

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



SPECIFICATION

MODEL	SDM30-12S3	SDM30-24S3	SDM30-48S3	SDM30-12S5	SDM30-24S5	SDM30-48S5
OUTPUT	DC VOLTAGE			5V		
	RATED CURRENT			5A		
	CURRENT RANGE			0 ~ 5A		
	RATED POWER			25W		
	RIPPLE & NOISE (max.) Note.2			75mVp-p		
	VOLTAGE TOLERANCE Note.3			±3.0%		
	LINE REGULATION			±1.0%		
	LOAD REGULATION			±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%		
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		
Protection type : Shut off o/p voltage, clamping by zener diode						
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					
	ISOLATION VOLTAGE					
	I/P-O/P:1KVDC					
ISOLATION RESISTANCE						
I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH						
EMC EMISSION						
Compliance to EN55022 (CISPR22) Class B						
EMC IMMUNITY						
Compliance to EN61000-2,3,4,6,8, EN55024, light industry level, criteria A						
OTHERS	MTBF					
	322.4K 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/0.97CUFT						
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 12,24,48VDC input, rated load and 25°C 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. Short circuit not more than 60 second. 5. DC source wires ≥ 5cm, an input external al capacitor 47 ~ 100uF is required. 6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 					

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SPECIFICATION

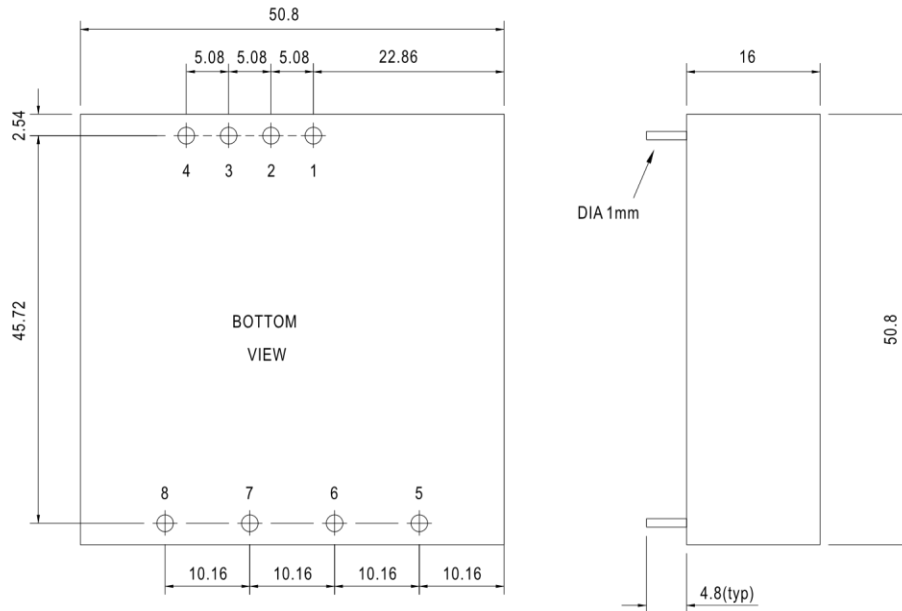
MODEL		SDM30-12S12	SDM30-24S12	SDM30-48S12	SDM30-12S15	SDM30-24S15	SDM30-48S15
OUTPUT	DC VOLTAGE	12V			15V		
	RATED CURRENT	2.1A	2.5A		1.7A	2A	
	CURRENT RANGE	0 ~ 2.1A	0 ~ 2.5A		0 ~ 1.7A	0 ~ 2A	
	RATED POWER	25.2W	30W		25.5W	30W	
	RIPPLE & NOISE (max.) Note.2	100mVp-p			100mVp-p		
	VOLTAGE TOLERANCE Note.3	±2.0% max.			±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.)	80%	82%	84%	80%	83%	85%
	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	13.8 ~ 18V			17.25 ~ 22.5V		
	Protection type : Shut off o/p voltage, clamping by zener diode						
	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					
	ISOLATION VOLTAGE	I/P-O/P:1KVDC					
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B					
	EMC IMMUNITY	Compliance to EN61000-2,3,4,6,8, EN55024, light industry level, criteria A					
OTHERS	MTBF	322.4K 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/0.97CUFT					
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 12,24,48VDC input, rated load and 25°C 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. Short circuit not more than 60 second. 5. DC source wires ≥ 5cm, an input external al capacitor 47 ~ 100uF is required. 6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 						

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Mechanical Specification

Case No. SDM-30 Unit:mm

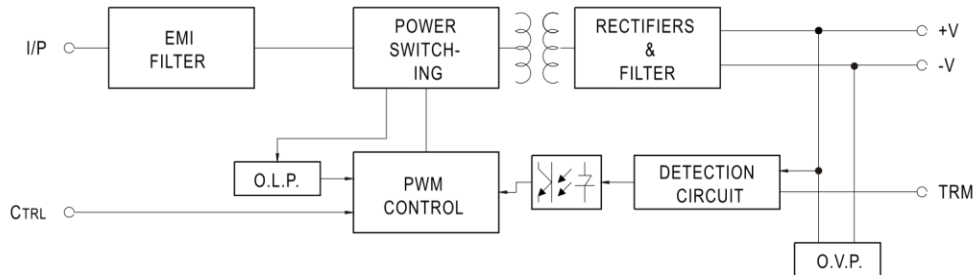


Pin No. Assignment

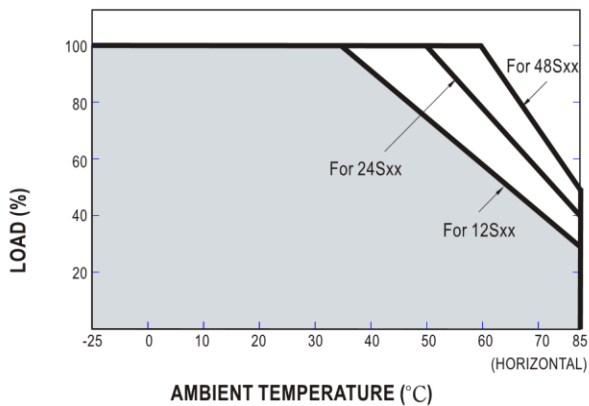
Pin No.	Assignment	Pin No.	Assignment
1	+Vin	6	+Vout
2	-Vin	7	-Vout
3,5	No pin	8	Trim
4	Control ON/OFF		

Block Diagram

fosc : 225KHz

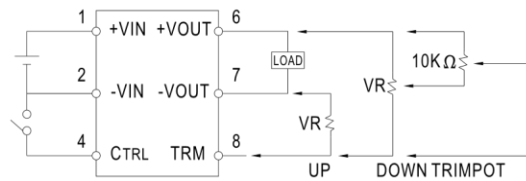


Derating Curve



External Output Trimming

OUTPUT MAY OPTIONALLY BE EXTERNALLY TRIMMED($\pm 13\%$)
A FIXED RESISTER 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