Features

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- No load power consumption <0.5W at remote OFF
- High efficiency up to 96%
- -40°C ~ +70°C wide operating range
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Fanless design, cooling by free air convection
- IP67 / IP65 design for indoor or outdoor installations
- Withstand 5G vibration test
- Three in one dimming function
  (0~10Vdc or PWM signal or resistance)
- LED indicator for power on (A-Type)
- Suitable for dry / damp / wet location
- 5 years warranty (Note.10)

Description

HLG-600H series is a high performance dustproof and waterproof AC-to-DC LED power supply up to 600W. The fully-potted silicone and the aluminum case facilitate the heat dissipation. Above all, it delivers the efficiency up to 96% that tops the LED power supply field. Other features include the wide working temperature range between -40°C and +70°C, the fan-less design, the adjustable output voltage and current, the surge susceptibility up to 4KV (EN61000-4-5), low no-load power consumption (<0.5W) at remote OFF and workable for 277VAC input. These attributes all make HLG-600H the fit for the indoor/outdoor LED lighting application requiring remarkable reliability.

Model Encoding

HLG - 600H - [12] [A]

Function mode option
Output voltage
High input voltage up to 305VAC
Output wattage
Series name

A : Standard model, IP65, Vo and Io level can be adjusted through internal potentiometer.
B : Standard model, IP67, Io adjustable with 0~10Vdc, PWM signal or resistance.
Blank : Optional model, IP67, with fixed Vo and Io level.
## SPECIFICATION

### OUTPUT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DC VOLTAGE</th>
<th>CONSTANT CURRENT REGION</th>
<th>RATED CURRENT</th>
<th>RATED POWER</th>
<th>RIPPLE &amp; NOISE (max.)</th>
<th>VOLTAGE ADJ. RANGE</th>
<th>CURRENT ADJ. RANGE</th>
<th>VOLTAGE TOLERANCE</th>
<th>LINE REGULATION</th>
<th>LOAD REGULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLG-600H-1</td>
<td>12V</td>
<td>1~12V</td>
<td>40A</td>
<td>480W</td>
<td>150mVp-p</td>
<td>10.2~12.6V</td>
<td>±3.0%</td>
<td>±2.0%</td>
<td>±0.5%</td>
<td>±2.0%</td>
</tr>
<tr>
<td>HLG-600H-12</td>
<td>15V</td>
<td>7.5~15V</td>
<td>36A</td>
<td>540W</td>
<td>150mVp-p</td>
<td>12.7~15.8V</td>
<td>±2.0%</td>
<td>±2.0%</td>
<td>±0.5%</td>
<td>±2.0%</td>
</tr>
<tr>
<td>HLG-600H-20</td>
<td>20V</td>
<td>10~20V</td>
<td>28A</td>
<td>560W</td>
<td>150mVp-p</td>
<td>17~21V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>HLG-600H-24</td>
<td>24V</td>
<td>12~24V</td>
<td>25A</td>
<td>600W</td>
<td>200mVp-p</td>
<td>20.4~25.2V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>HLG-600H-30</td>
<td>30V</td>
<td>15~30V</td>
<td>20A</td>
<td>600W</td>
<td>250mVp-p</td>
<td>25.5~31.5V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>HLG-600H-36</td>
<td>36V</td>
<td>18~36V</td>
<td>16.7A</td>
<td>600W</td>
<td>250mVp-p</td>
<td>30.6~37.8V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>HLG-600H-42</td>
<td>42V</td>
<td>21~42V</td>
<td>14.3A</td>
<td>600W</td>
<td>350mVp-p</td>
<td>35.7~44.1V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>HLG-600H-48</td>
<td>48V</td>
<td>24~48V</td>
<td>12.5A</td>
<td>600W</td>
<td>45.9~56.7V</td>
<td>40.8~50.4V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>HLG-600H-54</td>
<td>54V</td>
<td>27~54V</td>
<td>11.2A</td>
<td>600W</td>
<td>48~54V</td>
<td>45.9~56.7V</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
</tbody>
</table>

### INPUT

- **POWER FACTOR (Typ.):** PF=0.98/115VAC, PF=0.95/230VAC, PF=0.93/277VAC at full load
- **TOTAL HARMONIC DISTORTION:** THD+20% when output loading ≥50% at 115VAC/230VAC input and output loading ≥75% at 277VAC input
- **EFFICIENCY (Typ.):** 230VAC 92%, 277VAC 92.5%
- **AC CURRENT (Typ.):** 7A/115VAC, 3.3A/230VAC
- **INRUSH CURRENT (Typ.):** COLD START 70A(t=1000s measured at 50% I) at 230VAC

### SAFETY & EMC

- **SAFETY STANDARDS:** UL60950-1, UL60750, IEC/IEC 60121-1, EN61547-1, EN61547-2-13 independent, EN62384, IEC62136, IEC61547-2-13 approved
- **WITHSTAND VOLTAGE:** I/P-O/P:3.75kVAC, I/P-FF:2kVAC, O/P-FF:1.5kVAC
- **ISOLATION RESISTANCE:** I/P-O/P:10M Ohms / 500VDC / 75°C 70% RH
- **EMC EMISSION:** Compliance to EN55015, EN55022(CISPR22) Class B, EN61000-3-2 Class C (≥50% load) ; EN61000-3-3
- **EMC IMMUNITY:** Compliance to EN61000-4-2,4,5,6,8,11,EN61547, EN55024, light industry level (surge 4KV), criteria A

### ENVIRONMENT

- **TEMP. COEFFICIENT:** ±0.03%/°C (0 ~ 80°C)
- **VIBRATION:** 10 ~ 500Hz, 5g, 12min./cycle, period for 72min. each along X, Y, Z axes

### PROTECTION

- **OVER CURRENT:** 95 ~ 108%
- **SHORT CIRCUIT:** Constant current limiting, recovers automatically after fault condition is removed
- **OVER VOLTAGE:** SHUT DOWN O/P voltage, re-power on to recover
- **LEAKAGE CURRENT:** <0.75mA / 277VAC

### FUNCTION

- **REMOTE ON/OFF CONTROL:** 4-20mA signal or Open circuit
- **WORKING TEMP.:** 0~+70°C (Refer to “Derating Curve”)
- **WORKING HUMIDITY:** 20 ~ 95% RH non-condensing

### OTHERS

- **DIMENSION:** 280*144*48.5mm (L*W*H)
- **PACKING:** 10.8Kg; 4pcs/16.6Kg/60CUFT

### NOTE

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. Theoretical thermal performance is only for reference, in some cases the input voltage is over 230VAC, please also consult the thermal design of the board.
4. Constant current operation region is within 50%~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific design.
5. Derating may be needed under low input voltages. Please check the static characteristics for more details.
6. A type only.
7. 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.

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File Name: HLG-600H-SPEC 2014-12-26
**Power Factor Characteristic**

### Constant Current Mode

- **Input Voltages:** 277V, 230V, 115V
- **Power Factor (PF):**
  - 0.78 to 1.00 across different load percentages (50% to 100%)

### Derating Curve

- **LOAD (%)**
- **AMBIENT TEMPERATURE (°C):**
  - Note: At high ambient temperature Ta=70°C, if HLG-600H operates in C.C mode, the maximal current must not be greater than 60% of the rated current.

### Static Characteristics

- **INPUT VOLTAGE (V) 60Hz**
- **LOAD (%)**
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 (C.V) or constant current mode (C.C)" to drive the LEDs. Mean Well's LED power supply with C.V+ C.C characteristic can be operated at both C.V mode (with LED driver, at area (A)) and C.C mode (direct drive, at area (B)).

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.

Typical LED power supply I-V curve
Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 0 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

Please DO NOT connect "DIM-" to "-V".

Reference resistance value for output current adjustment (Typical)

<table>
<thead>
<tr>
<th>Resistance value</th>
<th>Single driver</th>
<th>Multiple drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short</td>
<td>Short</td>
</tr>
<tr>
<td></td>
<td>10K Ω</td>
<td>10K Ω/N</td>
</tr>
<tr>
<td></td>
<td>20K Ω</td>
<td>20K Ω/N</td>
</tr>
<tr>
<td></td>
<td>30K Ω</td>
<td>30K Ω/N</td>
</tr>
<tr>
<td></td>
<td>40K Ω</td>
<td>40K Ω/N</td>
</tr>
<tr>
<td></td>
<td>50K Ω</td>
<td>50K Ω/N</td>
</tr>
<tr>
<td></td>
<td>60K Ω</td>
<td>60K Ω/N</td>
</tr>
<tr>
<td></td>
<td>70K Ω</td>
<td>70K Ω/N</td>
</tr>
<tr>
<td></td>
<td>80K Ω</td>
<td>80K Ω/N</td>
</tr>
<tr>
<td></td>
<td>90K Ω</td>
<td>90K Ω/N</td>
</tr>
<tr>
<td></td>
<td>100K Ω</td>
<td>100K Ω/N</td>
</tr>
<tr>
<td></td>
<td>OPEN</td>
<td>-----</td>
</tr>
</tbody>
</table>

| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

0 ~ 10V dimming function for output current adjustment (Typical)

Dimming value

| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

10V PWM signal for output current adjustment (Typical): Frequency range : 100Hz ~ 3KHz

Duty value

| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.
Mechanical Specification

A Type: (HLG-600H-_.A)

B Type: (HLG-600H-_.B)

* IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

T case: Max. Case Temperature.
Installation Manual

Please refer to: http://www.meanwell.com/webnet/search/InstallationSearch.html
Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

**Mean Well:**
- HLG-600H-12A
- HLG-600H-12B
- HLG-600H-15A
- HLG-600H-15B
- HLG-600H-20A
- HLG-600H-20B
- HLG-600H-24A
- HLG-600H-24B
- HLG-600H-30A
- HLG-600H-30B
- HLG-600H-36A
- HLG-600H-36B
- HLG-600H-42A
- HLG-600H-42B
- HLG-600H-48A
- HLG-600H-48B
- HLG-600H-54A
- HLG-600H-54B