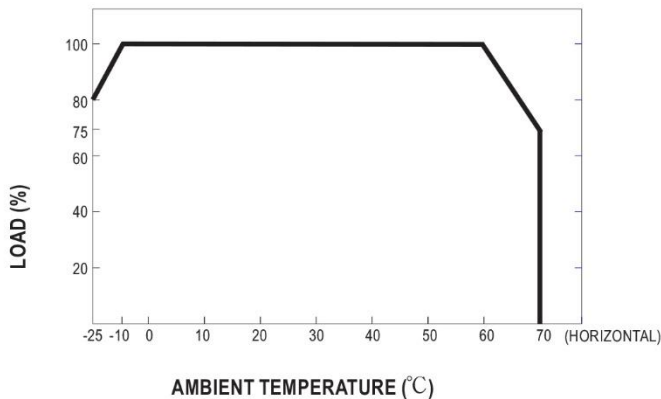
Pin No.	Assignment	Pin No.	Assignment
1	+INPUT	4	N/C
2	-INPUT(GND)	5	-OUT
3	+OUT	6	CONTROL

**Block Diagram**

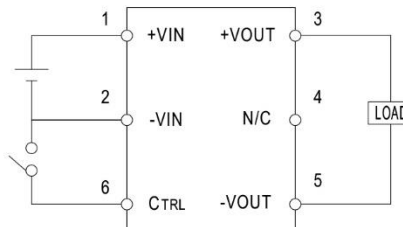
fosc : 350KHz



**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