

**■ Features**

- 3"×2" miniature size
- Universal AC input / Full range
- Class II (without FG) installations
- No load power consumption<0.1W
- High efficiency up to 91%
- For 1U applications
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- -30~70°C wide range of operating temperature
- Operating altitude up to 5000 meters(Note 6.)
- LED indicator for power on
- 3 years warranty

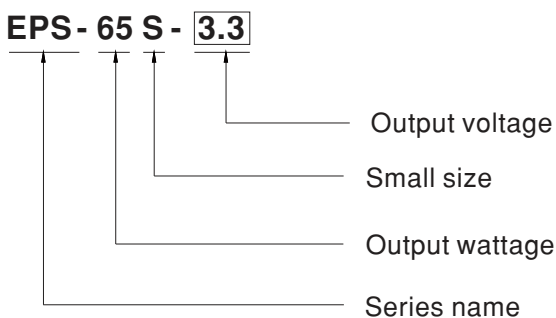
**■ Applications**

- Industrial electrical equipment
- Mechanical equipment
- Factory automation equipment
- Handheld electronic device

**■ Description**

EPS-65S is a 65W highly reliable green PCB type industrial power supply with a high power density on the 3" by 2" footprint. It accepts 80~264VAC input and offers various output voltages between 3.3V and 48V. The working efficiency is up to 91% and the extremely low no load power consumption is down below 0.1W. EPS-65S is able to be used for Class II (no FG) system design.

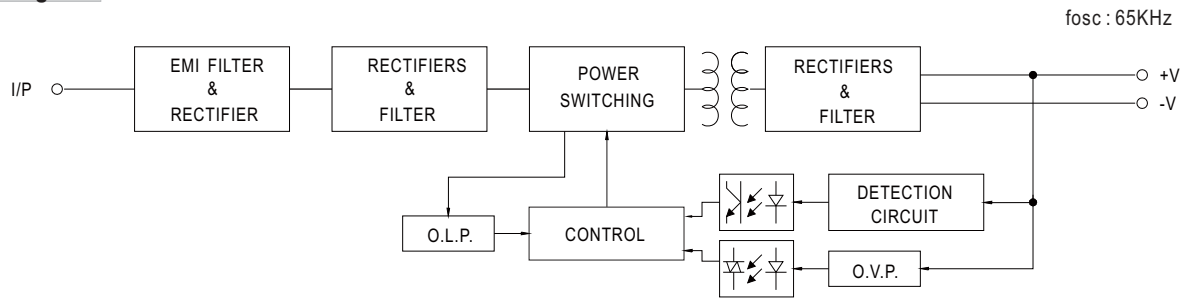
**■ Model Encoding**



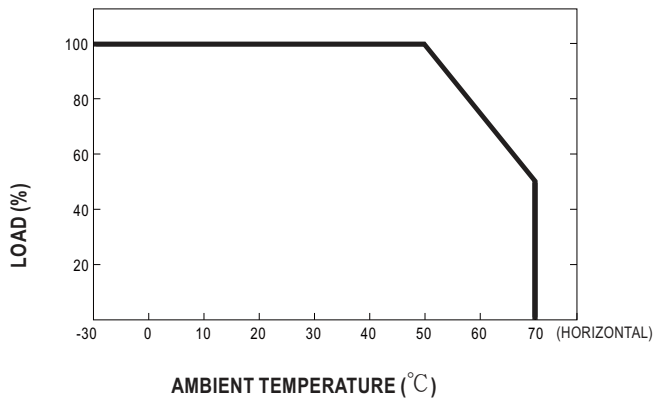
## SPECIFICATION

| ORDER NO.              |  | EPS-65S-3.3   | EPS-65S-5  | EPS-65S-7.5 | EPS-65S-12 | EPS-65S-15   | EPS-65S-24 | EPS-65S-48 |   |
|------------------------|--|---|------------|-------------|------------|--------------|------------|------------|---|
| OUTPUT                 | DC VOLTAGE   | 3.3V  | 5V         | 7.5V        | 12V        | 15V          | 24V        | 48V        |   |
|                        | RATED CURRENT  | 10A   | 10A        | 8A          | 5.42A      | 4.34A        | 2.71A      | 1.36A      |   |
|                        | CURRENT RANGE  | 0 ~ 11A   | 0 ~ 11A    | 0 ~ 8.8A    | 0 ~ 5.96A  | 0 ~ 4.77A    | 0 ~ 2.98A  | 0 ~ 1.49A  |   |
|                        | RATED POWER  | 33W   | 50W        | 60W         | 65W        | 65.1W        | 65W        | 65.3W      |   |
|                        | PEAK LOAD(10sec.) <small>Note.2</small>  | 36.3W   | 55W        | 66W         | 71.5W      | 71.6W        | 71.5W      | 71.5W      |   |
|                        | RIPPLE & NOISE (max.) <small>Note.3</small>  | 80mVp-p   | 80mVp-p    | 80mVp-p     | 120mVp-p   | 150mVp-p     | 240mVp-p   | 300mVp-p   |   |
|                        | VOLTAGE ADJ. RANGE   | 2.9~3.6V  | 4.7~5.5V   | 7.12~8.3V   | 11.4~13.2V | 13.5~16.5V   | 22.8~27.6V | 45.6~52.8V |   |
|                        | VOLTAGE TOLERANCE <small>Note.4</small>  | ±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%      |   |
|                        | LOAD REGULATION  | ±2.0%   | ±2.0%      | ±2.0%       | ±2.0%      | ±1.0%        | ±1.0%      | ±1.0%      |   |
|                        | SETUP, RISE TIME   | 500ms, 30ms / 230VAC    500ms, 30ms / 115VAC at full load   |            |             |            |              |            |            |   |
| HOLD UP TIME (Typ.)    | 30ms / 230VAC    12ms / 115VAC at full load  |   |            |             |            |              |            |            |   |
| INPUT                  | VOLTAGE RANGE <small>Note.5</small>  | 80 ~ 264VAC   |            |             |            |              |            |            |   |
|                        | FREQUENCY RANGE  | 47 ~ 63Hz   |            |             |            |              |            |            |   |
|                        | EFFICIENCY (Typ.)  | 80%   | 84%        | 85%         | 88%        | 89%          | 90%        | 91%        |   |
|                        | AC CURRENT (Typ.)  | 1.5A / 115VAC    1A / 230VAC  |            |             |            |              |            |            |   |
|                        | INRUSH CURRENT (Typ.)  | COLD STAR 30A/115VAC    50A/230VAC  |            |             |            |              |            |            |   |
|                        | LEAKAGE CURRENT(max.)  | 0.25mA/264VAC   |            |             |            |              |            |            |   |
| PROTECTION             | OVERLOAD   | 115 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |            |             |            |              |            |            |   |
|                        | OVER VOLTAGE   | 3.8~4.46V   | 5.75~6.75V | 8.62~11.3V  | 13.8~16.2V | 17.25~20.25V | 27.6~32.4V | 55.2~64.8V | Protection type : Shut down o/p voltage, re-power on to recover |
| ENVIRONMENT            | WORKING TEMP.  | -30 ~ +70°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, period for 60min. each along X, Y, Z axes   |            |             |            |              |            |            |   |
| SAFETY & EMC (Note. 6) | SAFETY STANDARDS   | UL60950-1, TUV EN60950-1 approved   |            |             |            |              |            |            |   |
|                        | ISOLATION LEVEL  | Primary-Secondary: 2xMOPP   |            |             |            |              |            |            |   |
|                        | WITHSTAND VOLTAGE  | I/P-O/P: 3KVAC  |            |             |            |              |            |            |   |
|                        | ISOLATION RESISTANCE   | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH  |            |             |            |              |            |            |   |
|                        | EMC EMISSION   | Compliance to EN55022(CISPR22) Class B, EN61000-3-2,3   |            |             |            |              |            |            |   |
| EMC IMMUNITY           | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, Heavy industry Level criteria A   |   |            |             |            |              |            |            |   |
| OTHERS                 | MTBF   | 959.1Khrs min. MIL-HDBK-217(25°C)   |            |             |            |              |            |            |   |
|                        | DIMENSION  | 76.2*50.8*24mm or 3" * 2" *0.945" inch (L*W*H)  |            |             |            |              |            |            |   |
|                        | PACKING  | 0.11Kg; 120pcs/14.2Kg/0.97CUFT  |            |             |            |              |            |            |   |
| NOTE                   | <ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m (6500ft).</li> <li>The power supply is considered a component which will be installed into a final equipment. 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. (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> </ol> |   |            |             |            |              |            |            |   |

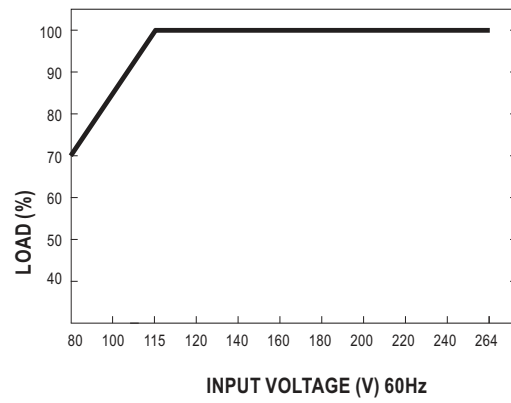
### ■ Block Diagram



### ■ Derating Curve

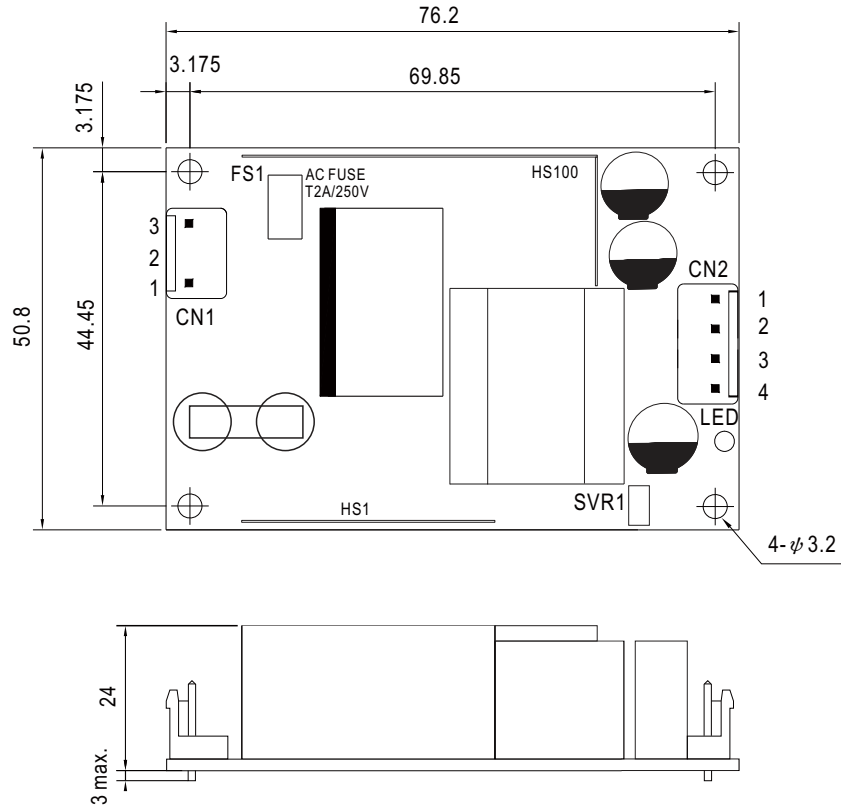


### ■ Static Characteristics



## Mechanical Specification

Case No. Unit:mm



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 B2P-VH or equivalent

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

## Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>