**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)

**Applications**

- LED street lighting
- LED high-bay lighting
- Parking space lighting
- LED searchlight
- LED fishing lamp

**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 - [ ]

- **Function mode option**
  - 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.

- **Output voltage**
- **High input voltage up to 305VAC**
- **Output wattage**
- **Series name**
## Specification

### 600W Single Output Switching Power Supply

#### HLG-600H series

<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>Leakage Current</th>
<th>Over Current</th>
<th>Short Circuit</th>
<th>Over Voltage</th>
<th>Over Temperature</th>
<th>Function</th>
<th>Voltage Range</th>
<th>Frequency Range</th>
<th>Power Factor (Typ.)</th>
<th>Total Harmonic Distortion</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLG-600H-1</td>
<td>12V 15V</td>
<td>6 ~ 12V</td>
<td>40A</td>
<td>480W</td>
<td>150µVpp 150µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>16 ~ 18V</td>
<td>24 ~ 28A</td>
<td>25A</td>
<td>20A</td>
<td>16.7A</td>
<td>22A</td>
<td>5V STANDBY</td>
<td></td>
</tr>
<tr>
<td>HLG-600H-15</td>
<td>20V</td>
<td>20 ~ 20V</td>
<td>36A</td>
<td>540W</td>
<td>150µVpp 150µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>18 ~ 24V</td>
<td>12.5 ~ 25A</td>
<td>10 ~ 20A</td>
<td>8.3 ~ 16.7A</td>
<td>13.8A</td>
<td>24A</td>
<td>Power on: &quot;Hi&quot; &gt;2 ~ 5V or Open circuit</td>
<td></td>
</tr>
<tr>
<td>HLG-600H-20</td>
<td>24V</td>
<td>15 ~ 24V</td>
<td>28A</td>
<td>600W</td>
<td>200µVpp 250µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>18 ~ 36V</td>
<td>30.6 ~ 31.5V</td>
<td>30.6 ~ 31.5V</td>
<td>35.7 ~ 41.4V</td>
<td>40.8 ~ 50.4V</td>
<td>64.9 ~ 76.7V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLG-600H-24</td>
<td>30V</td>
<td>15 ~ 30V</td>
<td>25A</td>
<td>600.2W</td>
<td>200µVpp 250µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>21 ~ 42V</td>
<td>42V</td>
<td>48V</td>
<td>48V</td>
<td>54V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLG-600H-30</td>
<td>36V</td>
<td>18 ~ 42V</td>
<td>20A</td>
<td>600.2W</td>
<td>200µVpp 250µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>24 ~ 48V</td>
<td>42V</td>
<td>48V</td>
<td>48V</td>
<td>54V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLG-600H-36</td>
<td>38V</td>
<td>18.5 ~ 32.5V</td>
<td>16.7A</td>
<td>600.2W</td>
<td>200µVpp 250µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>27 ~ 54V</td>
<td>48V</td>
<td>48V</td>
<td>48V</td>
<td>54V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLG-600H-42</td>
<td>42V</td>
<td>22 ~ 26V</td>
<td>14.3A</td>
<td>601.2W</td>
<td>300µVpp 350µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>48V</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLG-600H-48</td>
<td>48V</td>
<td>26 ~ 30V</td>
<td>12.5A</td>
<td>600.2W</td>
<td>300µVpp 350µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLG-600H-54</td>
<td>54V</td>
<td>30.6 ~ 31.5V</td>
<td>11.2A</td>
<td>600.2W</td>
<td>300µVpp 350µVpp</td>
<td>5V : <a href="mailto:5V@0.5A">5V@0.5A</a></td>
<td>≤0.5mA / 277VAC</td>
<td>≤0.5%</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td>54V</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Notes

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. Tolerance: includes set up tolerance, line regulation and load regulation.
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 system design.
5. Derating may be needed under low input voltages. Please check the static characteristics for more details.
6. A type only.
7. Safety and EMC design refer to EN65084-1, subject CNS15233, GB7000.1, FCC part18.
8. Length of set up time is measured at cold start first. Turning ON/OFF the power supply may lead to increase of the set up time.
9. 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.
10. Refer to warranty statement.
**Block Diagram**

- **EMI FILTER & RECTIFIERS**
- **PFC CIRCUIT**
- **POWER SWITCHING**
- **PWM CONTROL**
- **POWER SWITCHING & FILTER**
- **RECTIFIERS & FILTER**
- **DETECTION CIRCUIT**
- **PWM & PFC CONTROL**
- **O.L.P.**
- **O.V.P.**
- **PS/ON CONTROL**
- **fosc: 100KHz(5V), 70KHz(12V~54V)**

**Derating Curve**

Note: At high ambient temperature $T_a=70°C$, if HLG-600H operates in C.C mode, the maximal current must not be greater than 60% of the rated current.

**Static Characteristics**

**Power Factor Characteristic**

- **Constant Current Mode**
  - 277V
  - 230V
  - 115V

**Input Voltage (V) 60Hz**

**Output Voltage (V) 60Hz**

**File Name:** HLG-600H-SPEC 2015-05-11
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.
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 (for low quantity synchronization dimming operation)</th>
<th>Multiple drivers (N=driver quantity for synchronized dimming operation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of rated current</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>10K Ω</td>
<td>20K Ω</td>
<td>30K Ω</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Dimming value</th>
<th>0V</th>
<th>1V</th>
<th>2V</th>
<th>3V</th>
<th>4V</th>
<th>5V</th>
<th>6V</th>
<th>7V</th>
<th>8V</th>
<th>9V</th>
<th>10V</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of rated current</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
<td>95%~108%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Duty value</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of rated current</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
<td>95%~108%</td>
</tr>
</tbody>
</table>

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)

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※ 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.
Blank Type(option):(HLG-600H-_)

T case: Max. Case Temperature.

Installation Manual

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