



Наличие и актуальные цены на

**HSG-70-24**

<https://www.mean-well.ru/store/HSG-70-24/>



#### ■ Features :

- Universal AC input / Full range(up to 305VAC)
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Built-in active PFC function
- High efficiency up to 90%
- Cooling by free air convection
- IP65 design for indoor and outdoor installations
- Small and compact size
- High reliability,low cost
- Suitable for LED lighting and moving sign applications
- 3 years warranty



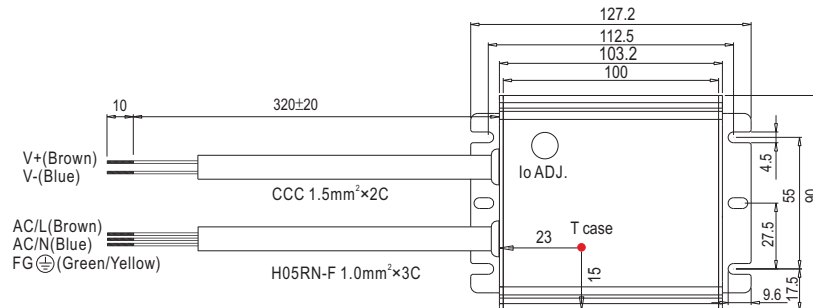
#### SPECIFICATION

| MODEL                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | HSG-70-12                                                                                                            | HSG-70-18     | HSG-70-24   | HSG-70-36  | HSG-70-48  |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------|-------------|------------|------------|
| OUTPUT                                 | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 12V                                                                                                                  | 18V           | 24V         | 36V        | 48V        |
|                                        | CONSTANT CURRENT REGION <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 7.7 ~ 12V                                                                                                            | 11.3 ~ 18V    | 15.5 ~ 24V  | 22.1 ~ 36V | 29.3 ~ 48V |
|                                        | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5.0A                                                                                                                 | 4.0A          | 3.0A        | 2.0A       | 1.5A       |
|                                        | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 60W                                                                                                                  | 72W           | 72W         | 72W        | 72W        |
|                                        | CURRENT ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Can be adjusted by internal potentiometer                                                                            |               |             |            |            |
|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3 ~ 5A                                                                                                               | 2.4 ~ 4A      | 1.8 ~ 3A    | 1.2 ~ 2A   | 0.9 ~ 1.5A |
|                                        | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 150mVp-p                                                                                                             | 200mVp-p      | 200mVp-p    | 200mVp-p   | 200mVp-p   |
|                                        | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±2.5%                                                                                                                | ±2.0%         | ±1.0%       | ±1.0%      | ±1.0%      |
|                                        | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±0.5%                                                                                                                | ±0.5%         | ±0.5%       | ±0.5%      | ±0.5%      |
|                                        | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±2.0%                                                                                                                | ±1.5%         | ±0.5%       | ±0.5%      | ±0.5%      |
| SETUP, RISE TIME <small>Note.7</small> | 2000ms,80ms / 115VAC 500ms,80ms / 230VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                      |               |             |            |            |
| HOLD UP TIME                           | 16ms at full load 230VAC/115VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                      |               |             |            |            |
| INPUT                                  | VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 90 ~ 305VAC                                                                                                          | 127~431VDC    |             |            |            |
|                                        | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 47 ~ 63Hz                                                                                                            |               |             |            |            |
|                                        | POWER FACTOR(Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | PF ≥ 0.96/115VAC, PF ≥ 0.96/230VAC, PF≥0.92/277VAC at full load(please refer to "Power Factor characteristic curve") |               |             |            |            |
|                                        | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | THD< 20% when output loading≥65% at 115VAC/230VAC input and output loading≥75% at 277VAC input                       |               |             |            |            |
|                                        | EFFICIENCY(Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 88%                                                                                                                  | 89%           | 89%         | 90%        | 90%        |
|                                        | AC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.85A/115VAC                                                                                                         | 0.425A/230VAC | 0.4A/277VAC |            |            |
|                                        | INRUSH CURRENT(Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | COLD START 55A(twidth=340μs measured at 50% Ipeak) at 230VAC                                                         |               |             |            |            |
|                                        | MAX. No. of PSUs on 16A CIRCUIT BREAKER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6 units (circuit breaker of type B) / 11 units (circuit breaker of type C) at 230VAC                                 |               |             |            |            |
|                                        | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <0.75mA / 277VAC                                                                                                     |               |             |            |            |
| PROTECTION                             | OVER CURRENT <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 95 ~ 108%<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed    |               |             |            |            |
|                                        | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Protection type : Hiccup mode, recovers automatically after fault condition is removed.                              |               |             |            |            |
|                                        | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 14 ~ 17V                                                                                                             | 21 ~ 25V      | 28 ~ 34V    | 41 ~ 48V   | 54 ~ 63V   |
|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Protection type : Shut down o/p voltage, re-power on to recover                                                      |               |             |            |            |
|                                        | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Shut down o/p voltage, re-power on to recover                                                                        |               |             |            |            |
| ENVIRONMENT                            | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -40 ~ +70℃ (Refer to "Derating Curve")                                                                               |               |             |            |            |
|                                        | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20 ~ 95% RH non-condensing                                                                                           |               |             |            |            |
|                                        | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -40 ~ +80℃, 10 ~ 95% RH                                                                                              |               |             |            |            |
|                                        | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±0.03%/℃ (0 ~ 50℃)                                                                                                   |               |             |            |            |
|                                        | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes                                              |               |             |            |            |
| SAFETY & EMC                           | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | GB19510.14, GB19510.1, IP65 approved; design refer to TUV EN61347-1, EN61347-2-13, UL8750                            |               |             |            |            |
|                                        | 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℃ / 70%RH                                                               |               |             |            |            |
|                                        | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Compliance to EN55015, GB17743, GB17625.1, EN61000-3-2 Class C(≥65% load);EN61000-3-3                                |               |             |            |            |
|                                        | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024, light industry level (surge 4KV), criteria A               |               |             |            |            |
| OTHERS                                 | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 338.2Khrs min. MIL-HDBK-217F (25℃)                                                                                   |               |             |            |            |
|                                        | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 127.2*90*38.8mm (L*W*H)                                                                                              |               |             |            |            |
|                                        | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.76Kg;16pcs/ 13.2Kg/0.77CUFT                                                                                        |               |             |            |            |
| NOTE                                   | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Derating may be needed under low input voltage, please check the static characteristics for more details.<br>5. Constant current operation region is within 65% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.<br>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.<br>7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.<br>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. |                                                                                                                      |               |             |            |            |

## Mechanical Specification

Case No.209B

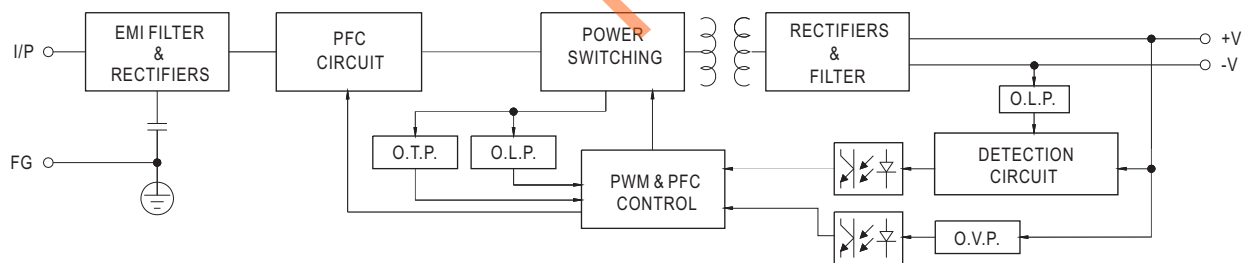
Unit:mm



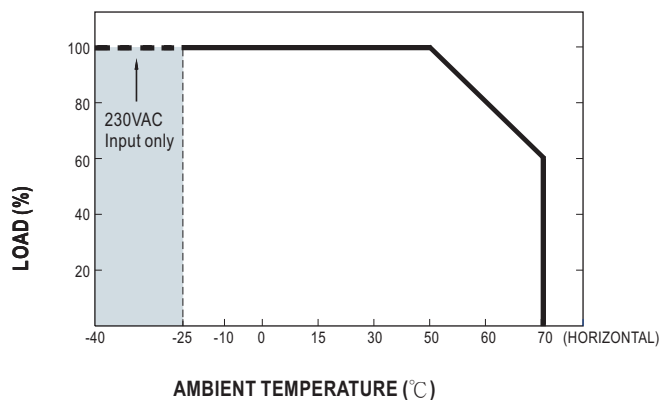
※ T case: Max. Case Temperature

※ IP65 rated. Constant current level can be adjusted through internal potentiometer.  
(Can access by removing the rubber stopper on the case.)

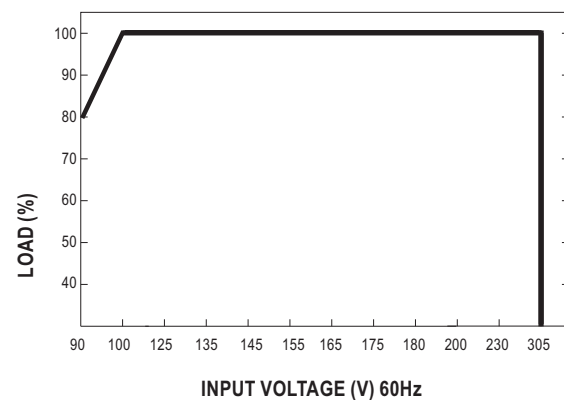
## Block Diagram



## Derating Curve

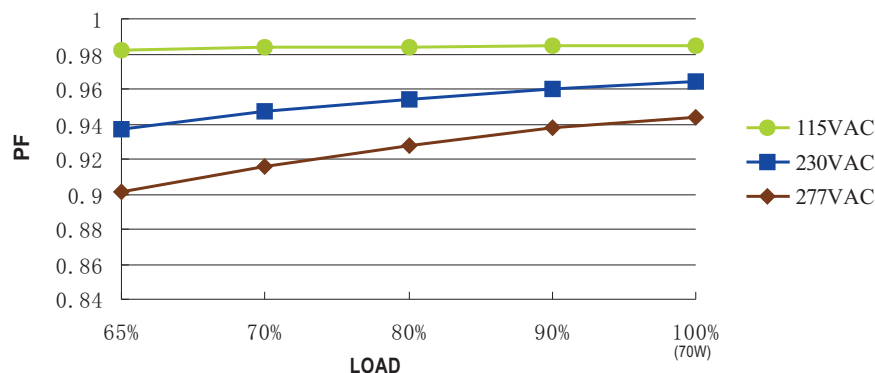


## Static Characteristics



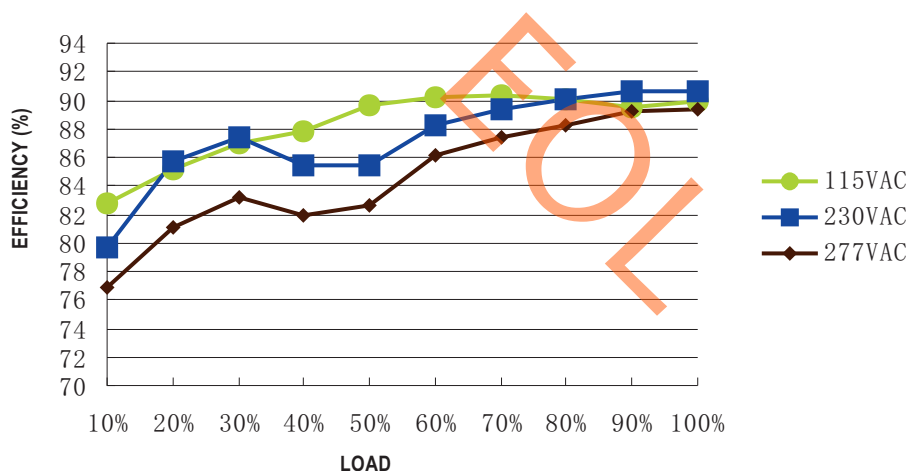
### Power Factor Characteristic

#### Constant Current Mode



### EFFICIENCY vs LOAD (48V Model)

HSG-70 series possess superior working efficiency that up to 90% can be reached in field applications.

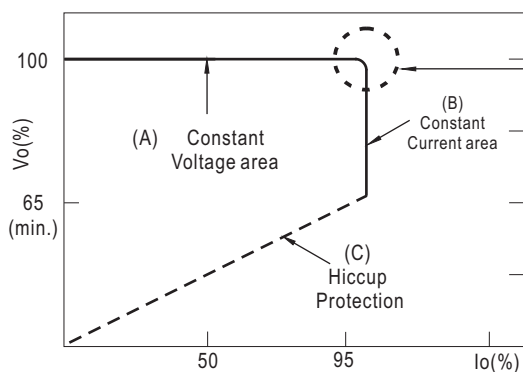


### DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B)).



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.