

MEAN WELL
HLG-60H Series
60W Constant
Voltage plus
Constant
Current LED
Driver



MEAN WELL HLG-60H Series 60W Constant Voltage plus Constant Current LED Driver Instruction Manual

[Home](#) » [MEAN WELL](#) » MEAN WELL HLG-60H Series 60W Constant Voltage plus Constant Current LED Driver Instruction Manual 

Contents

- 1 MEAN WELL HLG-60H Series 60W Constant Voltage plus Constant Current LED Driver
- 2 SPECIFICATION
- 3 Product Usage Instructions
- 4 Features
- 5 Applications
- 6 Model Encoding
- 7 BLOCK DIAGRAM
- 8 DRIVING METHODS OF LED MODULE
- 9 DIMMING OPERATION
- 10 MECHANICAL SPECIFICATION
- 11 WATERPROOF CONNECTION
- 12 FAQ'S
- 13 Documents / Resources
 - 13.1 References



MEAN WELL HLG-60H Series 60W Constant Voltage plus Constant Current LED Driver



SPECIFICATION

MODEL		HLG-60 H-15	HLG-60 H-20	HLG-60 H-24	HLG-60 H-30	HLG-60 H-36	HLG-60 H-42	HLG-60 H-48	HLG-60 H-54
OUTPUT	DC VOLTAGE	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION Note.4	9 ~ 15V	12 ~ 20V	14.4 ~ 24V	18 ~ 30V	21.6 ~ 36V	25.2 ~ 42V	28.8 ~ 48V	32.4 ~ 54V
	RATED CURRENT	4A	3A	2.5A	2A	1.7A	1.45A	1.3A	1.15A
	RATED POWER	60W	60W	60W	60W	61.2W	60.9W	62.4W	62.1W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	300mVp-p	300mVp-p	300mVp-p
	VOLTAGE ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)							
		13.5 ~ 17V	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	40 ~ 46V	44 ~ 53V	49 ~ 58V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)							
		2.4 ~ 4A	1.8 ~ 3A	1.5 ~ 2.5A	1.2 ~ 2A	1 ~ 1.7A	0.87 ~ 1.45A	0.78 ~ 1.3A	0.69 ~ 1.15A
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±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%
	LOAD REGULATION	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%

	SETUP, RISE TIME	Not e.6	500ms,80ms/115VAC 500ms,80ms/230VAC							
	HOLD UP TIME (Typ.)		16ms / 115VAC, 230VAC							
INPUT	VOLTAGE RANGE	Not e.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≥0.92/277VAC @ full load (Please refer to “POWER FACTOR (PF) CHARACTERISTIC” section)							
	TOTAL HARMONIC DISTORTION		THD< 20% (@ load≥60% / 115VAC,230VAC; @ load≥75% / 277VAC) (Please refer to “TOTAL HARMONIC DISTORTION (THD)” section)							
	EFFICIENCY (Typ.)		87.5%	89%	89.5%	90%	90%	90%	90.5%	90.5%
	AC CURRENT (Typ.)		0.64A / 115VAC 0.32A / 230VAC 0.3A / 277VAC							
	INRUSH CURRENT(Typ.)		COLD START 55A(twidth=265μs measured at 50% Ipeak) at 230VAC; Per NEMA 410							
	MAX. No. of PSUs on 16A CIRCUIT BREAKER		9 units (circuit breaker of type B) / 16 units (circuit breaker of type C) at 230VAC							
PROTECTION	LEAKAGE CURRENT		<0.75mA / 277VAC							
	OVER CURRENT	Not e.4	95 ~ 108%							
			Constant current limiting, recovers automatically after fault condition is removed							
	SHORT CIRCUIT		Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	18 ~ 24 V	23 ~ 30 V	28 ~ 35 V	35 ~ 43 V	41 ~ 49 V	48 ~ 58 V	54 ~ 65 V	59 ~ 68 V	
		Shut down o/p voltage, re-power on to recover								
OVER TEMPERATURE		Shut down o/p voltage, re-power on to recover								
ENVIRONMENTAL	WORKING TEMP.		Tcase= -40 ~ +80°C (Please refer to “OUTPUT LOAD vs TEMPERATURE” section)							
	MAX. CASE TEMP.		Tcase= +80°C							
	WORKING HUMIDITY		20 ~ 95% RH non-condensing							

ENVIRONMENT	STORAGE TEMP. , HUMIDITY		-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT		±0.03%/°C (0 ~ 60°C)
	VIBRATION		10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS Note.8		UL8750(type"HL"), CSA C22.2 No. 250.0-08, BS EN/EN/AS/NZS 61347-1,BS EN/EN/AS/NZS 61347-2-13 independent, GB19510.1,GB19510.14,EAC TP TC 004,KC61347-1,KC61347-2-13(except for AB-type), IP65 or IP67 approved ; J61347-1, J61347-2-13 (except for B,AB and D-type) ; design refer to BS EN/EN60335-1(by request)
	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°C/ 70% RH
	EMC EMISSION	Note.8	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load≥60%) ; BS EN/EN61000-3-3,GB/T 17743 , GB17625.1, EAC TP TC 020
	EMC IMMUNITY		Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV),EAC TP TC 020
OTHERS	MTBF		3396.9K hrs min. Telcordia SR-332 (Bellcore) ;345.8K hrs min. MIL-HDBK-217F (25°C)
	DIMENSION		171*61.5*36.8mm (L*W*H)
	PACKING		0.73Kg; 20pcs/15.6Kg/0.9CUFT

NOTE	<ol style="list-style-type: none"> 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. 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 driver 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf) 8. To fulfill requirements of the latest ErP 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 >62,000 hours of operation when Tcase, particularly tc point (or TMP, per DLC), is about 70°C or less. 10. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com. 11. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/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 <p>※ Product Liability Disclaimer For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>
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Product Usage Instructions

Installation

1. Ensure the input voltage matches the specified range.
2. Connect the output wires to the LED lights as per the required voltage and current.
3. Mount the LED driver in a well-ventilated area away from moisture.

Adjusting Voltage and Current

For A/AB-Type models, use the built-in potentiometer to adjust the voltage and current within the specified ranges.

Powering On

1. After installation, connect the LED driver to the power source.
2. Switch on the power and ensure proper functionality of the LED lights.

Maintenance

Regularly check for any signs of damage or overheating. Clean the driver as needed to prevent dust accumulation.

Features

- Constant Voltage + Constant Current mode output
- Metal housing with class 1 design
- Built-in active PFC function
- Class 2 power unit
- IP67 / 1P65 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

Applications

- LED street lighting
- 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.

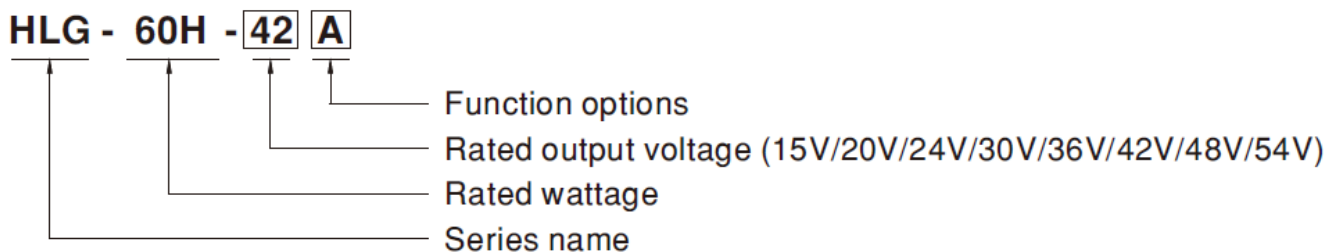
GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

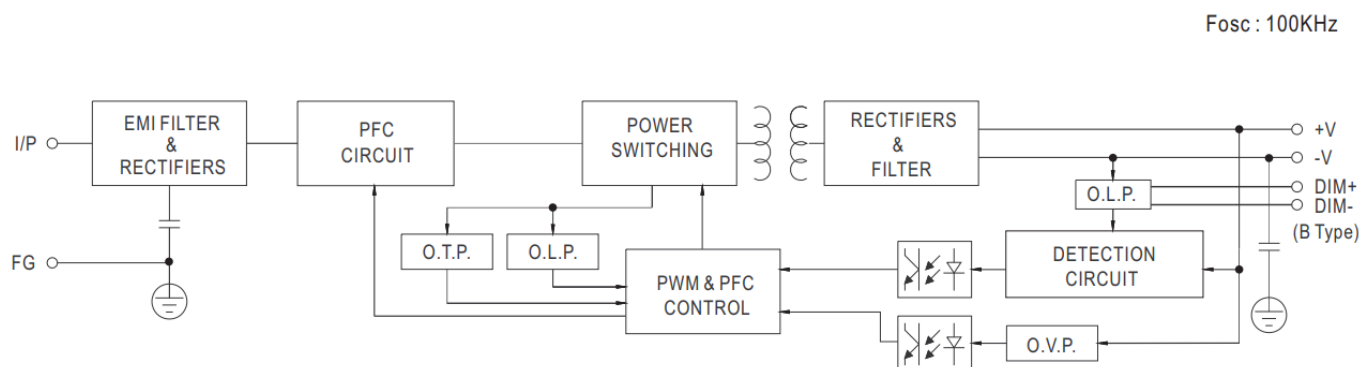
HLG-60H series is a 60W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-60H operates from 90 ~ 305VAC and offers models with different rated voltage ranging between 15V and 54V. Thanks to the high efficiency up to 90.5%, with the fanless design, the entire series is able to operate for -40°C ~ +80°C case temperature under free air convection. The design of metal housing and IP67/1P65 ingress protection level allows this series to fit both indoor and outdoor applications. HLG-60H is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding



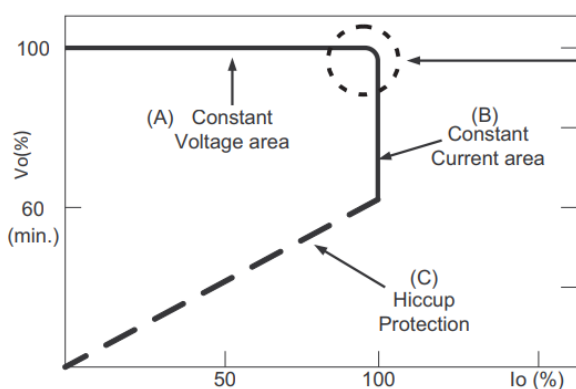
Ty pe	IP Le vel	Function	Note
Blank	IP67	Io and Vo fixed	In Stock
A	IP65	Io and Vo adjustable through built-in potentiometer	In Stock
B	IP67	3 in 1 dimming function (1~10VDC, 10V PWM signal and resistance)	In Stock
AB	IP65	Io and Vo adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
D	IP67	Timer dimming function, contact MEAN WELL for details (safety pending).	By request

BLOCK DIAGRAM



DRIVING METHODS OF LED MODULE

※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.



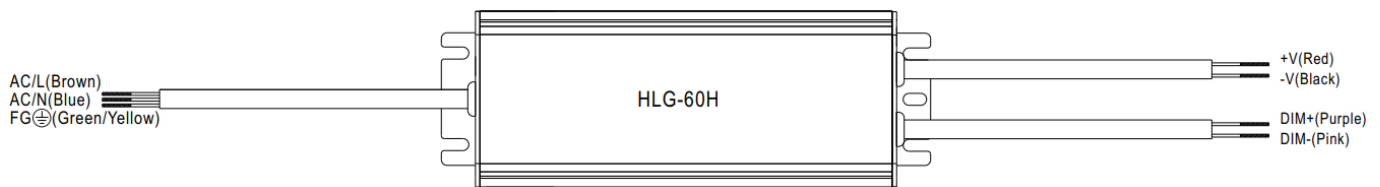
Typical output current normalized by rated current (%)

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 output current normalized by rated current (%)

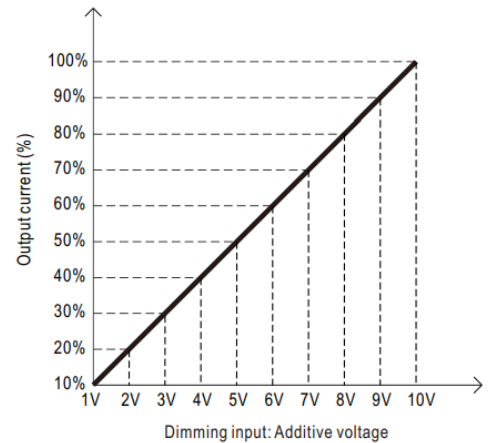
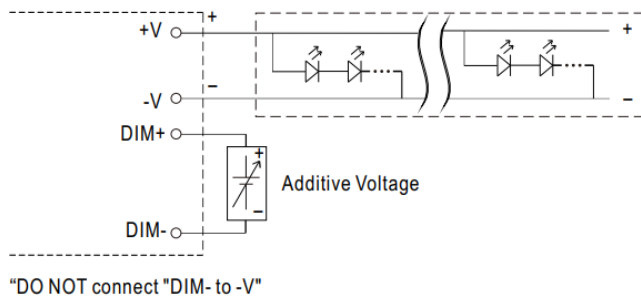
DIMMING OPERATION



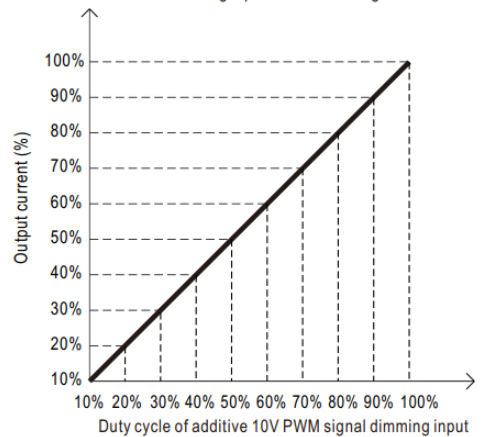
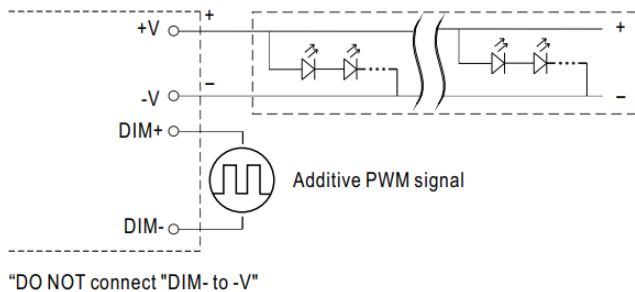
3 in 1 dimming function (for B/AB-Type)

- 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.)

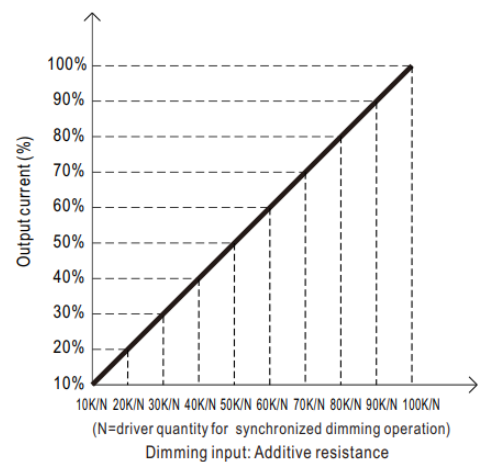
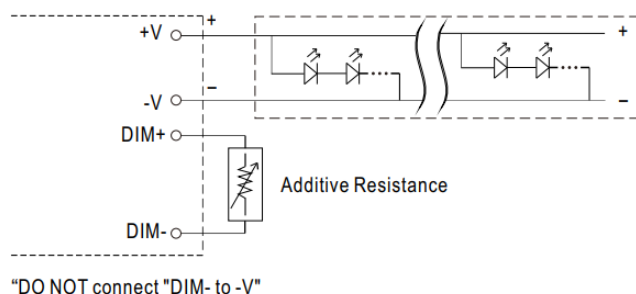
⊙ Applying additive 1 ~ 10VDC



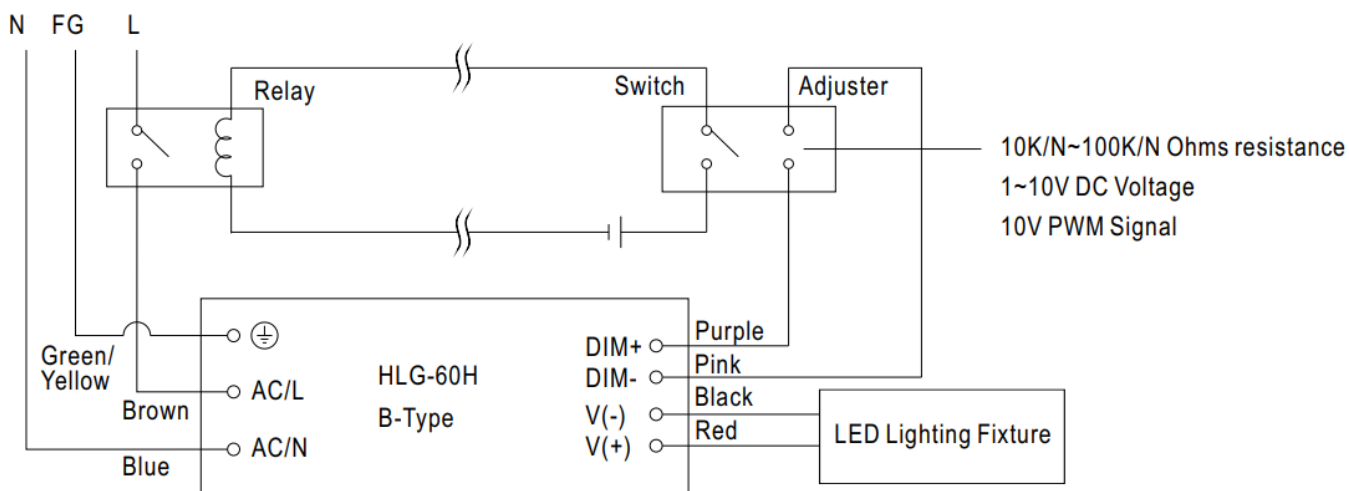
⊙ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



⊙ Applying additive resistance:

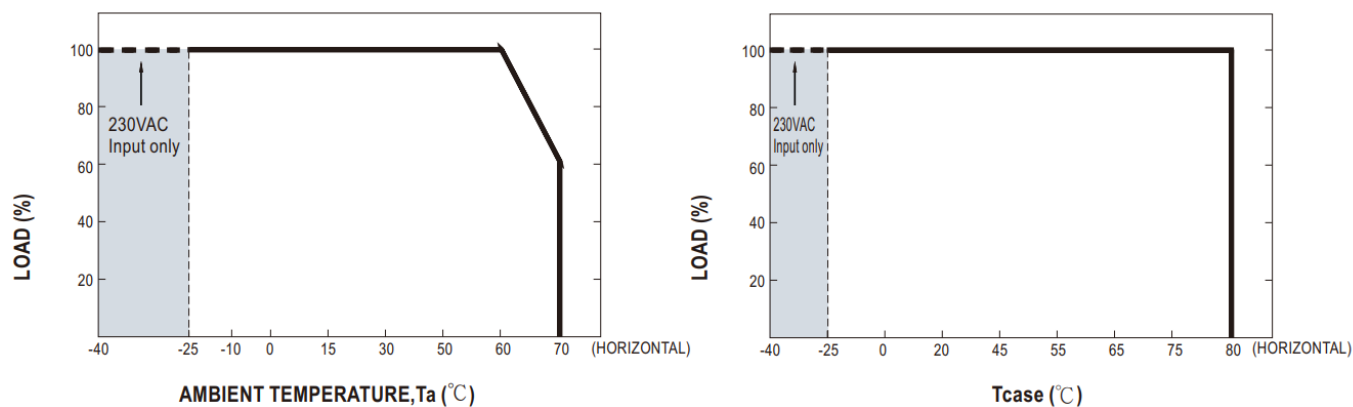


Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.

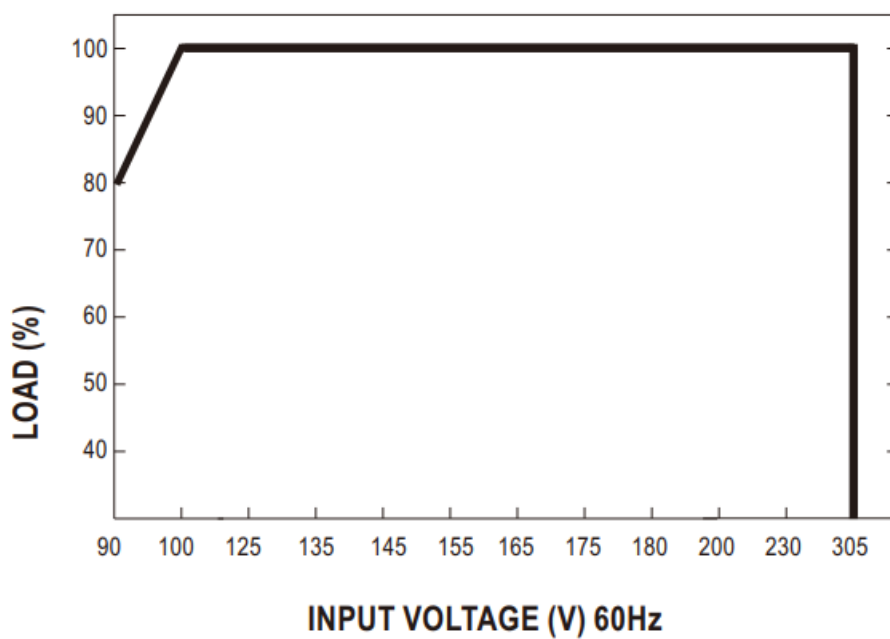


Using a switch and relay can turn ON/OFF the lighting fixture.

OUTPUT LOAD vs TEMPERATURE(Note.10)

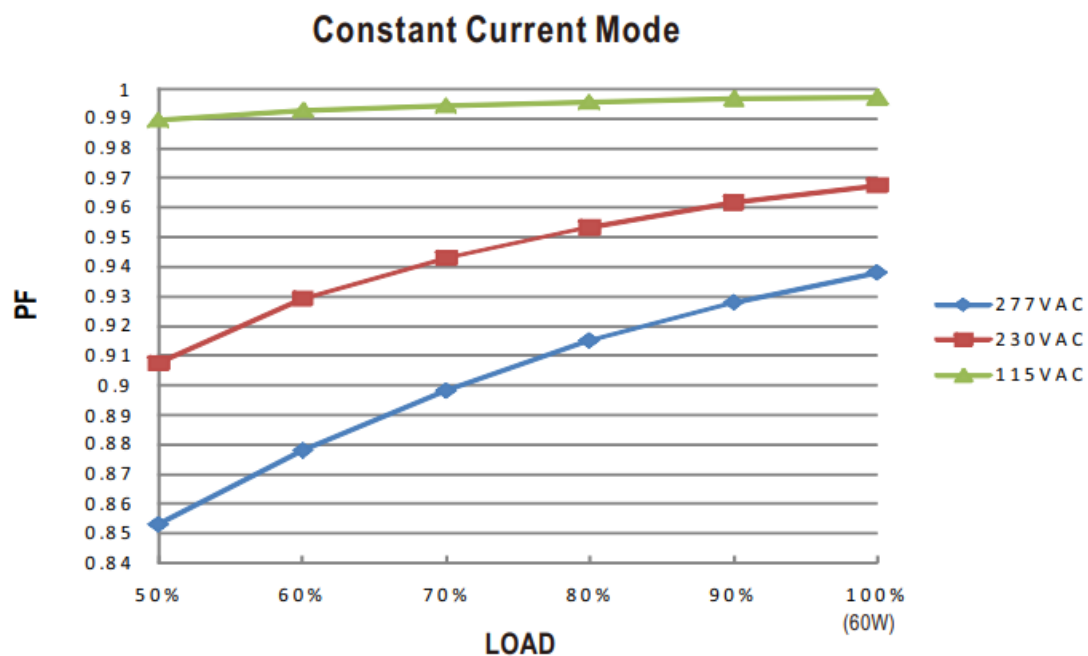


STATIC CHARACTERISTICS



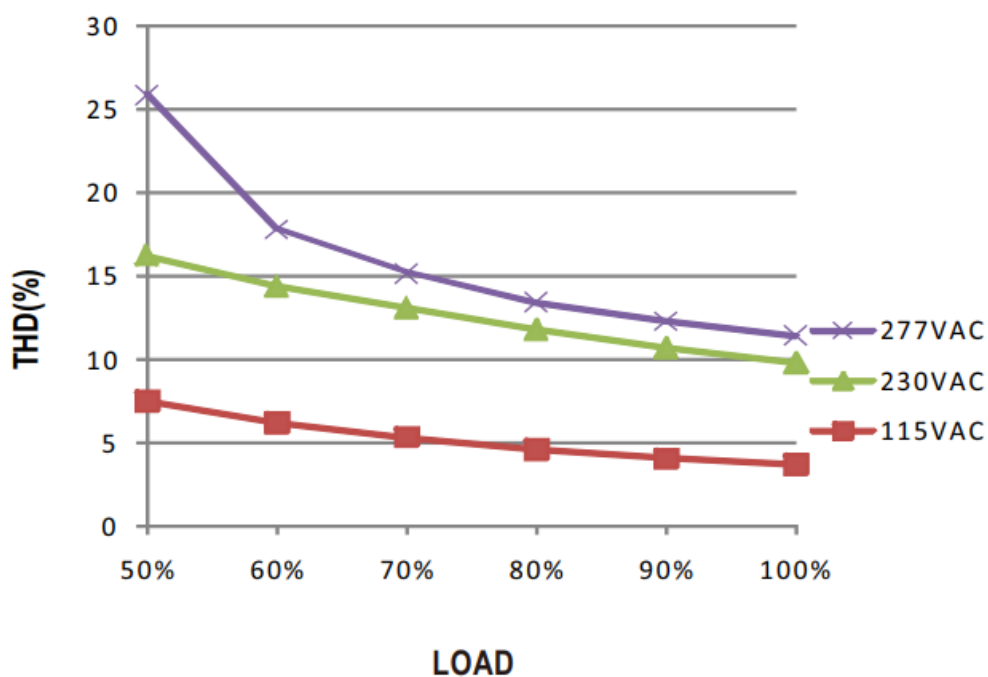
De-rating is needed under low input voltage.

POWER FACTOR(PF) CHARACTERISTIC



TOTAL HARMONIC DISTORTION (THD)

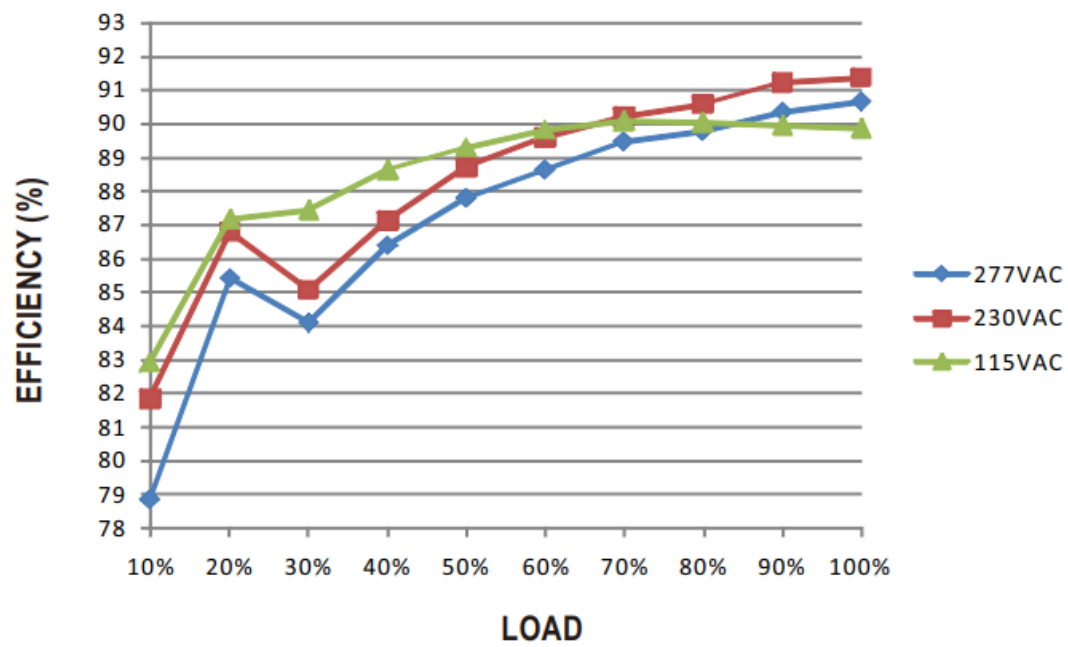
- 48V Model, Tcase at 70°C



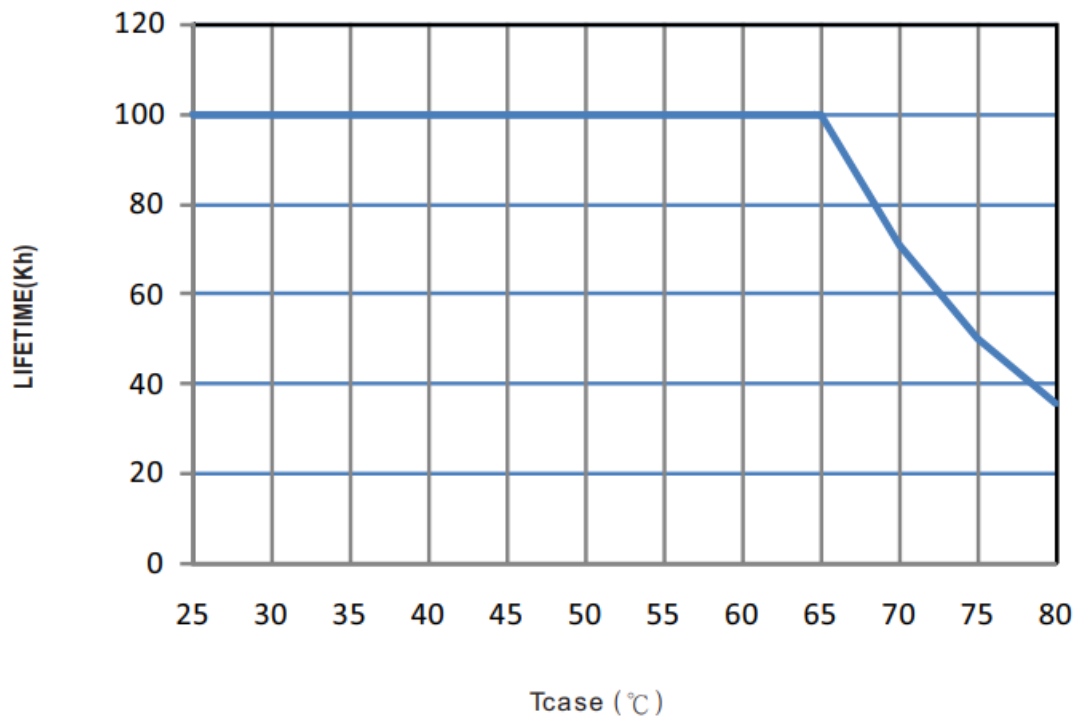
EFFICIENCY vs LOAD

HLG-60H series possess superior working efficiency that up to 90.5% can be reached in field applications.

- 48V Model, Tcase at 70°C

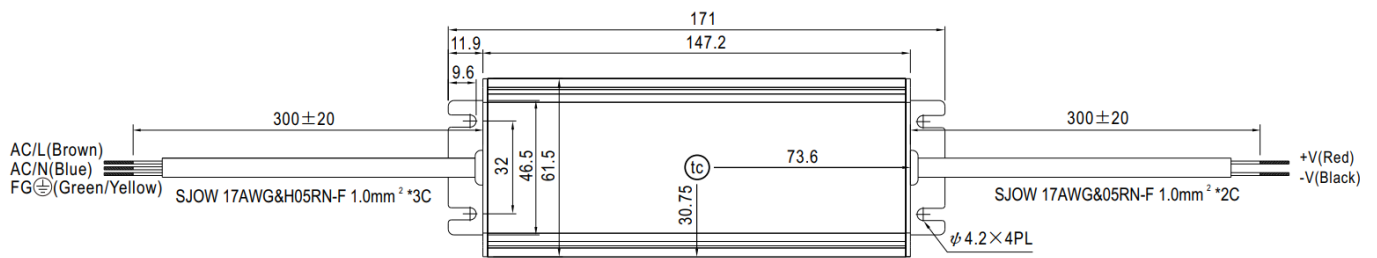


LIFETIME



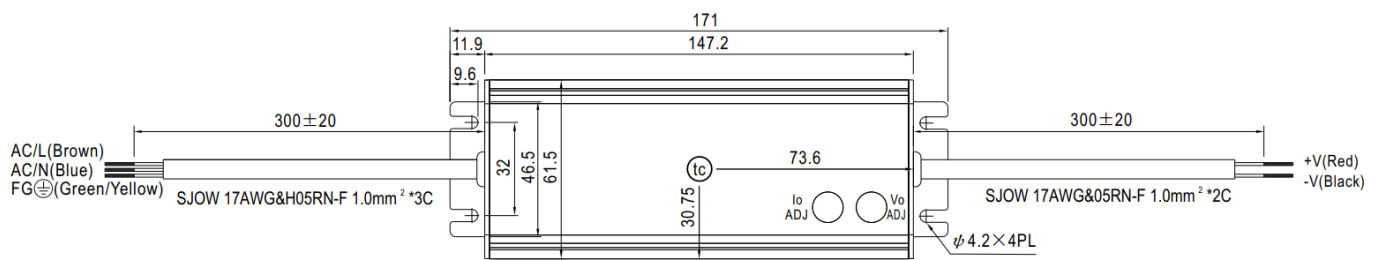
MECHANICAL SPECIFICATION

Blank/D-Type



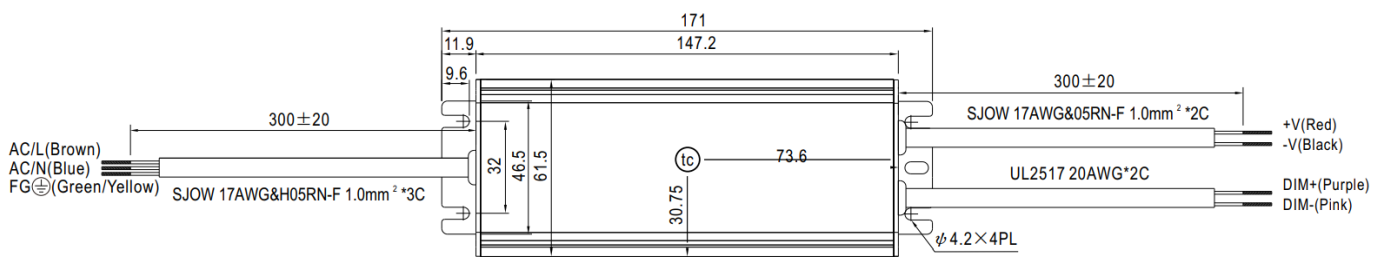
• (tc) : Max. Case Temperature

A-Type



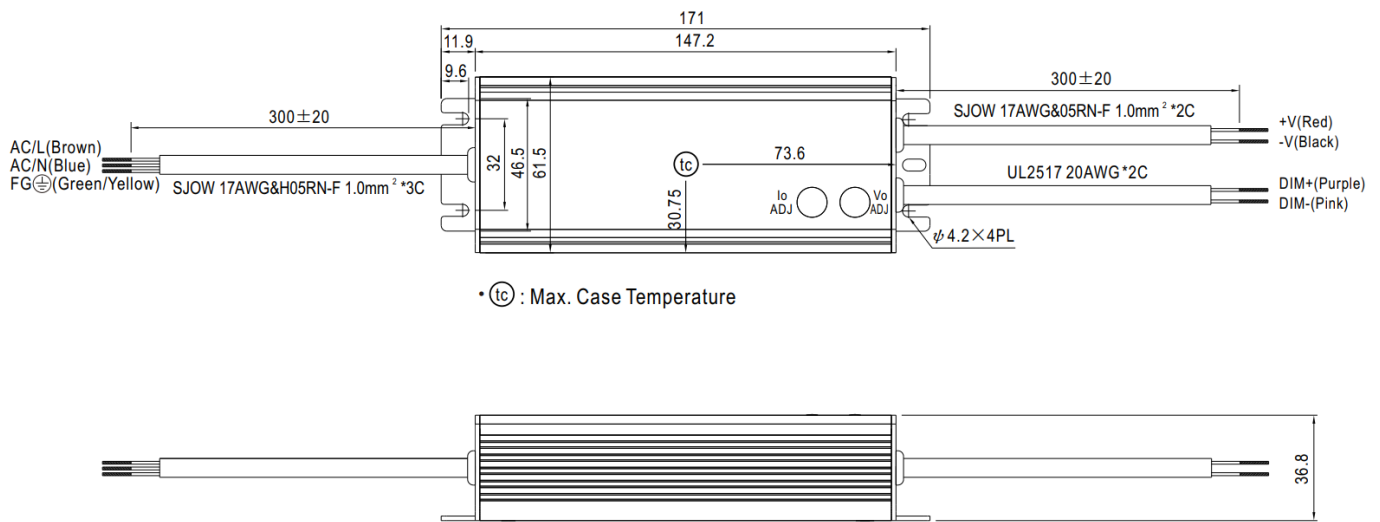
• (tc) : Max. Case Temperature

B-Type



• (tc) : Max. Case Temperature

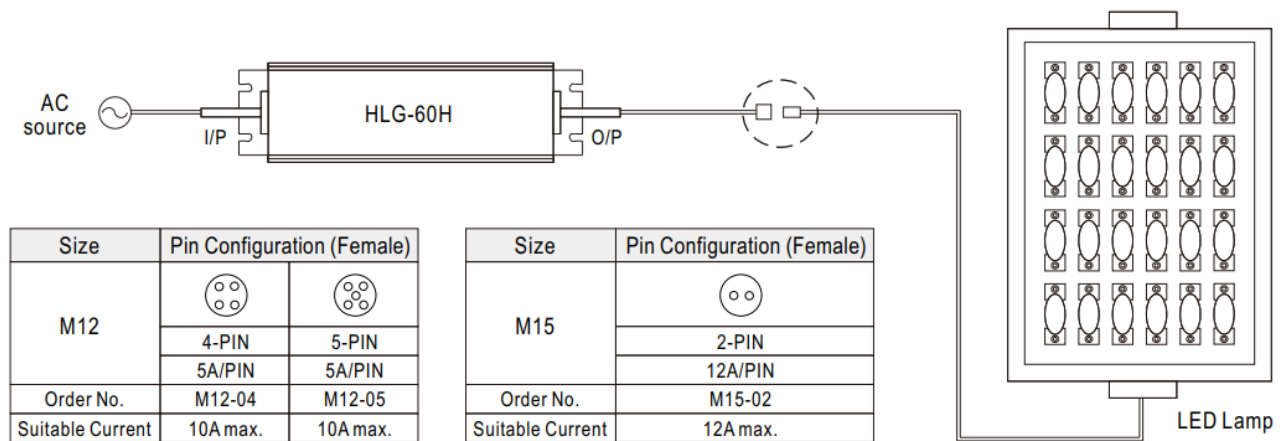
AB-Type



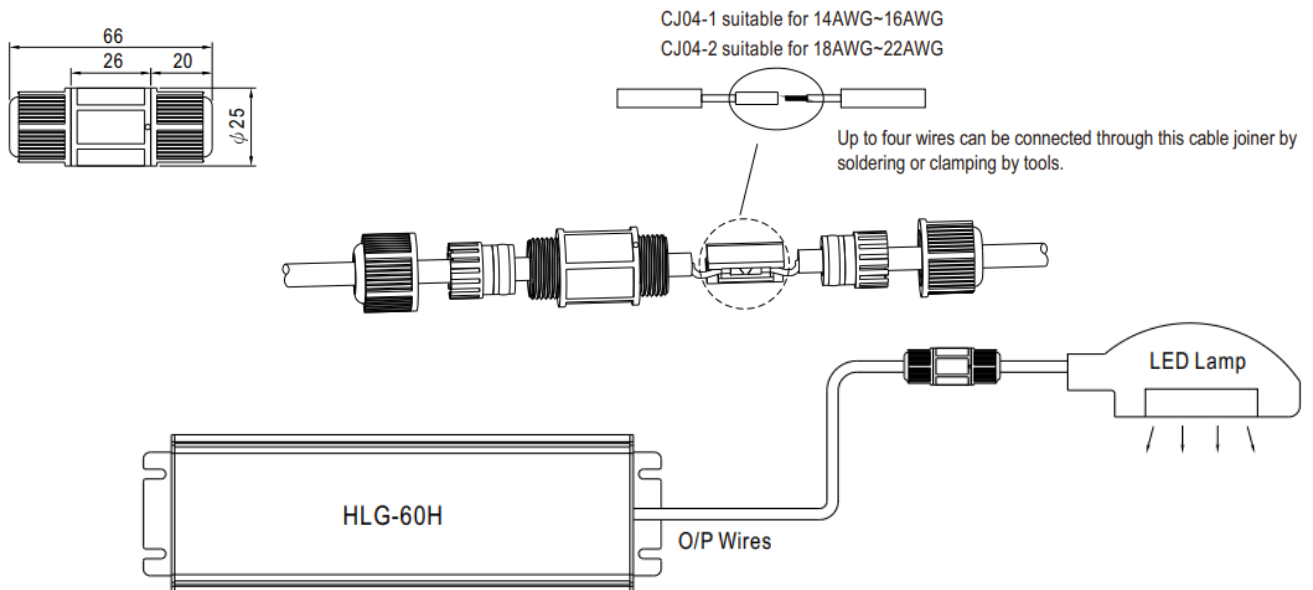
WATERPROOF CONNECTION

Waterproof connector

The waterproof connector can be assembled on the output cable of HLG-60H to operate in dry/wet/damp or outdoor environment



※ Cable Joiner



◎ CJ04 cable joiner can be purchased independently for user's own assembly.
MEAN WELL order No. : CJ04-1, CJ04-2.

INSTALLATION MANUAL

Please refer to: <http://www.meanwell.com/manual.html>

FAQ'S

Q: Can I use this LED driver with outdoor lighting?

A: Yes, this LED driver is rated IP65/IP67 for outdoor use, providing protection against dust and water.

Q: How many LED lights can I connect to this driver?

A: The maximum number of units that can be connected depends on the circuit breaker type and voltage.

Documents / Resources



[MEAN WELL HLG-60H Series 60W Constant Voltage plus Constant Current LED Driver](#) [pdf] Instruction Manual

HLG-60H-15, HLG-60H-20, HLG-60H-24, HLG-60H-30, HLG-60H-36, HLG-60H-42, HLG-60H-48, HLG-60H-54, HLG-60H Series 60W Constant Voltage plus Constant Current LED Driver, HLG-60H Series, HLG-60H Series LED Driver, 60W Constant Voltage plus Constant Current LED Driver, 60W LED Driver, Constant Voltage plus Constant Current LED Driver, Current LED Driver, Current Driver, LED Driver, Driver

References

- [TÜV Rheinland - Home | US | TÜV Rheinland](#)
- [User Manual](#)

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