



# THE DATASHEET OF SDM30-12S5





# 30W DC-DC Single Output

# SDM30 series



### ■ Features :

- Wide 2:1 DC input range
- In/out capacitance 1000pF
- Protections: Short circuit / Overload / Over voltage
- 1000VDC I/O isolation for D/D
- Cooling by free air convection
- Built-in remote ON-OFF control
- 100% full load burn-in test
- Fixed switching frequency at 225KHz
- Low cost
- High reliability
- 2 years warranty

### ■ GTIN CODE

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



### SPECIFICATION

MODEL	SDM30-12S3	SDM30-24S3	SDM30-48S3	SDM30-12S5	SDM30-24S5	SDM30-48S5	
OUTPUT	DC VOLTAGE	3.3V			5V		
	RATED CURRENT	5A			5A		
	CURRENT RANGE	0 ~ 5A			0 ~ 5A		
	RATED POWER	16.5W			25W		
	RIPPLE & NOISE (max.) Note.2	75mVp-p			75mVp-p		
	VOLTAGE TOLERANCE Note.3	±3.0%			±2.0% max.		
	LINE REGULATION	±1.0%			±1.0%		
	LOAD REGULATION	±1.0%			±1.0%		
TRIM OUTPUT	±13%(Typ.) output voltage						
INPUT	RATED DC INPUT	12S: 12VDC	24S: 24VDC	48S: 48VDC			
	VOLTAGE RANGE	12S: 9.2 ~ 18VDC	24S: 18 ~ 36VDC	48S: 36 ~ 72VDC			
	EFFICIENCY (Typ.)	77%	79%	80%	77%	79%	80%
	DC CURRENT	12S: 3.6A	24S: 2A	48S: 1A			
	IDLE CURRENT	12S: 35mA	24S/48S: 30mA				
PROTECTION	OVERLOAD	Above 105% rated output power Protection type : Over power limiting, recovers automatically after fault condition is removed					
	OVER VOLTAGE	3.8 ~ 4.95V			5.75 ~ 7.5V		
	SHORT CIRCUIT	Protection type : Constant current limiting, recovers automatically after fault condition is removed					
FUNCTION	ON/OFF CONTROL	Logic "1" or open: power on      Logic "0" short to Vin-: power off					
ENVIRONMENT	WORKING TEMP.	-25 ~ +85°C (Refer to "Derating Curve")					
	STORAGE TEMP., HUMIDITY	-25 ~ +85°C, 0 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)					
SAFETY & EMC (Note 6)	SAFETY STANDARDS	Design refer to LVD, 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					
OTHERS	EMC IMMUNITY	Compliance to BS EN/EN61000-2,3,4,6,8, BS EN/EN55035, light industry level, EAC TP TC 020					
	MTBF	8083.5K hrs min.      Telcordia SR-332 (Bellcore) ; 777.2K hrs min.      MIL-HDBK-217F (25°C)					
	DIMENSION	50.8*50.8*16mm (2"*2"*0.63") (L*W*H)					
	PACKING	0.1Kg; 150pcs/15.8Kg/0.94CUFT					
NOTE	<p>1. All parameters NOT specially mentioned are measured at 12,24,48VDC 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 μF &amp; 47 μF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Short circuit not more than 60 second.</p> <p>5. DC source wires ≥5cm, an input external al capacitor 47 ~ 100uF is required.</p> <p>6. 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>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>						



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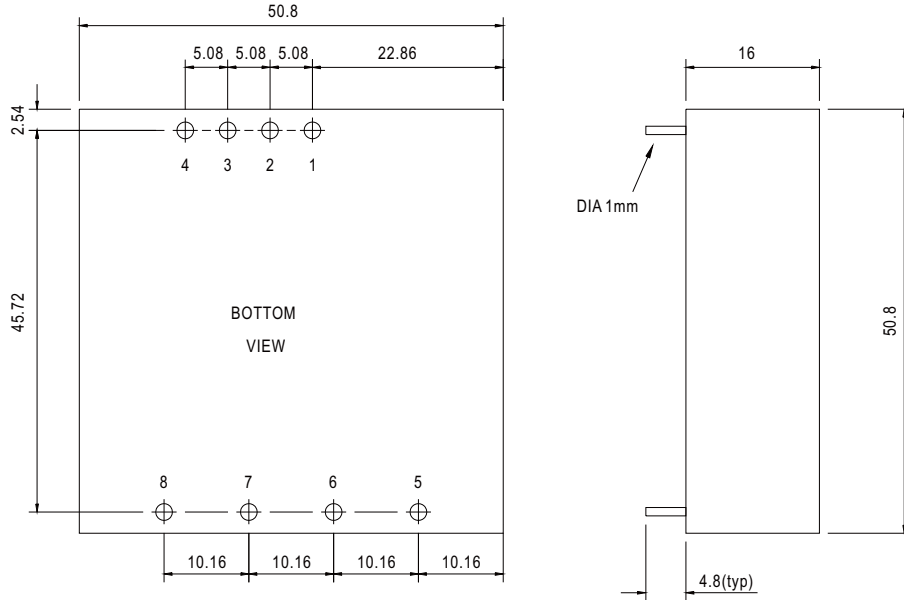


**SPECIFICATION**

MODEL	SDM30-12S12	SDM30-24S12	SDM30-48S12	SDM30-12S15	SDM30-24S15	SDM30-48S15
OUTPUT	DC VOLTAGE			12V		
	RATED CURRENT			2.1A		
	CURRENT RANGE			0 ~ 2.1A		
	RATED POWER			25.2W		
	RIPPLE & NOISE (max.) Note.2			100mVp-p		
	VOLTAGE TOLERANCE Note.3			±2.0% max.		
	LINE REGULATION			±1.0%		
	LOAD REGULATION			±1.0%		
TRIM OUTPUT			±13%(Typ.) output voltage			
INPUT	RATED DC INPUT					
	VOLTAGE RANGE					
	EFFICIENCY (Typ.)					
	DC CURRENT					
	IDLE CURRENT					
PROTECTION	OVERLOAD					
	OVER VOLTAGE					
	SHORT CIRCUIT					
FUNCTION	ON/OFF CONTROL					
ENVIRONMENT	WORKING TEMP.					
	STORAGE TEMP., HUMIDITY					
	TEMP. COEFFICIENT					
SAFETY & EMC (Note 6)	SAFETY STANDARDS					
	ISOLATION VOLTAGE					
	ISOLATION RESISTANCE					
	EMC EMISSION					
OTHERS	EMC IMMUNITY					
	MTBF					
	DIMENSION					
PACKING						
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### Mechanical Specification

Case No. SDM-30 Unit:mm

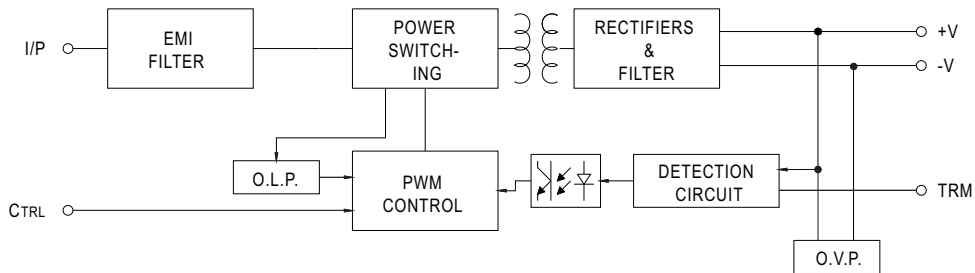


Pin No. Assignment

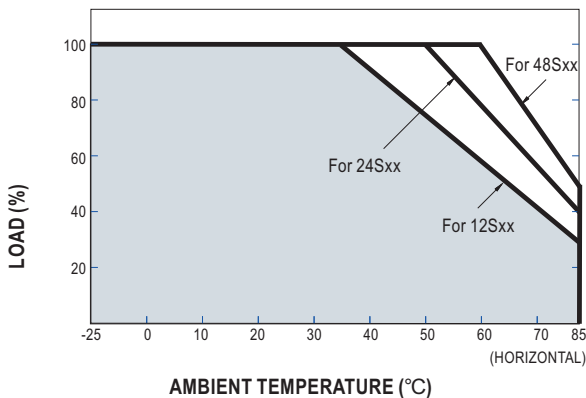
Pin No.	Assignment	Pin No.	Assignment
1	+Vin	6	+Vout
2	-Vin	7	-Vout
3,5	No pin	8	Trim
4	Control ON/OFF		

### Block Diagram

fosc : 225KHz

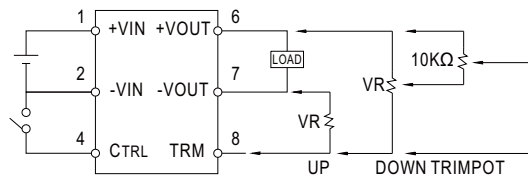


### Derating Curve



### External Output Trimming

OUTPUT MAY OPTIONALLY BE EXTERNALLY TRIMMED( $\pm 13\%$ )  
A FIXED RESISTOR OR AN EXTERNAL TRIMPOT AS SHOWN



### ON/OFF Control Pin

CONTROL INPUT.....PIN4  
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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- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management