# **60WH Series**

60W single output with constant voltage circuit



- Constant voltage design(C.V. mode)
- AC Input voltage 90-305V
- Protections:

Overload/Over voltage /Short circuit/ Over temperature

- IP68 design for outdoor installations
- 100% full load burn-in test
- Suitable for LED lighting and moving sign applications
- Metal case
- Class 2 power unit
- Safety standards: UL879
- EMC standards : FCC Part 15 classB
- 5years warranty

| IP68 ( | M/M/ | SELV LPS | c <b>All</b> us FC |
|--------|------|----------|--------------------|
|        |      |          |                    |

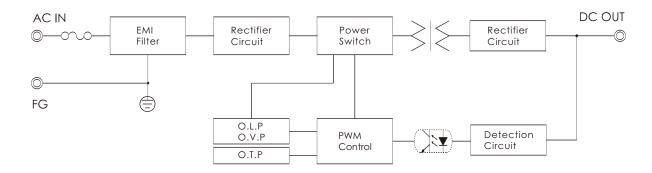
| ITEM             |                          | UP60S12WH   |  |  |
|------------------|--------------------------|---|--|--|
| INPUT            | VOLTAGE RANGE            | AC90~305V   |  |  |
|                  | FREQUENCY RANGE          | 47~63Hz   |  |  |
|                  | EFFICIENCY(typ.)         | 84%   |  |  |
|                  | AC CURRENT(typ.)         | 0.9A/115VAC (typ) 0.5A/230VAC(typ)  |  |  |
|                  | INRUSH CURRENT(typ.)     | COLD START 40A/230VAC   |  |  |
|                  | LEAKAGE CURRENT          | <1.5mA / 230VAC   |  |  |
| OUTPUT           | DC VOLTAGE               | 12V   |  |  |
|                  | RATED CURRENT            | 5A  |  |  |
|                  | RATED POWER              | 60W   |  |  |
|                  | RIPPLE&NOISE(max.) Note2 | 170mVp-p  |  |  |
|                  | VOLTAGE ADJ. RANGE       | ±5%   |  |  |
|                  | VOLTAGE TOLERANCE Note3  | ±3%   |  |  |
|                  | LINE REGULATION Note4    | ±1%   |  |  |
|                  | LOAD REGULATION Note5    | ±2%   |  |  |
|                  | SETUP, RISE TIME(max.)   | 3000ms,100ms/115VAC 3000ms,100ms/230VAC at full load                          |  |  |
|                  | HOLD UP TIME(typ.)       | 10ms/115VAC 60ms/230VAC at full load  |  |  |
| PROTEC<br>-TION  | SHORT CIRCUIT            | Hiccup mode ; recovers automatically after fault condition is removed         |  |  |
|                  | OVERLOAD                 | Over 110% of rating; recovers automatically after fault condition is removed  |  |  |
|                  | OVER VOLTAGE             | 115~140% of rating  |  |  |
|                  | OVER TEMPERATURE         | 90±10℃(temp. Sensor); recovers automatically after fault condition is removed |  |  |
| ISOLA<br>-TION   | WITHSTAND VOLTAGE        | I/P-O/P:AC3.75KV, I/P-F.G:AC2KV, O/P-F.G:AC1.5KV                              |  |  |
|                  | ISOLATION RESISTANCE     | I/P-O/P, I/P-F.G, O/P-F.G:DC500V 100Mohms(At room temp. & humid.)             |  |  |
| ENVIRON<br>-MENT | WORKING TEMP.&HUMID.     | -40~+70℃ (Refer to "DERATING CURVE"),20~95%RH                                 |  |  |
|                  | STORAGE TEMP.&HUMID.     | -40~+75℃,10~95%RH   |  |  |
|                  | VIBRATION                | 10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes         |  |  |
| OTHERS           | DIMENSION/WEIGHT         | 194*56.7*41.3mm(L*W*H)/0.75Kg   |  |  |

#### 1. All parameters not specially mentioned are measured at 220Vac input, rated load and 25% of ambient temperature.

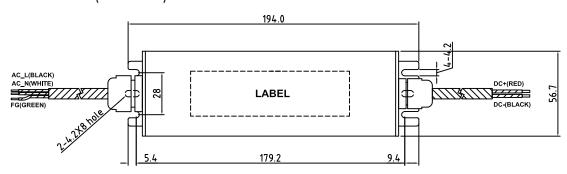
- 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pare-wire terminated with 0.1 uF & 47uF parallel capacitor.
- 3. Tolerance : includes set up tolrance, line regulation and load regulation.
- 4. Line regulation is measured from low line to high line at rated load.
- 5. Load regulation is measured from low 0% to 100% rated load.

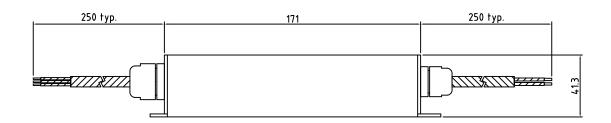
NOTE

### ■ BLOCK DIAGRAM

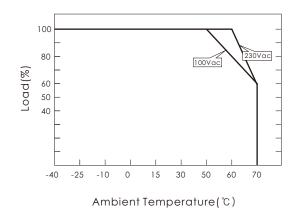


## ■ DIMENSIONS (unit:mm)





### ■ DERATING CURVE



### ■ STATIC CHARACTERISTICS

