



# 10W DC-DC Regulated Single Output

# NSD10-S series



### ■ 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

### ■ GTIN CODE

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

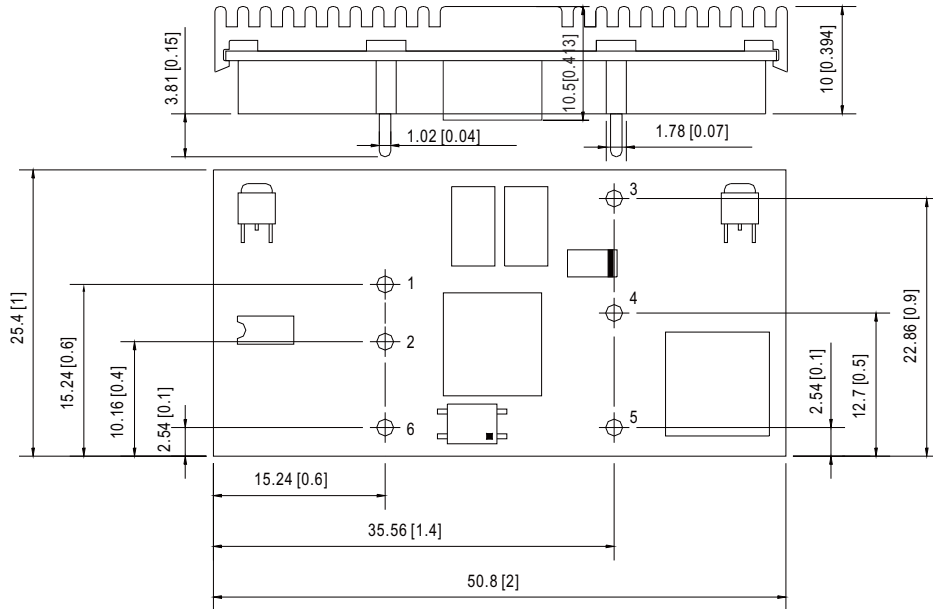


### SPECIFICATION

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%
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 BS EN/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 BS EN/EN55032 (CISPR32) Class B, EAC TP TC 020									
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,6,8; BS EN/EN55035, light industry level, EAC TP TC 020									
OTHERS	MTBF	12058.3K hrs min. Telcordia SR-332 (Bellcore) ; 2138.0K 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	<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. 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. 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>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> <div style="text-align: center;"> </div> <p>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).</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**

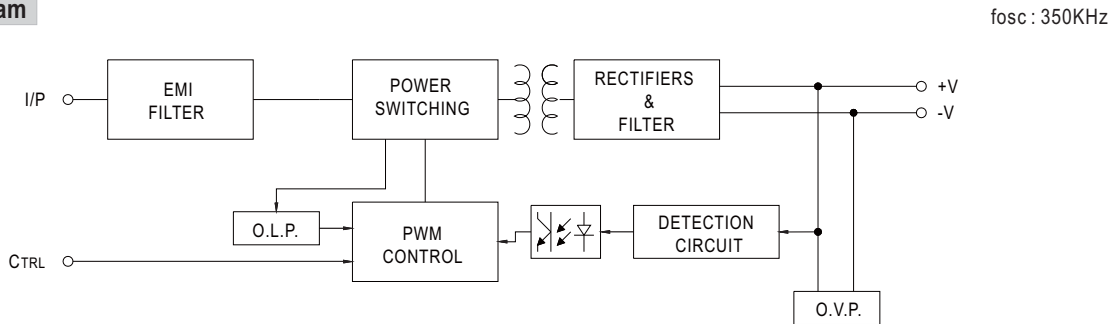
(Unit:mm[inch], Tolerance:±1[±0.04])



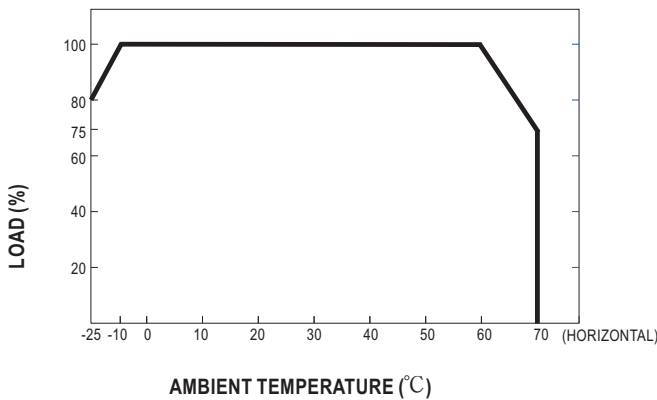
Pin. No Assignment

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

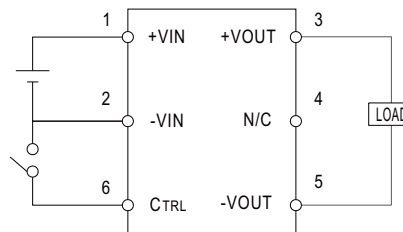
**Block Diagram**



**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