



Features :

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- Protections: Short circuit / Over current / Over voltage / Over temperature
- OCP point adjustable through output cable or internal potentiometer
- IP67/IP65 design for indoor or outdoor installations
- Suitable for dry / damp / wet locations
- 5 years warranty, Tc70°C 40000hrs

IP65 IP67 

HBG-240-60 ☐ Blank : IP67 rated. Cable for I/O connection.

A : IP65 rated. Output constant current level can be adjusted through internal potentiometer.

B : IP67 rated. output constant current lever can be adjusted through output cable with 1-10V,PWM signal and Resistance

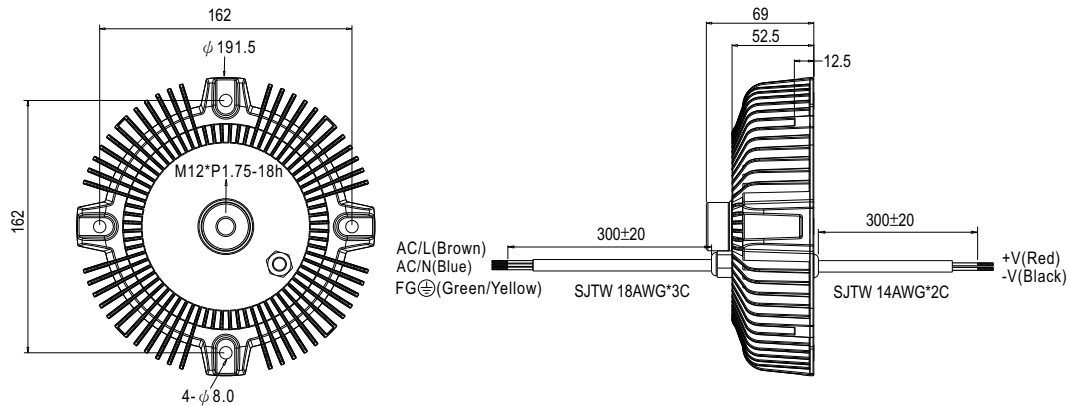
SPECIFICATION

MODEL		HBG-240-24 <input type="checkbox"/>	HBG-240-36 <input type="checkbox"/>	HBG-240-48 <input type="checkbox"/>	HBG-240-60 <input type="checkbox"/>
OUTPUT	DC VOLTAGE	24V	36V	48V	60V
	CONSTANT CURRENT REGION <small>Note.4</small>	14.4 ~ 24V	21.6 ~ 36V	28.8 ~ 48V	36 ~ 60V
	RATED CURRENT	10A	6.7A	5A	4.0A
	RATED POWER	240W	240W	240W	240W
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	250mVp-p	250mVp-p	350mVp-p
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer A type only			
		6 ~ 10A	4.0 ~ 6.7A	3 ~ 5A	2.4 ~ 4.0A
	VOLTAGE TOLERANCE <small>Note.3</small>	±2.0%			
	LINE REGULATION	±0.5%			
	LOAD REGULATION <small>Note.3</small>	±0.5%			
INPUT	SETUP, RISE TIME <small>Note.7</small>	2500ms,120ms at full load 230VAC /115VAC			
	HOLD UP TIME (Typ.)	15ms at full load 230VAC /115VAC			
	VOLTAGE RANGE <small>Note.5</small>	90 ~ 305VAC 127 ~ 431VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load (Please refer to "Power Factor Characteristic" curve)			
	EFFICIENCY (Typ.)	92.5%	92.5%	93%	93.5%
	AC CURRENT (Typ.)	2.5A / 115VAC	1.3A / 230VAC	1.2A / 277VAC	
	MAX.LED DRIVE NUMBER ON MCB C TYPE 16A	8units@230VAC			
PROTECTION	INRUSH CURRENT (Typ.)	COLD START 75A(twidth=680μs measured at 50% Ipeak) at 230VAC			
	LEAKAGE CURRENT	<0.75mA / 277VAC			
	OVER CURRENT <small>Note.4</small>	95 ~ 108%			
		Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.			
ENVIRONMENT	OVER VOLTAGE	27 ~ 34V	43 ~ 52V	52 ~ 63V	62 ~ 85V
		Protection type : Shut down and latch off o/p voltage, re-power on to recover			
	OVER TEMPERATURE	95°C±5°C (TSW1)			
SAFETY & EMC		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 95% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
OTHERS	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes			
	SAFETY STANDARDS	Design refer to EN61347-2,13,UL8750			
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:0.5KVAC			
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH			
	EMC EMISSION	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥75% load) ; EN61000-3-3			
NOTE	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level (surge 4KV), criteria A			
	MTBF	190.7Khrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	Refer to mechanical specification			
	PACKING	2.1Kg; 8pcs/17.8Kg/1.5CUFT			
		<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Constant current operation region is within 60% ~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.</p> <p>5. Derating may be needed under low input voltages. Please check the static characteristics for more details.</p> <p>6. 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.</p> <p>7. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.</p>			

Mechanical Specification

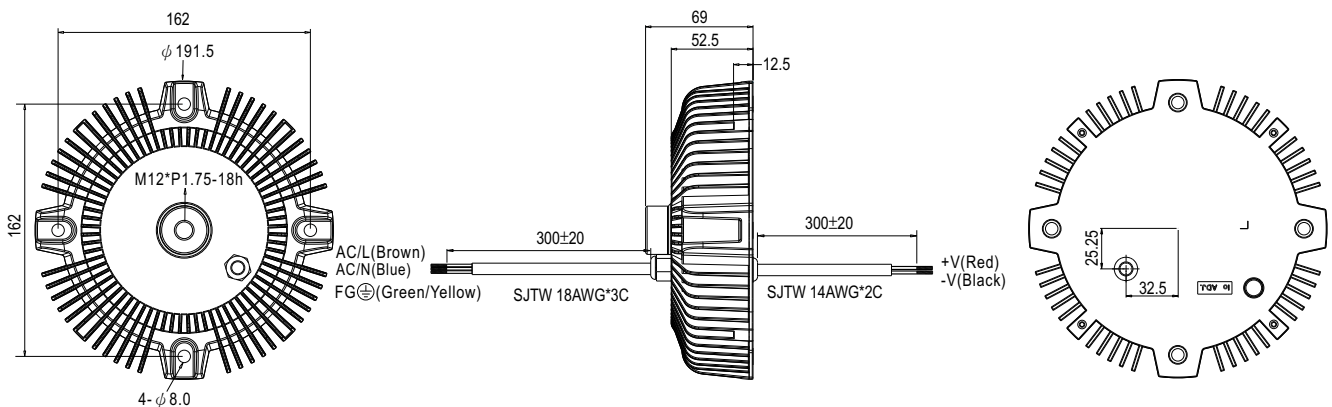
Case No. 213 Unit:mm

Blank:(HBG-240)



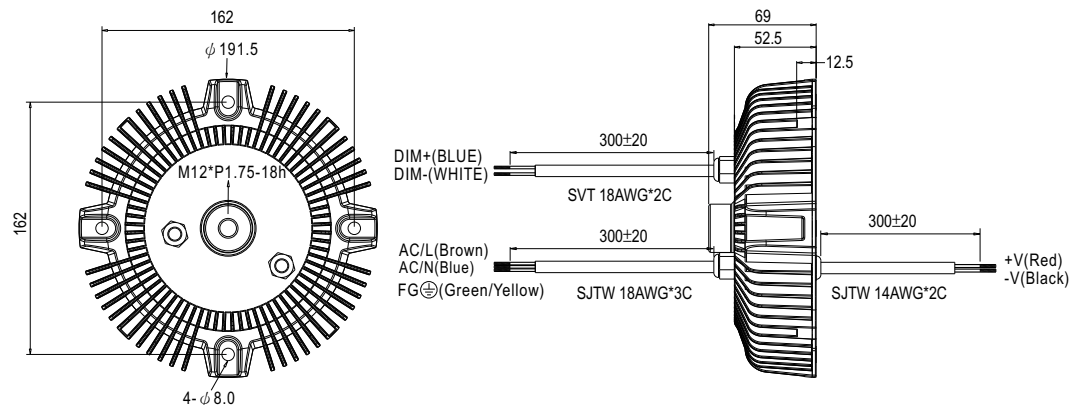
※IP67 rated. Cable for I/O connection.

A type:(HBG-240_A)



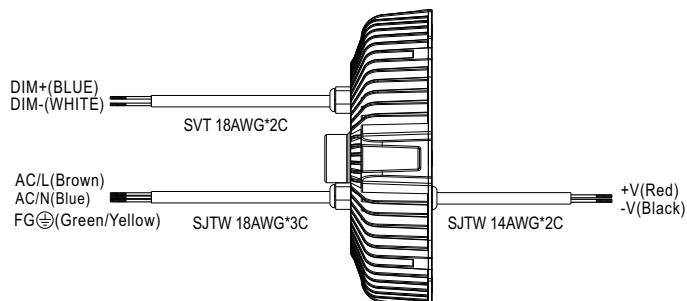
※IP65 rated. Output constant current level can be adjusted through internal potentiometer.

B type:(HBG-240_B)



※IP67 rated. output constant current lever can be adjusted through output cable with 1-10V,PWM signal and Resistance

DIMMING OPERATION



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

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

※ Reference resistance value for output current adjustment (Typical)

Resistance value	Single driver	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	Multiple drivers (N=driver quantity for synchronized dimming operation)	10KΩ/N	20KΩ/N	30KΩ/N	40KΩ/N	50KΩ/N	60KΩ/N	70KΩ/N	80KΩ/N	90KΩ/N	100KΩ/N	-----
Percentage of rated current		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※ 1 ~ 10V dimming function for output current adjustment (Typical)

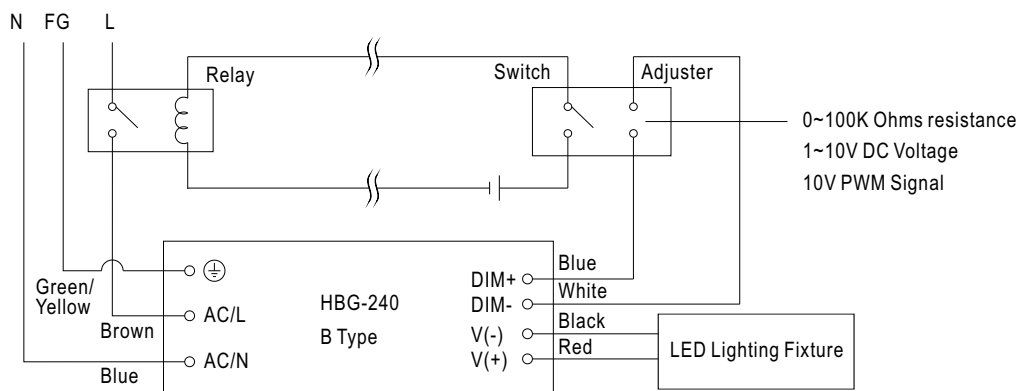
Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

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

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※Using the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

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

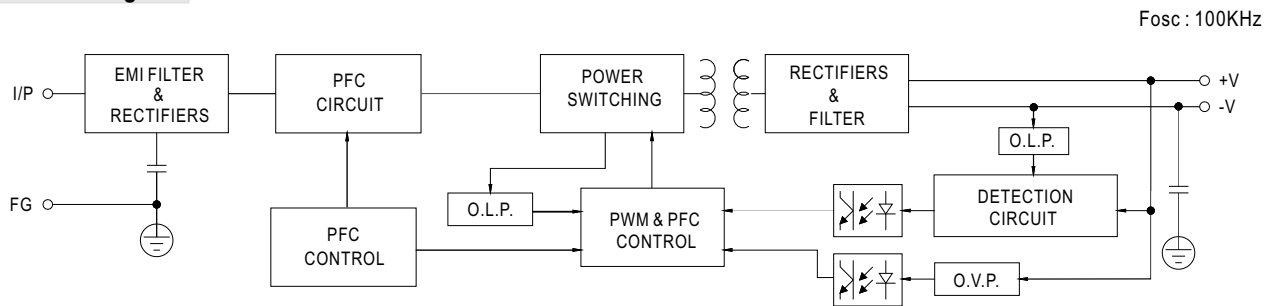


Using a switch and relay can turn ON/OFF the lighting fixture.

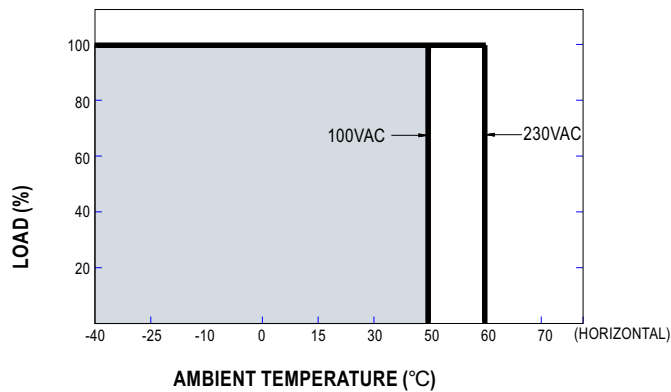
1. Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.

2. The LED lighting fixture can be turned ON/OFF by the switch.

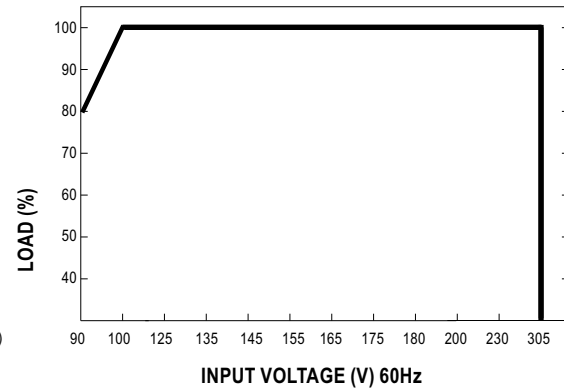
■ Block Diagram



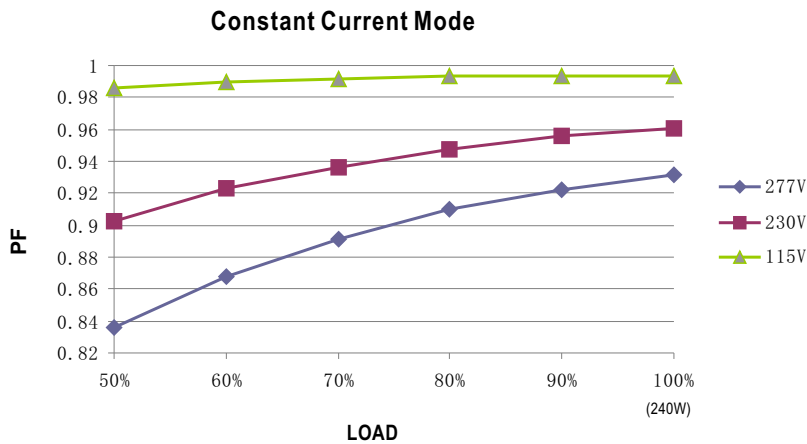
■ Derating Curve



■ Static Characteristics

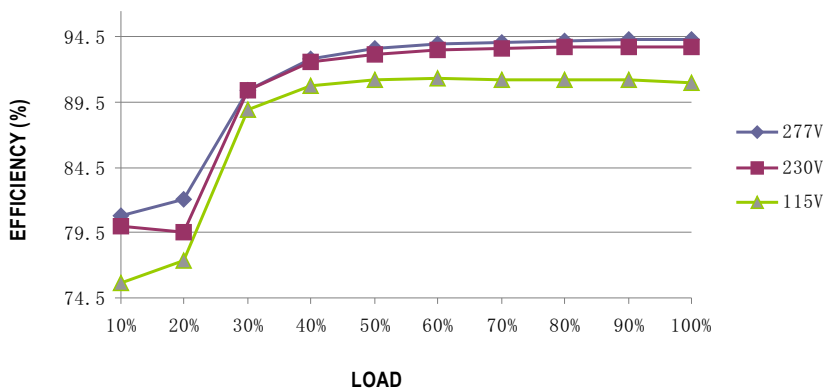


Power Factor Characteristic



EFFICIENCY vs LOAD (48V Model)

HBG-240 series possess superior working efficiency that up to 93% can be reached in field applications.

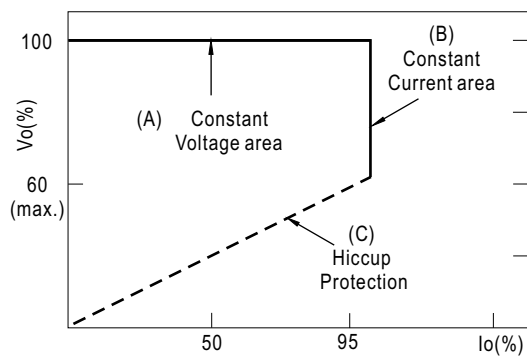


DRIVING METHODS OF LED MODULE

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 (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B)).



Typical LED power supply I-V curve

■ INSTALLATIONS

		
Hanger	Chain	High Bay Light