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# 30W DC-DC Single Output

# SDM30 series




■ Features :

- Wide 2:1 DC input range
- In/out capacitance1000pF
- 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 | | |
| | | 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℃ (Refer to "Derating Curve") | | | | | |
| | STORAGE TEMP., HUMIDITY | -25 ~ +85℃, 0 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0~50℃) | | | | | |
| 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℃ / 70% RH | | | | | |
| | EMC EMISSION | Compliance to BS EN/EN55032 (CISPR32) Class B, EAC TP TC 020 | | | | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-2,3,4,6,8, BS EN/EN55035, light industry level, EAC TP TC 020 | | | | | |
| OTHERS | MTBF | 8083.5K hrs min. Telcordia SR-332 (Bellcore) ; 777.2K hrs min. MIL-HDBK-217F (25℃) | | | | | |
| | DIMENSION | 50.8*50.8*16mm (2"*2"*0.63") (L*W*H) | | | | | |
| | PACKING | 0.1Kg; 150pcs/15.8Kg/0.94CUFT | | | | | |

**NOTE**

1. All parameters NOT specially mentioned are measured at 12,24,48VDC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF 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. 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 https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf )
7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

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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℃ (Refer to "Derating Curve") | | | | | |
| | STORAGE TEMP., HUMIDITY | -25 ~ +85℃, 0 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0~50℃) | | | | | |
| 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℃ / 70% RH | | | | | |
| | EMC EMISSION | Compliance to BS EN/EN55032 (CISPR32) Class B, EAC TP TC 020 | | | | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-2,3,4,6,8, BS EN/EN55035, light industry level, EAC TP TC 020 | | | | | |
| OTHERS | MTBF | 8083.5K hrs min. Telcordia SR-332 (Bellcore) ; 777.2K hrs min. MIL-HDBK-217F (25℃) | | | | | |
| | DIMENSION | 50.8*50.8*16mm (2"*2"*0.63") (L*W*H) | | | | | |
| | PACKING | 0.1Kg; 150pcs/15.8Kg/0.94CUFT | | | | | |

NOTE

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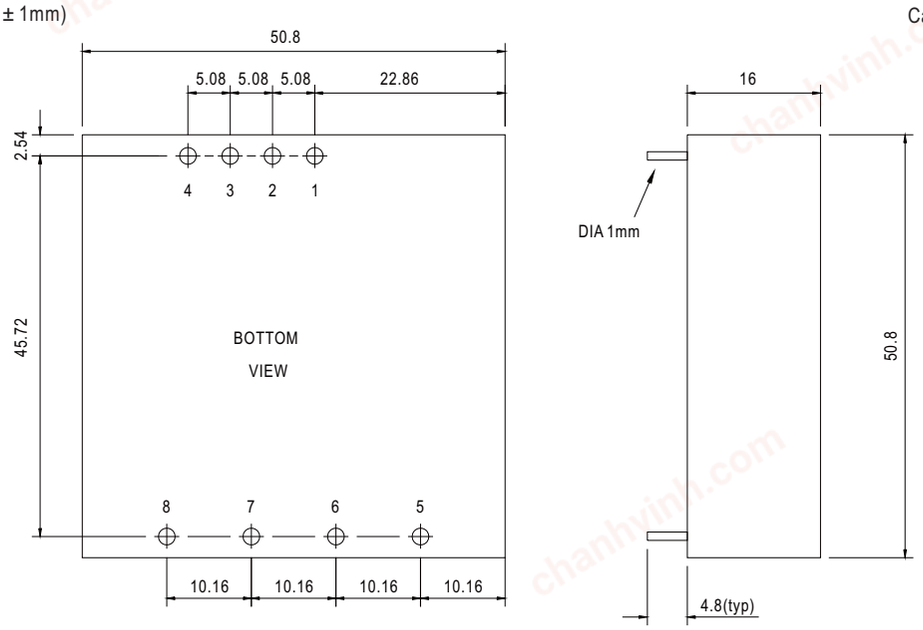
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## ■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)

Case No. SDM-30

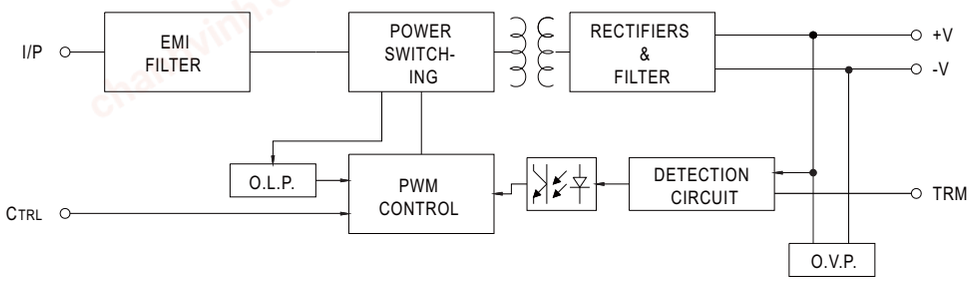



Pin No. Assignment

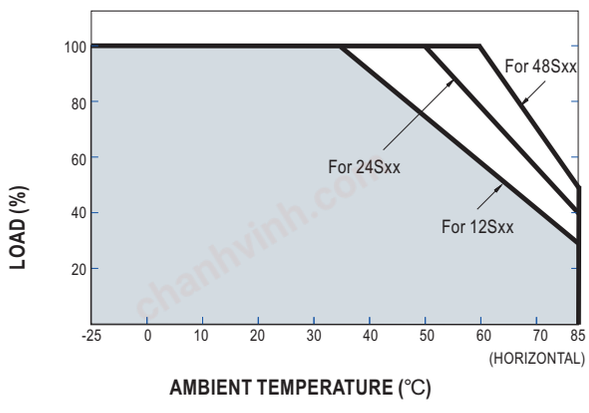
| Pin No. | Assignment | Pin No. | Assignment |
|---|---|---|---|
| 1 | +Vin | 6 | +Vout |
| 2 | -Vin | 7 | -Vout |
| 3,5 | No pin | 8 | Trim |
| 4 | Control ON/OFF | | |

## ■ Block Diagram

fosc : 225KHz



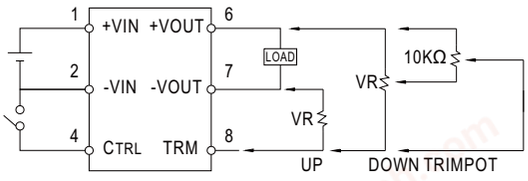

## ■ Derating Curve




## ■ External Output Trimming

OUTPUT MAY OPTIONALLY BE EXTERNALLY TRIMMED(±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