



## 65W Single Output Switching Power Supply

## EPS-65 series



### ■ Features :

- Universal AC input / Full range
- Optional L-Bracket and cover
- High efficiency up to 90%
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 4"×2" compact size
- LED indicator for power on
- No load power consumption<0.3W
- 3 years warranty



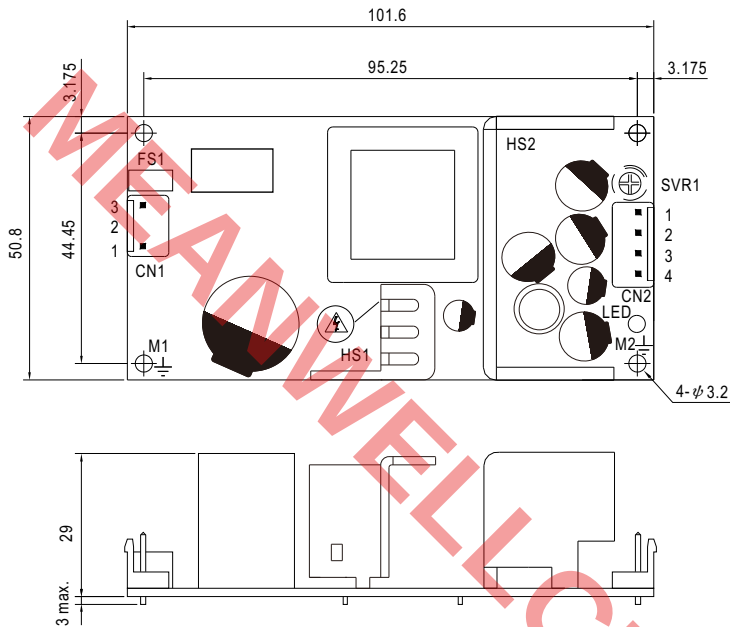
EPS-65-3.3 ☐ -C ☐ =Blank, -C ; Blank=PCB only, -C=Enclosed type

### SPECIFICATION

| MODEL                 |                              | EPS-65-3.3 <input type="checkbox"/>                                                                                     | EPS-65-5 <input type="checkbox"/> | EPS-65-7.5 <input type="checkbox"/> | EPS-65-12 <input type="checkbox"/> | EPS-65-15 <input type="checkbox"/> | EPS-65-24 <input type="checkbox"/> | EPS-65-36 <input type="checkbox"/> | EPS-65-48 <input type="checkbox"/> |
|-----------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| OUTPUT                | DC VOLTAGE                   | 3.3V                                                                                                                    | 5V                                | 7.5V                                | 12V                                | 15V                                | 24V                                | 36V                                | 48V                                |
|                       | RATED CURRENT                | 11A                                                                                                                     | 11A                               | 8A                                  | 5.42A                              | 4.34A                              | 2.71A                              | 1.81A                              | 1.36A                              |
|                       | CURRENT RANGE                | 0 ~ 12A                                                                                                                 | 0 ~ 12A                           | 0 ~ 8.8A                            | 0 ~ 6A                             | 0 ~ 4.8A                           | 0 ~ 3A                             | 0 ~ 2A                             | 0 ~ 1.5A                           |
|                       | RATED POWER                  | 36.3W                                                                                                                   | 55W                               | 60W                                 | 65.04W                             | 65.1W                              | 65.04W                             | 65.16W                             | 65.28W                             |
|                       | PEAK LOAD(10sec.) Note.6     | 39.6W                                                                                                                   | 60W                               | 66W                                 | 72W                                | 72W                                | 72W                                | 72W                                | 72W                                |
|                       | RIPPLE & NOISE (max.) Note.2 | 80mVp-p                                                                                                                 | 80mVp-p                           | 100mVp-p                            | 120mVp-p                           | 150mVp-p                           | 240mVp-p                           | 280mVp-p                           | 300mVp-p                           |
|                       | VOLTAGE ADJ. RANGE           | 3.1 ~ 3.6V                                                                                                              | 4.75 ~ 5.5V                       | 7.13 ~ 8.25V                        | 10.8 ~ 13.5V                       | 13.5 ~ 16.5V                       | 21.6 ~ 27V                         | 32.4 ~ 39.6V                       | 43.2 ~ 52.8V                       |
|                       | VOLTAGE TOLERANCE Note.3     | ±3.0%                                                                                                                   | ±2.0%                             | ±2.0%                               | ±2.0%                              | ±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              | ±2.0%                                                                                                                   | ±1.0%                             | ±1.0%                               | ±1.0%                              | ±1.0%                              | ±1.0%                              | ±1.0%                              | ±1.0%                              |
| INPUT                 | SETUP, RISE TIME             | 1000ms, 50ms/230VAC 2000ms, 50ms/115VAC at full load                                                                    |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | HOLD UP TIME (Typ.)          | 50ms/230VAC 12ms/115VAC at full load                                                                                    |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | VOLTAGE RANGE Note.5         | 90 ~ 264VAC 127 ~ 370VDC [DC input operation possible by connecting AC/N(+), AC/L(-)]                                   |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | FREQUENCY RANGE              | 47 ~ 63Hz                                                                                                               |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | EFFICIENCY (Typ.)            | 80%                                                                                                                     | 82%                               | 84%                                 | 86%                                | 87%                                | 88%                                | 89%                                | 90%                                |
|                       | AC CURRENT (Typ.)            | 1.8A/115VAC 1 A/230VAC                                                                                                  |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
| PROTECTION            | INRUSH CURRENT (Typ.)        | COLD START 60A/230VAC                                                                                                   |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | LEAKAGE CURRENT              | <2mA/240VAC                                                                                                             |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | OVER LOAD                    | 115 ~ 160% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
| ENVIRONMENT           | OVER VOLTAGE                 | 3.7 ~ 4.45V                                                                                                             | 5.6 ~ 6.75V                       | 8.63 ~ 10.1V                        | 13.8 ~ 16.2V                       | 17.25 ~ 20.25V                     | 27.6 ~ 32.4V                       | 39.7 ~ 46.8V                       | 53.3 ~ 64.8V                       |
|                       |                              | Protection type : Shut down o/p voltage, re-power on to recover                                                         |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | WORKING TEMP.                | -30 ~ +70°C (Refer to output load derating curve)                                                                       |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | WORKING HUMIDITY             | 20 ~ 90% RH non-condensing                                                                                              |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | STORAGE TEMP., HUMIDITY      | -40 ~ +85°C, 10 ~ 95% RH                                                                                                |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
| SAFETY & EMC (Note 4) | TEMP. COEFFICIENT            | ±0.03%/°C (0 ~ 50°C)                                                                                                    |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | VIBRATION                    | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                 |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | SAFETY STANDARDS             | UL60950-1, TUV EN60950-1, EAC TP TC 004 approved                                                                        |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | WITHSTAND VOLTAGE            | I/P-O/P:3KVAC 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                                                              |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
| OTHERS                | EMC EMISSION                 | Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020                                                  |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | EMC IMMUNITY                 | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, heavy industry level, criteria A, EAC TP TC 020                        |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | MTBF                         | 563Khrs min. MIL-HDBK-217F (25°C)                                                                                       |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
| NOTE                  | DIMENSION                    | PCB:101.6*50.8*29mm (L*W*H) ; with optional CASE:103.4*62*37mm (L*W*H)                                                  |                                   |                                     |                                    |                                    |                                    |                                    |                                    |
|                       | PACKING                      | PCB: 0.15Kg; 96pcs/ 15.4 Kg/0.89CUFT ; with optional CASE: 0.3Kg; 45pcs/ 14.5Kg/0.67CUFT                                |                                   |                                     |                                    |                                    |                                    |                                    |                                    |

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltage. Please check the static characteristics for more details.
5. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.
6. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 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 <http://www.meanwell.com>)
7. 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



- HS1, HS2 cannot be shorted.
- HS1 must have safety isolation distance with system case.

AC Input Connector (CN1) : JST B3P-VH or equivalent

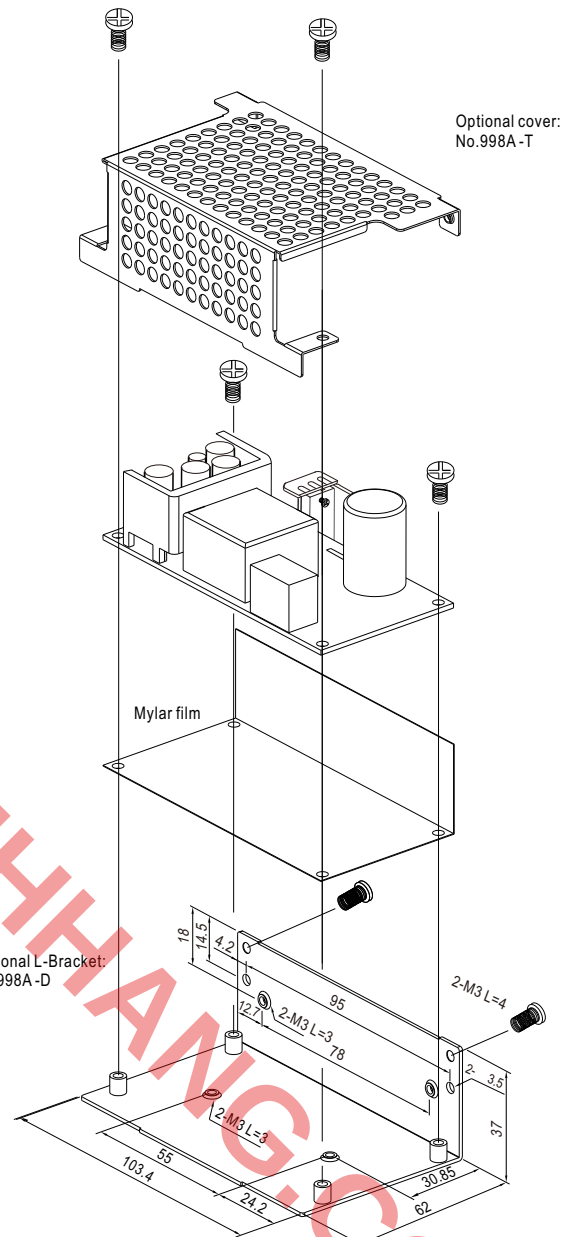
| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1       | AC/N       | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 2       | No Pin     |                       |                                |
| 3       | AC/L       |                       |                                |

DC Output Connector (CN2) : JST B4P-VH or equivalent

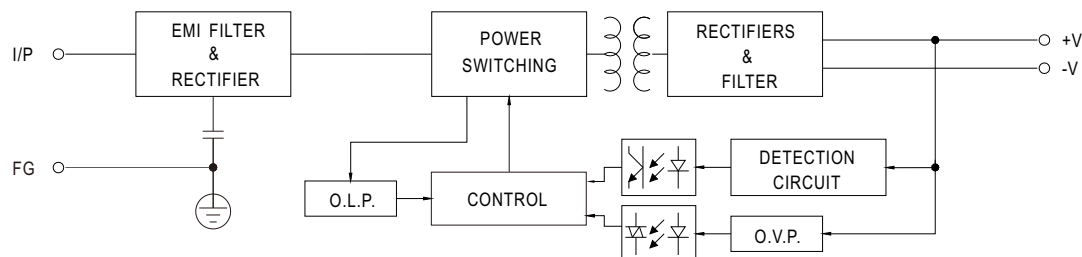
| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1,2     | +V         | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 3,4     | -V         |                       |                                |

⊥ : Grounding Required ; M1 and M2 are Safety ground and should all be grounded

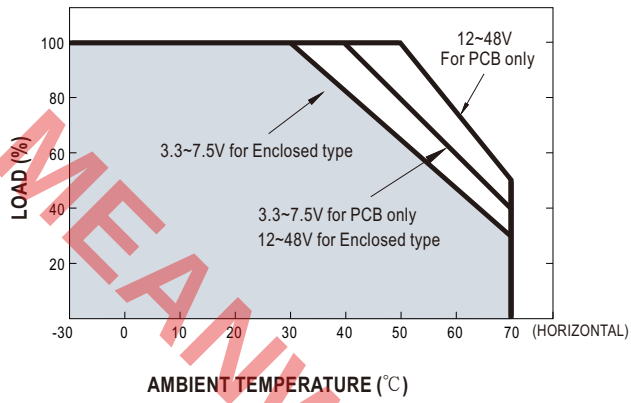
Unit:mm



## Block Diagram



■ Output Derating



■ Static Characteristics

