



Features:

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Over load/ Over voltage / Over temperature
- Cooling by free air convection
- Output voltage and constant current level adjustable
- IP65 design for indoor or outdoor installations
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 3 years warranty

SPECIFICATION DIMENSION: 196 × 63 × 39mm

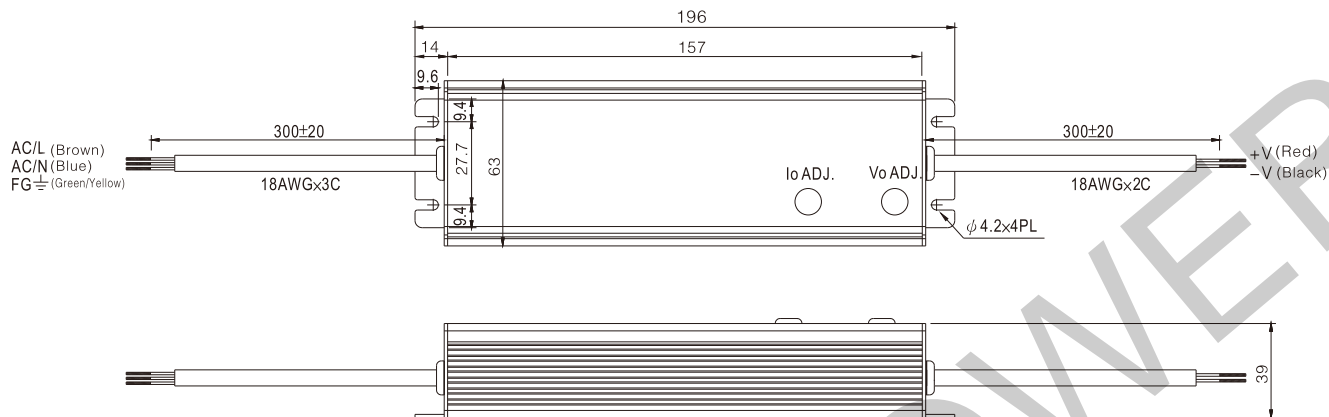


	MODEL	CEN-60-24	CEN-60-36	CEN-60-42	CEN-60-48	CEN-60-54
OUTPUT	DC VOLTAGE	24V	36V	42V	48V	54V
	CONSTANT CURRENT OPERATION VOLTAGE	16~24V	24~36V	27~42V	32~48V	36~54V
	RATED CURRENT	2.5A	1.7A	1.45A	1.3A	1.15A
	RATED POWER	60W	61.2W	60.9W	62.4W	62.1W
	RIPPLE&NOISE(max)	2.4Vp-p	3.6Vp-p	4Vp-p	4.6Vp-p	5Vp-p
	VOLTAGE ADJ.RANGE	22~27V	32~41V	35~45V	43~53V	46~58V
	CURRENT ADJ.RANGE	Can be adjusted by internal potentiometer or through output cable				
	VOLTAGE TOLERANCE	± 10%	± 10%	± 10%	± 10%	± 10%
INPUT	SETUP TIME	2800ms/115VAC. 1400ms/230VAC(Full load)				
	VOLTAGE RANGE	90 ~ 264VAC 47 ~ 63Hz, 127 ~ 370VDC				
	AC CURRENT (Typ.)	0.8A/115VAC 0.4A/230VAC				
	POWER FACTOR (Typ.)	PF > 0.95/230VAC PF > 0.97/115VAC(Full load)				
	EFFICIENCY (Typ.)	89%	90%	90%	91%	91%
	INRUSH CURRENT (Typ.)	Cold start current 55A/230VAC				
	LEAKAGE CURRENT	< 0.75mA/240VAC				
PROTECTION	OVER CURRENT	95~110% Protection type : Constant current limiting, recovers automatically after fault condition is removed				
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	30 ~ 33V	44 ~ 47V	48 ~ 52V	57 ~ 62V	63 ~ 68V
	OVER TEMPERATURE	95°C ± 10°C(TSW1) Protection type : Shut down o/p voltage, re-power on to recover				
ENVIRONMENT	WORKING TEMP,HUMIDITY	-30°C ~ +70°C; 20% ~ 90%RH(Please refer to"derating curve")"				
	STORAGE TEMP,HUMIDITY	-40°C ~ +80°C; 10% ~ 95%RH Non-condensing				
	VIBRATION	10 ~ 500Hz, 5G 12min./1 cycle, period for 72 min, each along X, Y, Z axes				
SAFETY& EMC	SAFETY STANDARDS	UI8750, TUV EN61347-1,EN61347-2-13, IP65 Certificated				
	WITHSTAND VOLTAGE	I/P-O/P: 3.75KVAC, I/P-FG: 1.88KVAC, O/P-FG: 0.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms/500VDC/25°C/70%RH				
	EMC INTERFERENCE	Compliance to EN55015,EN61000-3-2 Class C(≥ 65% Load)				
	EMC EMISSION	Compliance to EN61000-3-2 Class C(≥ 75% Load); EN61000-3-3				
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2 ,3,4,5,6,8, 11; ENV50204,EN55024,EN61547,light industry level (surge 4KV), criteria B				
	DIMENSION	196*63*39 (L*W*H)				
	PACKING	0.65kg/20pcs/14kg/0.026 m³/0.91CUFT				
	MTBF	≥510K hrs min. MIL-HDBK-217F(25°C)				

- NOTE:
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 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.
 - 5.Derating may be needed under low input voltage. Please check the static characteristics for more details.
 - 6.Setup time is measured at cold start condition. Turning ON/OFF the power supply frequently may increase the set up time.

Mechanical Specification

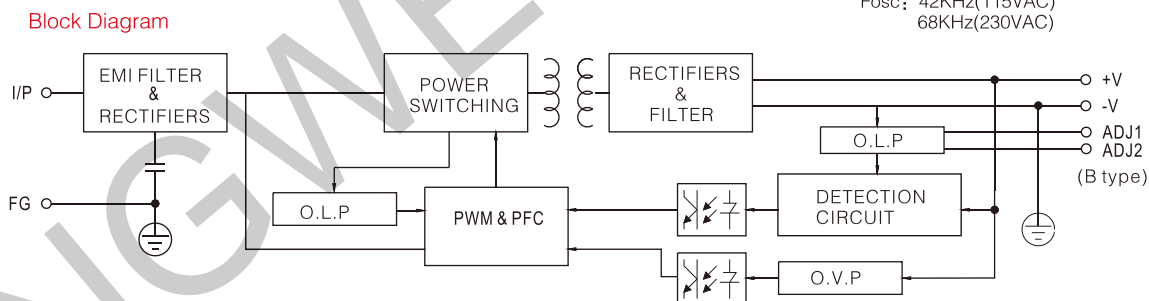
Unit:mm



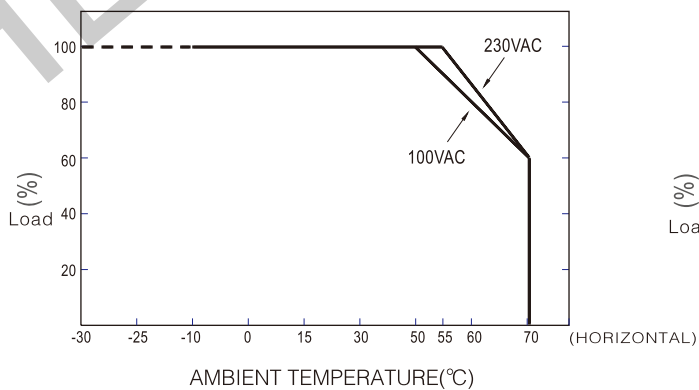
IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer. (Can access by removing the rubber stopper on the case.)

lead-out wire assignment

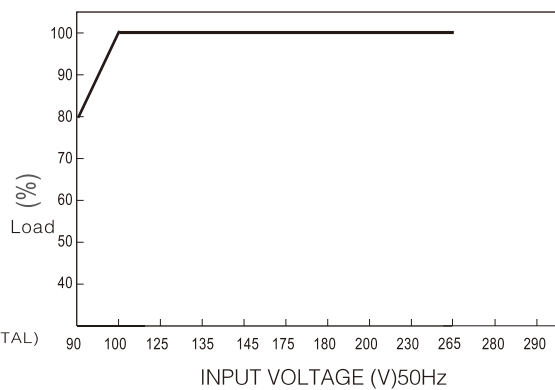
Input(Black three-core)		Output (Black two-core)	
Brown	AC/L	Red	DC OUTPUT +V
Blue	AC/N	Black	DC OUTPUT -V
(Green/Yellow)	Case:⊕ FG		



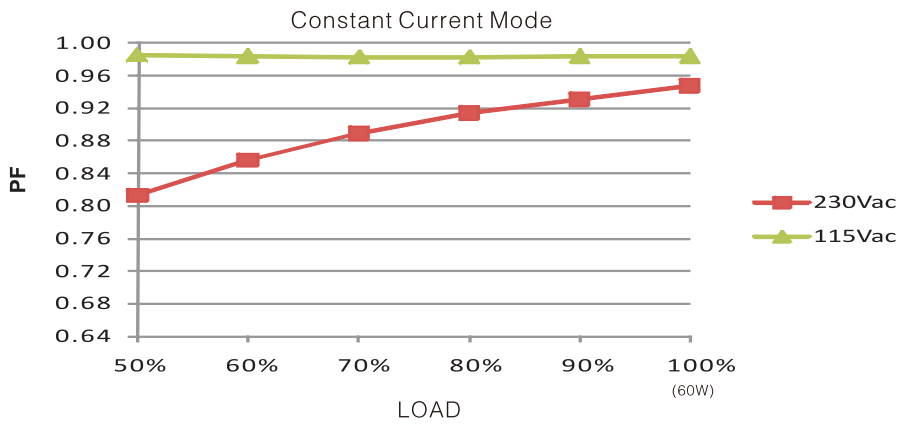
Derating Curve



Static Characteristics

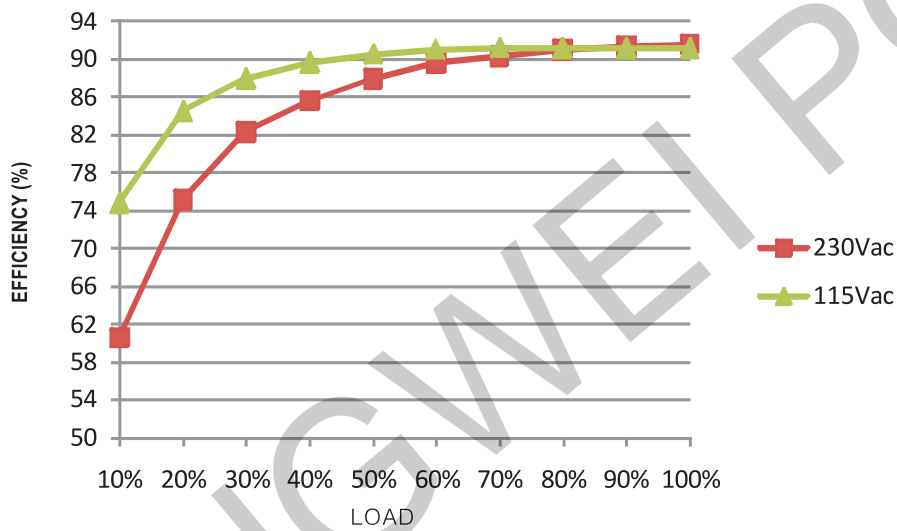


Power Factor Characteristic



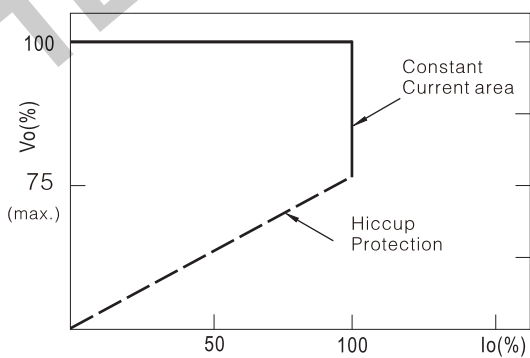
Efficiency VS Load(48V Model)

CEN-60 series possess superior working efficiency that up to 91% can be reached in field applications.



Driving Methods Of LED Module

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs



Typical LED power supply I-V curve