600W Constant Voltage + Constant Current LED Driver HLG-600H series

Features

- Constant Voltage + Constant Current mode output
- Metal housing with class I design
- Standby power consumption <0.5W at remote off
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off)
- Typical lifetime > 62000 hours
- 7 years warranty

Applications

- LED high-bay lighting
- Parking space lighting
- LED fishing lamp
- LED greenhouse lighting
- Type “HL” for use in Class I , Division 2 hazardous (Classified) location.

Description

HLG-600H series is a 600W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-600H operates from 90 ~ 305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 96%, with the fanless design, the entire series is able to operate for -40℃ ~ +90℃ 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-600H 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 - 600H - 15 A

- A — Function options
- 15 — Rated output voltage (12V/15V/20V/24V/30V/36V/42V/48V/54V)
- 600H — Rated wattage
- HLG — Series name

Type	IP Level	Function	Note
A	IP65	Io and Vo adjustable through built-in potentiometer	In Stock
B	IP67	3 in 1 dimming function (0~10VDC, 10V PWM signal and resistance)	In Stock
AB	IP65	Io and Vo adjustable through built-in potentiometer & 3 in 1 dimming function (0~10VDC,10V PWM signal and resistance)	In Stock
Blank	IP67	Io and Vo fixed	In Stock

SPECIFICATION

MODEL			HLG-600H-12□	HLG-600H-15□	HLG-600H-20□	HLG-600H-24□	HLG-600H-30□	HLG-600H-36□	HLG-600H-42□	HLG-600H-48□	HLG-600H-54□
OUTPUT	DC VOLTAGE		12V	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION Note.4		6 ~12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V
	RATED CURRENT		40A	36A	28A	25A	20A	16.7A	14.3A	12.5A	11.2A
	RATED POWER		480W	540W	560W	600W	600W	601.2W	600.6W	600W	604.8W
	RIPPLE & NOISE (max.) Note.2		150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE		Adjustable for A-Type only (via built-in potentiometer)								
			10.2 ~ 12.6V	12.7 ~ 15.8V	17 ~ 21V	20.4 ~ 25.2V	25.5 ~ 31.5V	30.6 ~ 37.8V	35.7 ~ 44.1V	40.8 ~ 50.4V	45.9 ~ 56.7V
	CURRENT ADJ. RANGE		Adjustable for A-Type only (via built-in potentiometer)								
			20 ~ 40A	18 ~ 36A	14 ~ 28A	12.5 ~ 25A	10 ~ 20A	8.3 ~ 16.7A	7.1 ~ 14.3A	6.2 ~ 12.5A	5.6 ~ 11.2A
	VOLTAGE TOLERANCE Note.3		±3.0%	±2.0%	±1.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION		±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION		±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME Note.6		500ms, 80ms/ 115VAC, 230VAC								
	HOLD UP TIME (Typ.)		15ms / 115VAC, 230VAC								
INPUT	VOLTAGE RANGE Note.5		90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)								
	FREQUENCY RANGE		47 ~ 63Hz								
	POWER FACTOR (Typ.)		PF≧0.98/115VAC, PF≧0.95/230VAC, PF≧0.93/277VAC @ full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)								
	TOTAL HARMONIC DISTORTION		THD< 20% (@ load≧50% /115VAC, 230VAC; @ load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)								
	EFFICIENCY (Typ.)	230VAC	92%	93.5%	94.5%	95%	95%	95.5%	96%	96%	96%
		277VAC	92.5%	93.5%	94.5%	95%	95%	95.5%	96%	96%	96%
	AC CURRENT (Typ.)		7A / 115VAC 3.3A / 230VAC 2.9A / 277VAC								
	INRUSH CURRENT(Typ.)		COLD START 70A(t_{width}=1000μs measured at 50% I_{peak}) at 230VAC; Per NEMA 410								
	MAX. No. of PSUs on 16A CIRCUIT BREAKER		1 unit (circuit breaker of type B) / 2 units (circuit breaker of type C) at 230VAC								
	LEAKAGE CURRENT		<0.75mA / 277VAC								
	STANDBY POWER CONSUMPTION		<0.5W at remote off								
PROTECTION	OVER CURRENT Note.4		95 ~ 108%								
			Constant current limiting, recovers automatically after fault condition is removed								
	SHORT CIRCUIT		Constant current limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE		13 ~ 16V	16.5 ~ 20.5V	22 ~ 26V	26 ~ 30V	32.5 ~ 36.5V	39.5 ~ 43.5V	46 ~ 50V	52.5 ~ 56.5V	59 ~ 63V
			Shut down o/p voltage, re-power on to recover								
	OVER TEMPERATURE		Shut down o/p voltage, re-power on to recover								
FUNCTION	REMOTE ON/OFF CONTROL		Power on : "High" >2 ~ 5V or Open circuit Power off : "Low" <0 ~ 0.5V or Short circuit								
	5V STANDBY		$5V_{SB}$: 5V@0.5A ; tolerance ±5%, ripple : 100mVp-p(max.)								
ENVIRONMENT	WORKING TEMP.		Tcase= -40 ~ +90℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)								
	MAX. CASE TEMP.		Tcase= +90℃								
	WORKING HUMIDITY		20 ~ 95% RH non-condensing								
	STORAGE TEMP., HUMIDITY		-40 ~ +85℃, 10 ~ 95% RH non-condensing								
	TEMP. COEFFICIENT		±0.03%/℃ (0 ~ 55℃)								
	VIBRATION		10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes								
SAFETY & EMC (Note 10)	SAFETY STANDARDS Note.7		UL60950-1, UL8750(type"HL"), CSA C22.2 No. 250.13-12, ENEC EN61347-1, EN61347-2-13 independent, EN62384, IP65 or IP67, J61347-1, J61347-2-13, CCC GB4943.1, EAC TP TC 004, AS/NZS 60950.1(by CB), KC61347-1, KC61347-2-13(for 24A,36A,48A,54A only) approved								
	WITHSTAND VOLTAGE		I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC								
	ISOLATION RESISTANCE		I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH								
	EMC EMISSION Note.7		Compliance to EN55015, EN61000-3-2 Class C (@ load≧50%) ; EN61000-3-3, EAC TP TC 020; KC KN15, KN61547(for 24A,36A,48A,54A only)								
	EMC IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020; KC KN15, KN61547(for 24A,36A,48A,54A only)								
OTHERS	MTBF		76.9K hrs min. MIL-HDBK-217F (25℃)								
	DIMENSION		280*144*48.5mm (L*W*H)								
	PACKING		3.9Kg; 4pcs/16.6Kg/0.9CUFT								

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ 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. De-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 increase of the set up time.
7. The model certified for CCC(GB19510.14, GB19510.1, GB17743 and GB17625.1) is an optional model . Please contact MEAN WELL for details.
8. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 75℃ or less.
9. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com
10. The driver is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)
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).
12. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf