



■ Features :

- Wide 2:1 DC input range
- In/out capacitance 1000pF
- Protections: Short circuit/Over load/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
- Lost cost
- High reliability
- 1 year warranty

**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			±10%(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	OVER LOAD	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 output load derating curve)					
	STORAGE TEMP., HUMIDITY	-25 ~ +85°C, 0 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)					
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1950, TUV EN60950					
	ISOLATION VOLTAGE	I/P-O/P: 1KVDC					
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms/500VDC					
	EMI CONDUCTION & RADIATION	Compliance to FCC Part15 J					
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/15Kg/0.97CUFT					
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 12,24,48VDC 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 second.</li> <li>5. DC source wires ≥5cm, an input external al capacitor 47 ~ 100uF is required.</li> </ol>						



## 30W DC-DC Single Output

# SDM-30 series



### ■ Features :

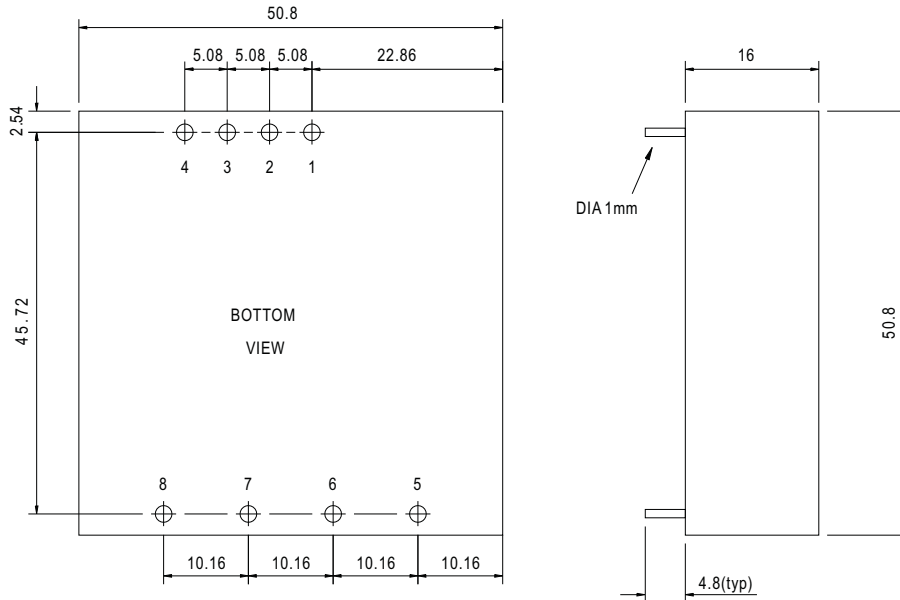
- Wide 2:1 DC input range
- In/out capacitance 1000pF
- Protections: Short circuit/Over load/Over voltage
- 1000VDC I/O isolation for D/D
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- Built-in remote ON-OFF control
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### SPECIFICATION

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	±10%(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	OVER LOAD	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		
	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 output load derating curve)					
	STORAGE TEMP., HUMIDITY	-25 ~ +85°C, 0 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)					
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1950, TUV EN60950					
	ISOLATION VOLTAGE	I/P-O/P: 1KVDC					
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms/500VDC					
OTHERS	EMI CONDUCTION & RADIATION	Compliance to FCC Part15 J					
	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/15Kg/0.97CUFT					
NOTE	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.						

## Mechanical Specification

Case No. SDM-30 Unit:mm

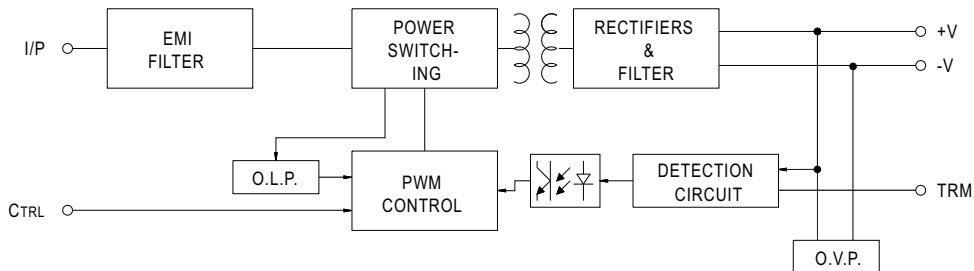


Pin. No Assignment

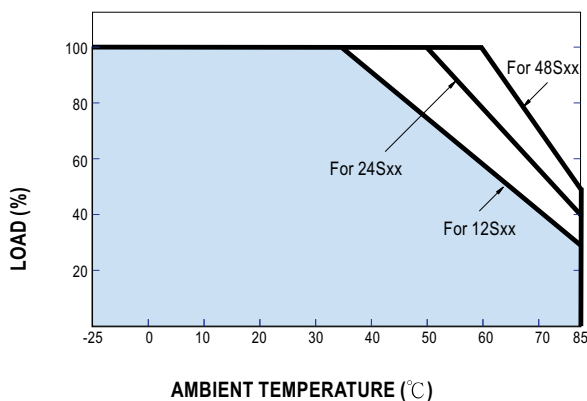
Pin No.	Assignment	Pin No.	Assignment
1,6	DC OUTPUT +V	4	CONTROL ON/OFF
2,7	DC OUTPUT -V	8	TRIM
3,5	No pin		

## Block Diagram

fosc : 225KHz

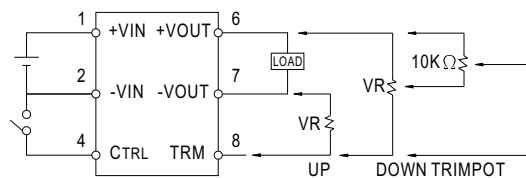


## Derating Curve



## External Output Trimming

OUTPUT MAY OPTIONALLY BE EXTERNALLY TRIMMED( $\pm 10\%$ )  
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