



- 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

EAC c RU us (for SD-200C-24 type only) CB (for D type only) CE

## 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.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 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 <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±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   |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Protection type : Shut down o/p voltage, re-power on to recover                                                        |            |              |            |              |            |              |            |
|                                         | 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<br><small>(Note 4)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UL60950-1 approved (for SD-200C-24 type only), IEC60950-1 CB approved by TUV (for D type only), EAC TP TC 004 approved |            |              |            |              |            |              |            |
|                                         | 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 EN55032 (CISPR32) Class B, EAC TP TC 020                                                                 |            |              |            |              |            |              |            |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020                                     |            |              |            |              |            |              |            |
| OTHERS                                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 218.2K hrs min.      MIL-HDBK-217F (25°C)                                                                              |            |              |            |              |            |              |            |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 215*115*50mm (L*W*H)                                                                                                   |            |              |            |              |            |              |            |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.1Kg; 12pcs/14.4Kg/0.92CUFT                                                                                           |            |              |            |              |            |              |            |
| NOTE                                    | 1. All parameters NOT specially mentioned are measured at 24,48,96VDC input, rated load and 25°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. 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> )<br>5. 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). |                                                                                                                        |            |              |            |              |            |              |            |



- 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

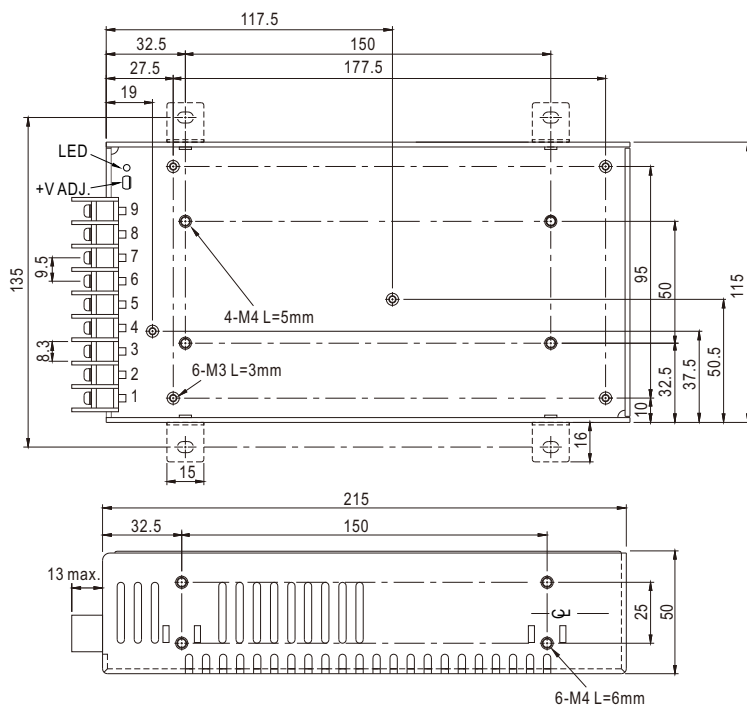
**CB** (for D type only) **CE**

## SPECIFICATION

| 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   |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Protection type : Shut down o/p voltage, re-power on to recover                                  |            |              |            |
|                          | 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<br>(Note 4) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | IEC60950-1 CB approved by TUV (for D type only), EAC TP TC 004 approved                          |            |              |            |
|                          | 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 EN55022 (CISPR22) Class B, EAC TP TC 020                                           |            |              |            |
|                          | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020               |            |              |            |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 218.2K hrs min.    MIL-HDBK-217F (25°C)                                                          |            |              |            |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 215*115*50mm (L*W*H)                                                                             |            |              |            |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.1Kg; 12pcs/14.4Kg/0.92CUFT                                                                     |            |              |            |
| NOTE                     | 1. All parameters NOT specially mentioned are measured at 24,48,96VDC input, rated load and 25°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. 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> )<br>5. 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). |                                                                                                  |            |              |            |

## ■ Mechanical Specification

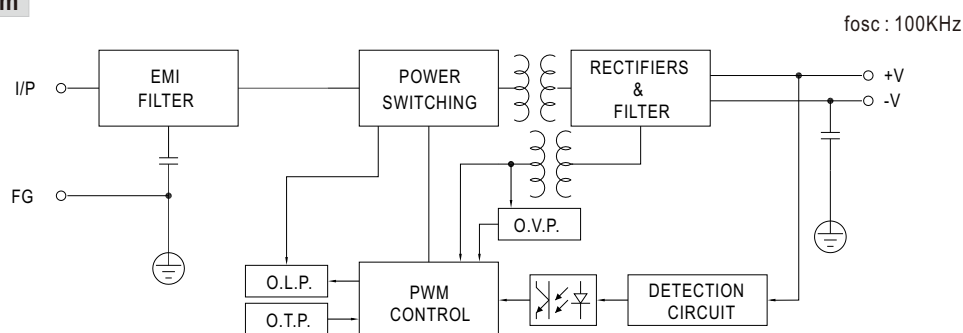
Case No. 912H Unit:mm



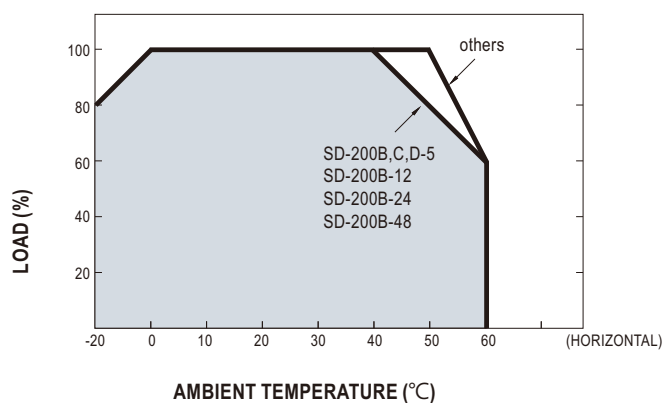
Terminal Pin No. Assignment :

| 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 $\frac{\perp}{\perp}$ |         |             |

### ■ Block Diagram



### Derating Curve



## ■ Static Characteristics

