



■ Features :

- Universal AC input / Full range (up to 295VAC)
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Output voltage and constant current level adjustable
- Built-in active PFC function
- IP66 design for indoor or outdoor installations
- Class 2 power unit
- Cooling by free air convection
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 3 years warranty

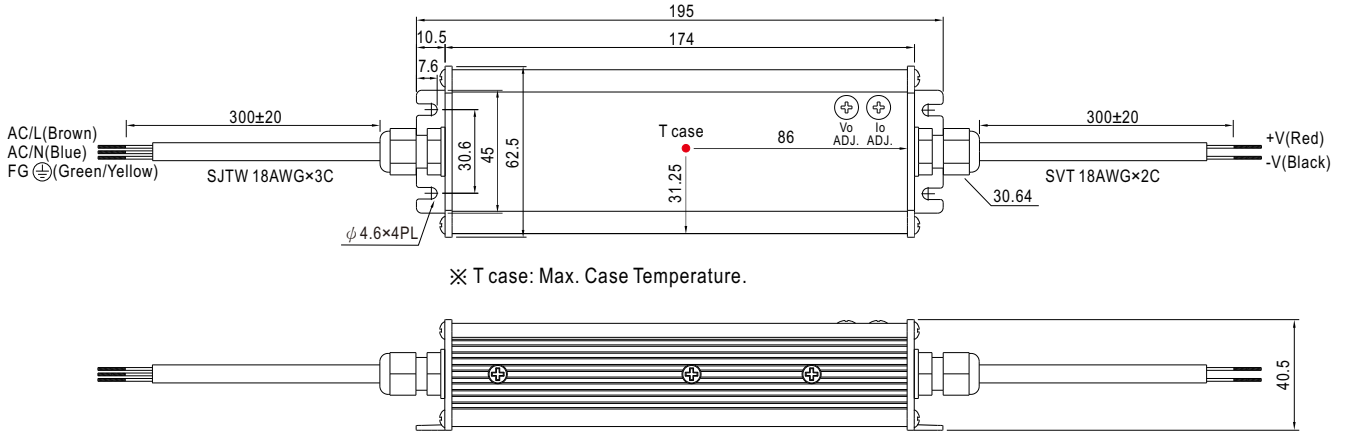
SPECIFICATION



| MODEL           | CEN-100-20  | CEN-100-24   | CEN-100-30  | CEN-100-36  | CEN-100-42   | CEN-100-48   | CEN-100-54 |              |
|-----------------|---|--|-------------|-------------|--------------|--------------|------------|--------------|
| OUTPUT          | DC VOLTAGE  | 20V  | 24V         | 30V         | 36V          | 42V          | 48V        | 54V          |
|                 | CONSTANT CURRENT REGION Note.5  | 13 ~ 20V   | 15.6 ~ 24V  | 19.5 ~ 30V  | 23.4 ~ 36V   | 27.3 ~ 42V   | 31.2 ~ 48V | 35.1 ~ 54V   |
|                 | RATED CURRENT   | 4.8A   | 4A          | 3.2A        | 2.65A        | 2.28A        | 2A         | 1.77A        |
|                 | CURRENT RANGE   | 0 ~ 4.8A   | 0 ~ 4A      | 0 ~ 3.2A    | 0 ~ 2.65A    | 0 ~ 2.28A    | 0 ~ 2A     | 0 ~ 1.77A    |
|                 | RATED POWER   | 96W  | 96W         | 96W         | 95.4W        | 95.76W       | 96W        | 95.58W       |
|                 | RIPPLE & NOISE (max.) Note.2  | 2.0Vp-p  | 2.7Vp-p     | 3Vp-p       | 3.6Vp-p      | 4Vp-p        | 4.6Vp-p    | 5Vp-p        |
|                 | VOLTAGE ADJ. RANGE (svr1)   | 17 ~ 22V   | 22 ~ 27V    | 27 ~ 33V    | 33 ~ 40V     | 37 ~ 46V     | 43 ~ 53V   | 49 ~ 58V     |
|                 | CURRENT ADJ. RANGE (svr2)   | 3.12 ~ 4.8A  | 2.6 ~ 4A    | 2.08 ~ 3.2A | 1.72 ~ 2.65A | 1.48 ~ 2.28A | 1.3 ~ 2A   | 1.15 ~ 1.77A |
|                 | VOLTAGE TOLERANCE Note.3  | ±10%   |             |             |              |              |            |              |
|                 | LINE REGULATION   | ±3.0%  |             |             |              |              |            |              |
| LOAD REGULATION | ±5.0%   |  |             |             |              |              |            |              |
| SETUP TIME      | 500ms / 230VAC 1200ms / 115VAC at full load   |  |             |             |              |              |            |              |
| INPUT           | VOLTAGE RANGE Note.4  | 90 ~ 295VAC 127 ~ 417VDC   |             |             |              |              |            |              |
|                 | FREQUENCY RANGE   | 47 ~ 63Hz  |             |             |              |              |            |              |
|                 | POWER FACTOR (Typ.)   | PF>0.97/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load (Please refer to "Power Factor Characteristic" curve)      |             |             |              |              |            |              |
|                 | EFFICIENCY (Typ.)   | 88%  | 89%         | 90%         | 90%          | 90%          | 91%        | 91%          |
|                 | AC CURRENT (Typ.)   | 1.4A/115VAC  | 0.7A/230VAC | 0.5A/277VAC |              |              |            |              |
|                 | INRUSH CURRENT (Typ.)   | COLD START 45A(twidth=85µs measured at 50% Ipeak) at 230VAC  |             |             |              |              |            |              |
|                 | LEAKAGE CURRENT   | <0.75mA / 240VAC   |             |             |              |              |            |              |
| PROTECTION      | OVER CURRENT  | 95 ~ 110%<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed      |             |             |              |              |            |              |
|                 | SHORT CIRCUIT   | Hiccup mode, recovers automatically after fault condition is removed   |             |             |              |              |            |              |
|                 | OVER VOLTAGE  | 22.8 ~ 26V   | 28 ~ 32V    | 34 ~ 38V    | 41 ~ 46V     | 47 ~ 52V     | 54 ~ 60V   | 59 ~ 68V     |
|                 | OVER TEMPERATURE  | Shut down o/p voltage, re-power on to recover  |             |             |              |              |            |              |
| ENVIRONMENT     | WORKING TEMP.   | -30 ~ +70°C (Refer to "Derating Curve")  |             |             |              |              |            |              |
|                 | WORKING HUMIDITY  | 20 ~ 95% RH non-condensing   |             |             |              |              |            |              |
|                 | STORAGE TEMP., HUMIDITY   | -40 ~ +80°C, 10 ~ 95% RH   |             |             |              |              |            |              |
|                 | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)   |             |             |              |              |            |              |
|                 | VIBRATION   | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes  |             |             |              |              |            |              |
| SAFETY & EMC    | SAFETY STANDARDS  | UL8750, CSA C22.2 No. 250.0-08(except for 48V, 54V), TUV EN61347-1, EN61347-2-13, IP66, J61347-1, J61347-2-13 approved |             |             |              |              |            |              |
|                 | WITHSTAND VOLTAGE   | I/P-O/P:3.75KVAC 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 EN55015, EN61000-3-2 Class C (≥65% load) ; EN61000-3-3   |             |             |              |              |            |              |
|                 | EMC IMMUNITY  | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61547, light industry level (surge 4KV), criteria B                 |             |             |              |              |            |              |
| OTHERS          | MTBF  | 519.5Khrs min. MIL-HDBK-217F (25°C)  |             |             |              |              |            |              |
|                 | DIMENSION   | 195*62.5*40.5mm (L*W*H)  |             |             |              |              |            |              |
|                 | PACKING   | 0.6Kg;24pcs/15.4Kg/1.29CUFT  |             |             |              |              |            |              |
| NOTE            | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf &amp; 47µf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Derating may be needed under low input voltage. Please check the static characteristics for more details.</li> <li>5. Please refer to "DRIVING METHODS OF LED MODULE".</li> <li>6. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</li> <li>7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.</li> <li>8. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.</li> </ol> |  |             |             |              |              |            |              |

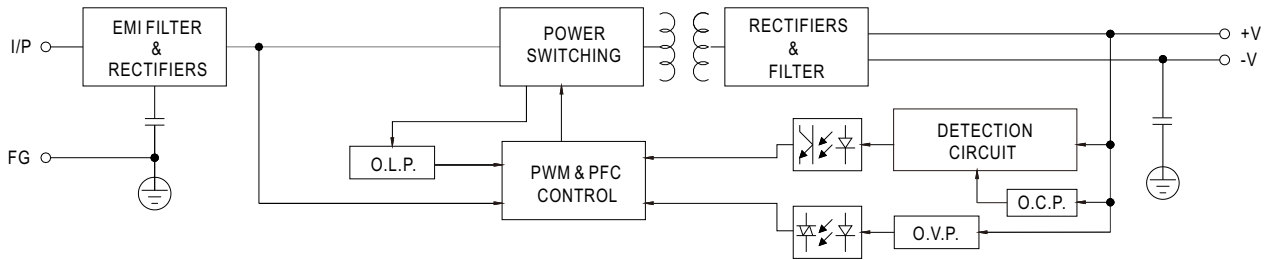
■ Mechanical Specification

Case No. 993A Unit:mm

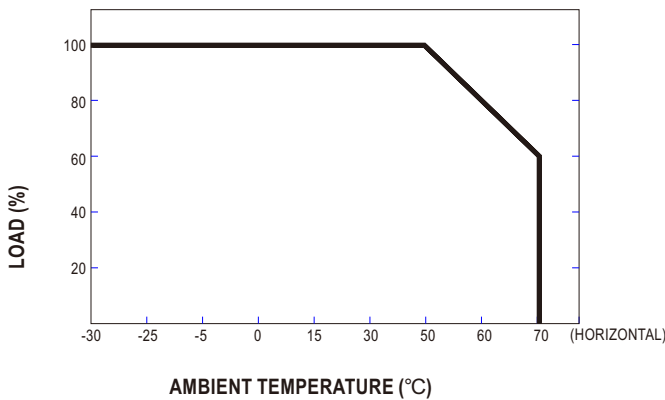


■ Block Diagram

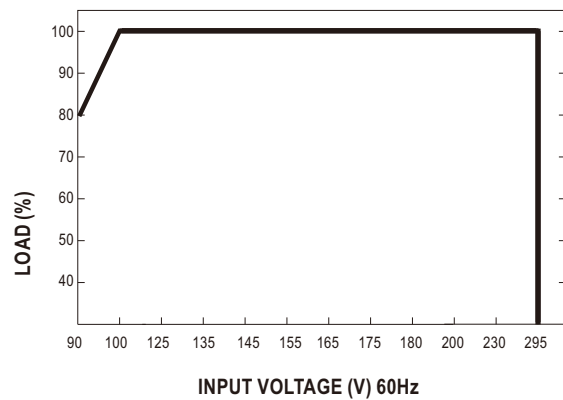
fosc : 42KHz(115VAC)  
68KHz(230VAC)



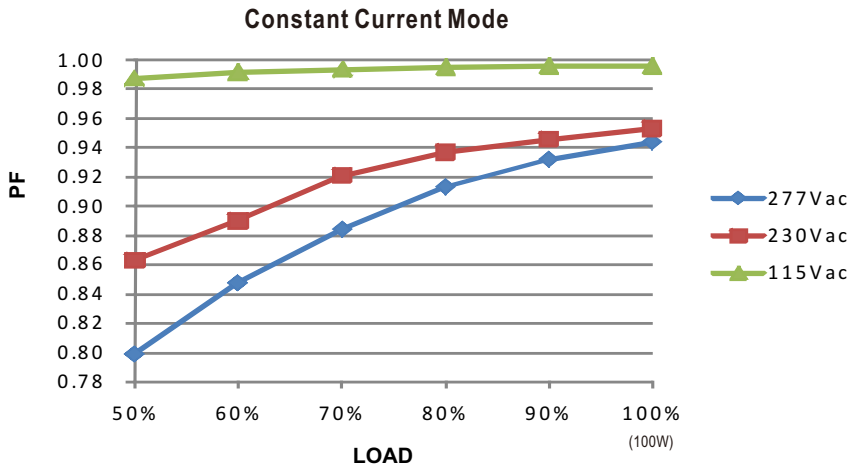
■ Derating Curve



■ Static Characteristics

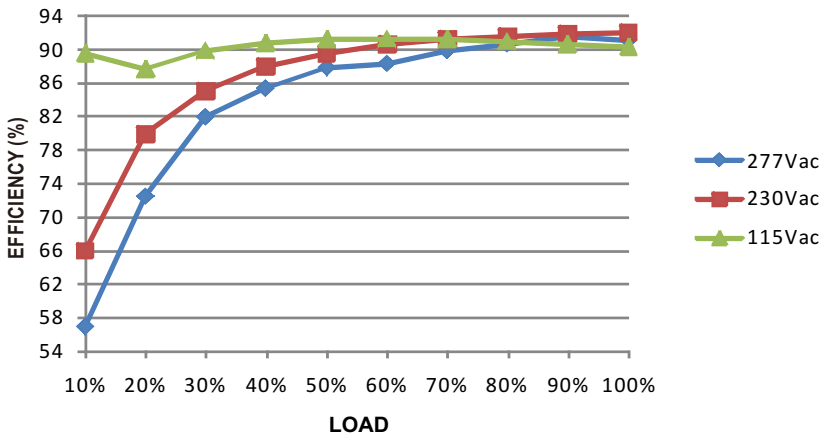


**Power Factor Characteristic**



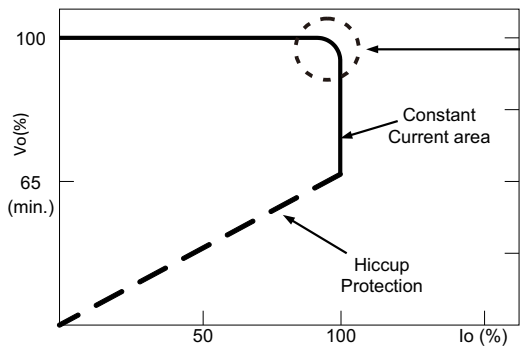
**EFFICIENCY vs LOAD (48V Model)**

CEN-100 series possess superior working efficiency that up to 91% can be reached in field applications.



**DRIVING METHODS OF LED MODULE**

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.  
Should there be any compatibility issues, please contact MEAN WELL.