### Features
- Constant Voltage + Constant Current mode output
- Metal housing with class 1 design
- Built-in active PFC function
- Class 2 power unit
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer;
  3 in 1 dimming; Timer dimming
- Typical lifetime > 62000 hours
- 7 years warranty

### Description
HLG-40H series is a 40W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-40H operates from 90 ~ 305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 89.5%, with the fanless design, the entire series is able to operate for -40°C ~ +80°C case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. HLG-40H is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

### Model Encoding
HLG - 40H - [36] [A]

- Function options
- Rated output voltage (12V/15V/20V/24V/30V/36V/42V/48V/54V)
- Rated wattage
- Series name

<table>
<thead>
<tr>
<th>Type</th>
<th>IP Level</th>
<th>Function</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>IP67</td>
<td>Io and Vo fixed</td>
<td>In Stock</td>
</tr>
<tr>
<td>A</td>
<td>IP65</td>
<td>Io and Vo adjustable through built-in potentiometer</td>
<td>In Stock</td>
</tr>
<tr>
<td>B</td>
<td>IP67</td>
<td>3 in 1 dimming function (1~10VDC, 10V PWM signal and resistance)</td>
<td>In Stock</td>
</tr>
<tr>
<td>AB</td>
<td>IP65</td>
<td>Io and Vo adjustable through built-in potentiometer &amp; 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)</td>
<td>In Stock</td>
</tr>
<tr>
<td>D</td>
<td>IP67</td>
<td>Timer dimming function, contact MEAN WELL for details(safety pending).</td>
<td>By request</td>
</tr>
</tbody>
</table>

File Name: HLG-40H-SPEC 2018-08-27
### SPECIFICATION

**MODEL** | **HLG-40H-12** | **HLG-40H-15** | **HLG-40H-20** | **HLG-40H-24** | **HLG-40H-30** | **HLG-40H-36** | **HLG-40H-42** | **HLG-40H-48** | **HLG-40H-54**
---|---|---|---|---|---|---|---|---|---
**DEG VOLTAGE** | 12V | 15V | 20V | 24V | 30V | 36V | 42V | 48V | 54V
**CONSTANT CURRENT REGION** | 7.2 ~ 12V | 9 ~ 15V | 12 ~ 20V | 14.4 ~ 24V | 18 ~ 30V | 21.6 ~ 36V | 25.2 ~ 42V | 28.8 ~ 48V | 32.4 ~ 54V
**RATED CURRENT** | 3.33A | 2.87A | 2A | 1.67A | 1.34A | 1.12A | 0.96A | 0.84A | 0.75A
**RATED POWER** | 39.96W | 40.05W | 40W | 40.08W | 40.2W | 40.32W | 40.32W | 40.32W | 40.5W
**RIPPLE & NOISE (max.)** | 150mVp-p | 150mVp-p | 150mVp-p | 200mVp-p | 200mVp-p | 200mVp-p | 300mVp-p | 300mVp-p | 300mVp-p

**OUTPUT**

| | **VOLTAGE ADJ. RANGE** | **CURRENT ADJ. RANGE** | **VOLTAGE TOLERANCE** | **LINE REGULATION** | **LOAD REGULATION** | **SETUP, RISE TIME** |
---|---|---|---|---|---|---|
| | Adjustable for A/AB-Type only (via built-in potentiometer) | Adjustable for A/AB-Type only (via built-in potentiometer) | ±2.5% | ±0.5% | ±2.0% | 500ms / 80ms / 115VAC | 200ms / 80ms / 230VAC |
| | 10.8 ~ 13.5V | 13.5 ~ 17V | ±1.0% | ±0.5% | ±1.0% | 12v / 48V / 5A |

**INPUT**

| | **VOLTAGE RANGE** | **FREQUENCY RANGE** | **POWER FACTOR (Typ.)** | **TOTAL HARMONIC DISTORTION** | **EFFICIENCY (Typ.)** | **AC CURRENT (Typ.)** | **INRUSH CURRENT (Typ.)** | **MAX. No. of PSUs on 16A** |
---|---|---|---|---|---|---|---|---|
| | 47 ~ 63Hz | 0.98~1.0 | (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) | (Please refer to "TOTAL HARMONIC DISTORTION (THD)* section) | 86.5% | ±0.2% | COLD START 50A(max)=210s measured at 50% (ip) at 230VAC; Per NEMA 410 |
| | ±0.5% | 115VAC | 0.24A / 230VAC | 0.23A / 27VAC | ±0.5% | ±0.5% | ±0.5% | 12 units (circuit breaker of type B) / 20 units (circuit breaker of type C) at 230VAC |

**PROTECTION**

| | **OVER CURRENT** | **SHORT CIRCUIT** | **OVER VOLTAGE** | **OVER TEMPERATURE** |
---|---|---|---|---|
| | 95 ~ 108% | Not applicable | 15 ~ 21V | Shut down o/p voltage, re-power on to recover |
| | Constant current limiting, recovers automatically after fault condition is removed | Shut down o/p voltage, recovers automatically after fault condition is removed |

**ENVIRONMENT**

| | **WORKING TEMP.** | **MAX. CASE TEMP.** | **WORKING HUMIDITY** | **TEMP. COEFFICIENT** |
---|---|---|---|---|
| | T<sub>case</sub> = -40 ~ +80°C | T<sub>case</sub> = +80°C | 20 ~ 95% RH non-condensing | ±0.03%/°C (0 ~ 80°C) |

**SAFETY & EMC**

| | **WITHSTAND VOLTAGE** | **ISOLATION RESISTANCE** | **EMC EMISSION** | **MTBF** |
---|---|---|---|---|
| | 1/0-P/3.75KVAC | 1/0-P/2,500VDC | Compliance to EN55015, EN61000-3-2, Class C ( @ load ≥60% ) | 1,131.9K hrs min. |
| | 1/0-P/FG,1/0-P/FG,1/0-P/FG,100M Ohms | 1/0-P/2,500VDC | Compliance to EN61000-3-2, Class C | Telecordia SR-332 (Belcore) |
| | 1/0-P/FG,1/0-P/FG,1/0-P/FG,25°C (70% RH) | 1/0-P/2,500VDC | | 336.5K hrs min. |
| | 1/0-P/FG,1/0-P/FG,1/0-P/FG,25°C (70% RH) | 1/0-P/2,500VDC | | MIL-HDBK-217F (23°C) |
| | 1/0-P/FG,1/0-P/FG,1/0-P/FG,25°C (70% RH) | 1/0-P/2,500VDC | | 171°/61.5°/36.8mm (L"W"H) |
| | 0.73Kg; 20pcs/15.6Kg/0.9CUFT | 0.73Kg; 20pcs/15.6Kg/0.9CUFT | | 0.73Kg; 20pcs/15.6Kg/0.9CUFT |

**NOTE**

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current 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. Please refer to "DRIVING METHODS OF LED MODULE".
5. DC-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to decrease of the set up time.
7. The driver is considered as a component that will be operated in final equipment 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.
8. To fulfill requirements of the latest E/P regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.
9. This series meets the typical life expectancy of >2,000,000 hours of operation when T<sub>case</sub>, particularly point or (TMP, per DLC), is about 75°C or less.
10. Please refer to the warranty statement on MEAN WELL’S website.
11. The ambient temperature derating of 3.5%/1000m with fanless models and of 5%/1000m with fan models for operating altitude higher than 2000m(6500ft).

**www.mean-well.com/trcelectronics**
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.
**DIMMING OPERATION**

- **Applying additive 1 ~ 10VDC**
  - DO NOT connect "DIM- to -V"

- **Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):**
  - DO NOT connect "DIM- to -V"

- **Applying additive resistance:**
  - DO NOT connect "DIM- to -V"

- 3 in 1 dimming function (for B/AB-Type)
  - Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
    - 1 ~ 10VDC, or 10V PWM signal or resistance.
  - Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
  - Dimming source current from power supply: 100μA (typ.)
  - Applying additive 1 ~ 10VDC
  - Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz): DO NOT connect "DIM- to -V"
  - Applying additive resistance: DO NOT connect "DIM- to -V"
Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact TRC Electronics for details for other options.

Using a switch and relay can turn ON/OFF the lighting fixture.
**OUTPUT LOAD vs TEMPERATURE(Note.10)**

- **AMBIENT TEMPERATURE, Ta (°C)**
- **LOAD (%)**

**STATIC CHARACTERISTICS**

- **INPUT VOLTAGE (V) 60Hz**
- **LOAD (%)**

**POWER FACTOR(PF) CHARACTERISTIC**

- **TCASE at 70°C**

**TOTAL HARMONIC DISTORTION (THD)**

- **48V Model, TCASE at 70°C**

**EFFICIENCY vs LOAD**

- HLG-40H series possess superior working efficiency that up to 89.5% can be reached in field applications.

※ De-rating is needed under low input voltage.
LED Driver • Constant Voltage + Constant Current • 40W
MEAN WELL HLG-40H Series

File Name:HLG-40H-SPEC 2018-08-27
MECHANICAL SPECIFICATION

Case No.957B  Unit:mm

※Blank/D-Type

※A-Type

* : Max. Case Temperature

File Name:HLG-40H-SPEC  2018-08-27
LED Driver • Constant Voltage + Constant Current • 40W
MEAN WELL HLG-40H Series

※B-Type

※AB-Type

File Name: HLG-40H-SPEC 2018-08-27
WATERPROOF CONNECTION

Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-40H to operate in dry/wet/damp or outdoor environment.

AC source

HLG-40H

O/P

- Waterprrof connector
- Waterproof connector can be assembled on the output cable of HLG-40H to operate in dry/wet/damp or outdoor environment.

<table>
<thead>
<tr>
<th>Size</th>
<th>Pin Configuration (Female)</th>
<th>Order No.</th>
<th>Suitable Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>M12</td>
<td>4-PIN 5-PIN</td>
<td>M12-04</td>
<td>10A max.</td>
</tr>
<tr>
<td></td>
<td>5A/PIN 5A/PIN</td>
<td>M12-05</td>
<td>10A max.</td>
</tr>
<tr>
<td>M15</td>
<td>2-PIN 12A/PIN</td>
<td>M15-02</td>
<td>12A max.</td>
</tr>
</tbody>
</table>

Cable Joiner

CJ04-1 suitable for 14AWG-16AWG
CJ04-2 suitable for 18AWG-22AWG

Up to four wires can be connected through this cable joiner by soldering or clamping by tools.

CJ04 cable joiner can be purchased independently for user's own assembly.

MEAN WELL order No.: CJ04-1, CJ04-2.

File Name: HLG-40H-SPEC 2018-08-27