



## 200W Single Output DC-DC Converter

# SD-200 series



- Features :
  - 2:1 wide input range
  - Protections: Short circuit / Overload / Over voltage / Over temperature
  - 1500VAC I/O isolation
  - Cooling by free air convection
  - 100% full load burn-in test
  - 24V and 48V input voltage design refer to LVD
  - 2 years warranty



### GTIN CODE

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



(for SD-200C-5/12/24 type only)



TPTC004

### SPECIFICATION

| MODEL                 |   | SD-200B  |            |              |            | SD-200C       |            |              |            |  |
|-----------------------|---|--|------------|--------------|------------|---------------|------------|--------------|------------|--|
| OUTPUT                | DC VOLTAGE  | 5V   | 12V        | 24V          | 48V        | 5V            | 12V        | 24V          | 48V        |  |
|                       | RATED CURRENT   | 34A  | 16.7A      | 8.4A         | 4.2A       | 40A           | 16.7A      | 8.4A         | 4.2A       |  |
|                       | CURRENT RANGE   | 0 ~ 34A  | 0 ~ 16.7A  | 0 ~ 8.4A     | 0 ~ 4.2A   | 0 ~ 40A       | 0 ~ 16.7A  | 0 ~ 8.4A     | 0 ~ 4.2A   |  |
|                       | RATED POWER   | 170W   | 200.4W     | 201.6W       | 201.6W     | 200W          | 200.4W     | 201.6W       | 201.6W     |  |
|                       | RIPPLE & NOISE (max.) Note.2  | 100mVp-p   | 120mVp-p   | 150mVp-p     | 200mVp-p   | 100mVp-p      | 120mVp-p   | 150mVp-p     | 200mVp-p   |  |
|                       | VOLTAGE ADJ. RANGE  | 4.5 ~ 5.5VDC   | 11 ~ 16VDC | 23 ~ 30VDC   | 43 ~ 53VDC | 4.5 ~ 5.5VDC  | 11 ~ 16VDC | 23 ~ 30VDC   | 43 ~ 53VDC |  |
|                       | VOLTAGE TOLERANCE Note.3  | ±2.0%  | ±1.0%      | ±1.0%        | ±1.0%      | ±2.0%         | ±1.0%      | ±1.0%        | ±1.0%      |  |
|                       | LINE REGULATION   | ±0.5%  | ±0.5%      | ±0.5%        | ±0.5%      | ±0.5%         | ±0.5%      | ±0.5%        | ±0.5%      |  |
|                       | LOAD REGULATION   | ±1.0%  | ±1.0%      | ±1.0%        | ±1.0%      | ±1.0%         | ±1.0%      | ±1.0%        | ±1.0%      |  |
| SETUP, RISE TIME      | 300ms, 50ms at full load  |  |            |              |            |               |            |              |            |  |
| INPUT                 | VOLTAGE RANGE   | B:19 ~ 36VDC   |            | C:36 ~ 72VDC |            | D:72 ~ 144VDC |            |              |            |  |
|                       | EFFICIENCY (Typ.)   | 79%  | 82%        | 85%          | 86%        | 81%           | 84%        | 86%          | 86%        |  |
|                       | DC CURRENT (Typ.)   | 10.8A/24V  | 10.6A/24V  | 10.4A/24V    | 10.4A/24V  | 5.4A/48V      | 5.2A/48V   | 6.7A/48V     | 5A/48V     |  |
|                       | INRUSH CURRENT (Typ.)   | C:45A/48VDC  |            | D:45A/96VDC  |            |               |            |              |            |  |
| PROTECTION            | OVERLOAD  | 105 ~ 135% rated output power<br>Protection type : Shut down o/p voltage, re-power on to recover           |            |              |            |               |            |              |            |  |
|                       | OVER VOLTAGE  | 5.75 ~ 6.75V   | 16.8 ~ 20V | 31.5 ~ 37.5V | 53 ~ 65V   | 5.75 ~ 6.75V  | 16.8 ~ 20V | 31.5 ~ 37.5V | 53 ~ 65V   |  |
|                       | OVER TEMPERATURE  | Shut down o/p voltage, recovers automatically after temperature goes down                                  |            |              |            |               |            |              |            |  |
| ENVIRONMENT           | WORKING TEMP.   | -20 ~ +60°C (Refer to "Derating Curve")  |            |              |            |               |            |              |            |  |
|                       | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing   |            |              |            |               |            |              |            |  |
|                       | STORAGE TEMP., HUMIDITY   | -40 ~ +85°C, 10 ~ 95% RH   |            |              |            |               |            |              |            |  |
|                       | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)   |            |              |            |               |            |              |            |  |
|                       | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes   |            |              |            |               |            |              |            |  |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | UL62368-1 approved (for SD-200C-5/12/24 type only), EAC TP TC 004 approved, design refer to AS/NZS 62368.1 |            |              |            |               |            |              |            |  |
|                       | WITHSTAND VOLTAGE   | I/P-O/P:1.5KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC  |            |              |            |               |            |              |            |  |
|                       | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG, O/P-FG: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  | 1919.7K hrs min. Telcordia SR-332 (Bellcore) ; 280.6K hrs min. MIL-HDBK-217F (25°C)                        |            |              |            |               |            |              |            |  |
|                       | DIMENSION   | 215*115*50mm (L*W*H)   |            |              |            |               |            |              |            |  |
|                       | PACKING   | 1.1Kg; 12pcs/14.4Kg/0.9CUFT  |            |              |            |               |            |              |            |  |
| NOTE                  | <ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 24,48,96VDC input, rated load and 25°C of ambient temperature.</li> <li>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>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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 360mm*360mm 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="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>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).</li> </ol> ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |  |            |              |            |               |            |              |            |  |



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  - Cooling by free air convection
  - 100% full load burn-in test
  - 24V and 48V input voltage design refer to LVD
  - 2 years warranty



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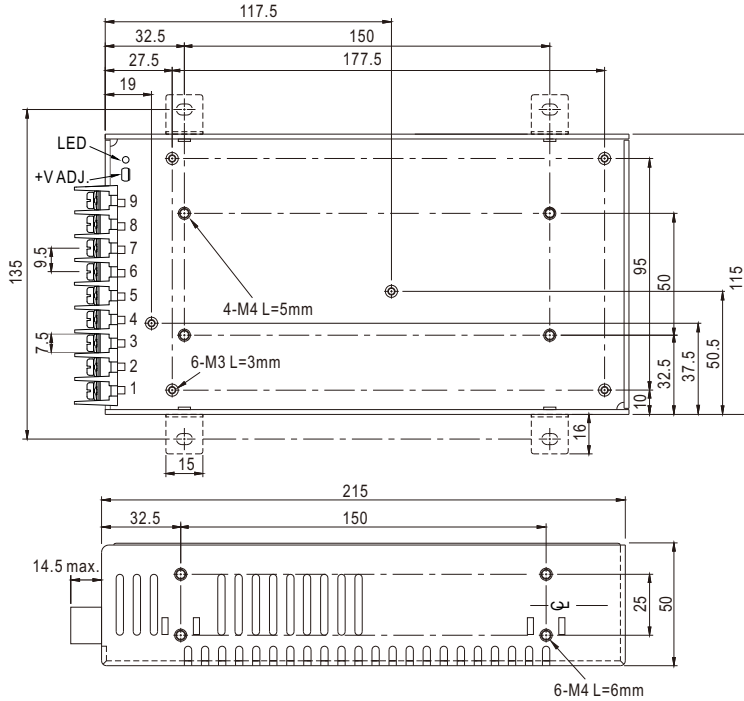
## SPECIFICATION

AS/NZS62368-1 BS EN/EN62368-1 IEC62368-1 TPTC004

| MODEL                 |  | SD-200D  |            |              |            |
|-----------------------|--|--|------------|--------------|------------|
| OUTPUT                | DC VOLTAGE   | 5V   | 12V        | 24V          | 48V        |
|                       | RATED CURRENT  | 40A  | 16.7A      | 8.4A         | 4.2A       |
|                       | CURRENT RANGE  | 0 ~ 40A  | 0 ~ 16.7A  | 0 ~ 8.4A     | 0 ~ 4.2A   |
|                       | RATED POWER  | 200W   | 200.4W     | 201.6W       | 201.6W     |
|                       | RIPPLE & NOISE (max.) Note.2   | 100mVp-p   | 120mVp-p   | 150mVp-p     | 200mVp-p   |
|                       | VOLTAGE ADJ. RANGE   | 4.5 ~ 5.5VDC   | 11 ~ 16VDC | 23 ~ 30VDC   | 43 ~ 53VDC |
|                       | VOLTAGE TOLERANCE Note.3   | ±2.0%  | ±1.0%      | ±1.0%        | ±1.0%      |
|                       | LINE REGULATION  | ±0.5%  | ±0.5%      | ±0.5%        | ±0.5%      |
|                       | LOAD REGULATION  | ±1.0%  | ±1.0%      | ±1.0%        | ±1.0%      |
| SETUP, RISE TIME      | 300ms, 50ms at full load   |  |            |              |            |
| INPUT                 | VOLTAGE RANGE  | B:19 ~ 36VDC C:36 ~ 72VDC D:72 ~144VDC   |            |              |            |
|                       | EFFICIENCY (Typ.)  | 82%  | 82%        | 84%          | 90%        |
|                       | DC CURRENT (Typ.)  | 3.5A/96V   | 3.5A/96V   | 3.5A/96V     | 3.5A/96V   |
|                       | INRUSH CURRENT (Typ.)  | C:45A/48VDC D:45A/96VDC  |            |              |            |
| PROTECTION            | OVERLOAD   | 105 ~ 135% rated output power<br>Protection type : Shut down o/p voltage, re-power on to recover |            |              |            |
|                       | OVER VOLTAGE   | 5.75 ~ 6.75V   | 16.8 ~ 20V | 31.5 ~ 37.5V | 53 ~ 65V   |
|                       | OVER TEMPERATURE   | Shut down o/p voltage, recovers automatically after temperature goes down                        |            |              |            |
| ENVIRONMENT           | WORKING TEMP.  | -20 ~ +60°C (Refer to "Derating Curve")  |            |              |            |
|                       | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing   |            |              |            |
|                       | STORAGE TEMP., HUMIDITY  | -40 ~ +85°C, 10 ~ 95% RH   |            |              |            |
|                       | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C)   |            |              |            |
|                       | VIBRATION  | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                     |            |              |            |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS   | IEC/BS EN/EN 62368-1, EAC TP TC 004 approved, design refer to AS/NZS 62368.1                     |            |              |            |
|                       | WITHSTAND VOLTAGE  | I/P-O/P:1.5KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC  |            |              |            |
|                       | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH                                       |            |              |            |
|                       | EMC EMISSION   | Compliance to BS EN/EN55022 (CISPR22) 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   | 1919.7K hrs min. Telcordia SR-332 (Bellcore) ; 280.6K hrs min. MIL-HDBK-217F (25°C)              |            |              |            |
|                       | DIMENSION  | 215*115*50mm (L*W*H)   |            |              |            |
|                       | PACKING  | 1.1Kg; 12pcs/14.4Kg/0.9CUFT  |            |              |            |
| NOTE                  | <ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 24,48,96VDC input, rated load and 25°C of ambient temperature.</li> <li>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>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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 360mm*360mm 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="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>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).</li> </ol> <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**

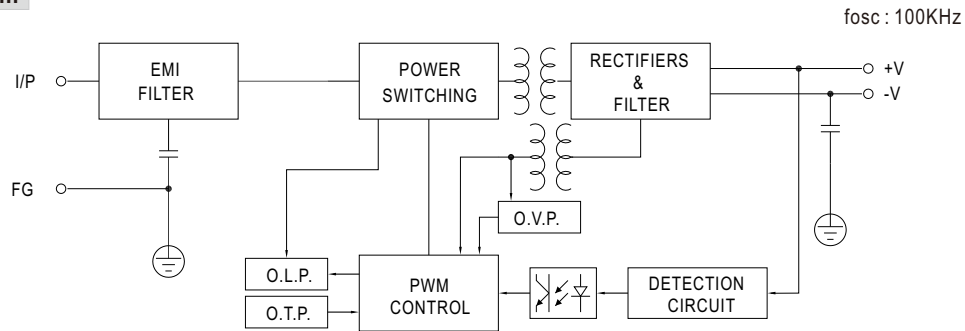
Case No. 912H Unit:mm



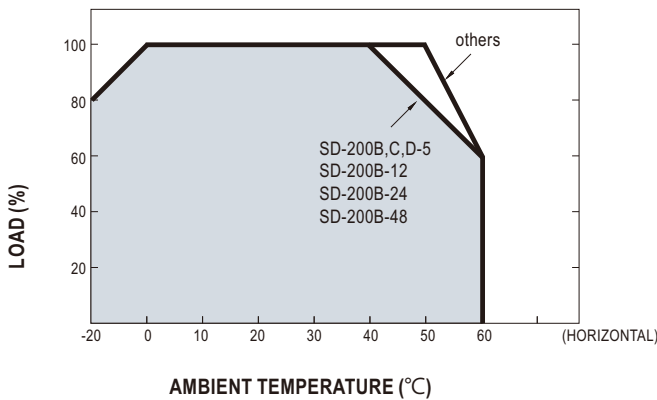
Terminal Pin No. Assignment :

| Pin No. | Assignment  | Pin No. | Assignment   |
|---------|-------------|---------|--------------|
| 1       | DC INPUT V+ | 4,5,6   | DC OUTPUT V- |
| 2       | DC INPUT V- | 7,8,9   | DC OUTPUT V+ |
| 3       | FG $\perp$  |         |              |

**Block Diagram**



**Derating Curve**



**Static Characteristics**

