



■ Features :

- Universal AC input / Full range (up to 295VAC)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Output voltage and constant current level adjustable
- Built-in active PFC function
- IP66 design for indoor or outdoor installations
- Cooling by free air convection
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet location and outdoor application
- 3 years warranty



SPECIFICATION

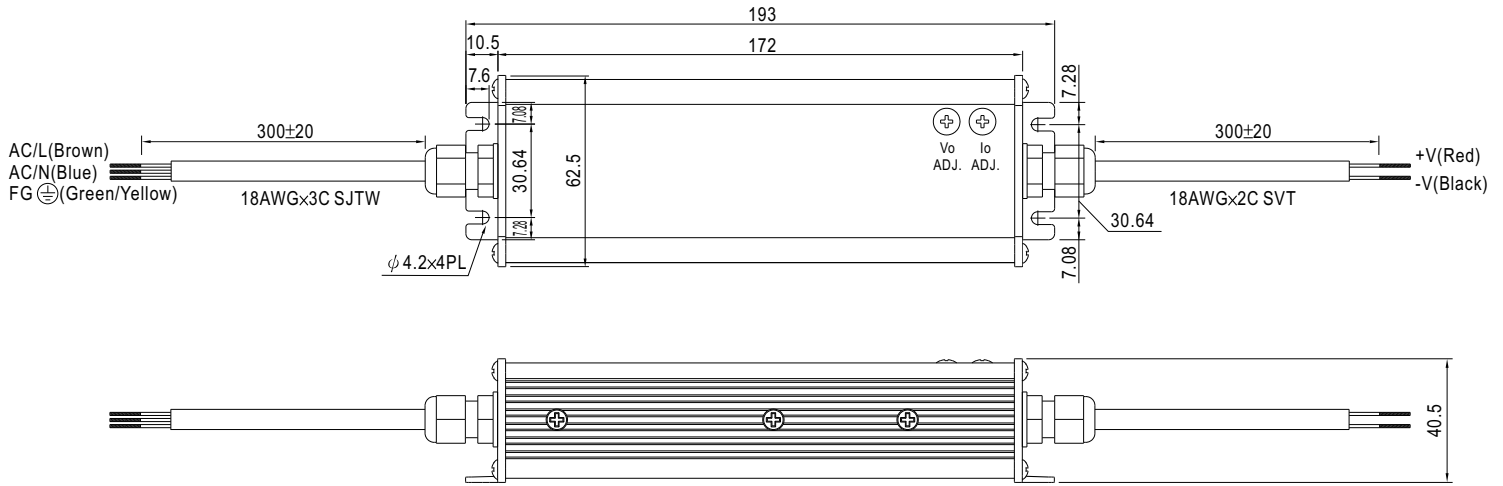
MODEL	CEN-100-20	CEN-100-24	CEN-100-30	CEN-100-36	CEN-100-42	CEN-100-48	CEN-100-54	
OUTPUT	DC VOLTAGE	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT OPERATION VOLTAGE Note.6	12 ~ 20V	14.4 ~ 24V	18 ~ 30V	21.6 ~ 36V	25.2 ~ 42V	28.8 ~ 48V	32.4 ~ 54V
	RATED CURRENT	4.8A	4A	3.2A	2.65A	2.28A	2A	1.77A
	CURRENT RANGE	0 ~ 4.8A	0 ~ 4A	0 ~ 3.2A	0 ~ 2.65A	0 ~ 2.28A	0 ~ 2A	0 ~ 1.77A
	RATED POWER	96W	96W	96W	95.4W	95.76W	96W	95.58W
	RIPPLE & NOISE (max.) Note.2	2.0Vp-p	2.7Vp-p	3Vp-p	3.6Vp-p	4Vp-p	4.6Vp-p	5Vp-p
	VOLTAGE ADJ. RANGE (SVR1)	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	37 ~ 46V	43 ~ 53V	49 ~ 58V
	CURRENT ADJ. RANGE(SVR2)	3.6 ~ 4.8A	3 ~ 4A	2.4 ~ 3.2A	2 ~ 2.65A	1.7 ~ 2.28A	1.5 ~ 2A	1.3 ~ 1.77A
	VOLTAGE TOLERANCE Note.3	±10%						
	LINE REGULATION	±3.0%						
LOAD REGULATION	±5.0%							
SETUP TIME	3000ms / 230VAC 5000ms / 115VAC at full load							
INPUT	VOLTAGE RANGE Note.5	90 ~ 295VAC	127 ~ 417VDC					
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR	PF ≥ 0.9 at 60 ~ 100% load, 115VAC / 230VAC ; PF > 0.97 / 115VAC PF > 0.95 / 230VAC at full load						
	EFFICIENCY(Typ.)	88%	89%	90%	90%	90%	91%	91%
	AC CURRENT	1.4A/115VAC	0.7A/230VAC					
	INRUSH CURRENT(Typ.)	60A/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 Note.4	Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	22.8 ~ 26V	28 ~ 32V	34 ~ 38V	41 ~ 46V	47 ~ 52V	54 ~ 60V	59 ~ 65V
	OVER TEMPERATURE	85°C ±10°C (RTH1) Protection type : Shut down o/p voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to output load 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)						
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes						
	SAFETY STANDARDS	TUV EN61347-1, EN61347-2-13, IP66 approved						
SAFETY & EMC	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: >100M Ohms / 500VDC / 25°C / 70% RH						
	EMI CONDUCTION & RADIATION	Compliance to EN55015						
	HARMONIC CURRENT	Compliance to EN61000-3-2 Class C (≥60% load) ; EN61000-3-3						
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN61547, light industry level (surge 4KV), criteria A						
	MTBF	519.5Khrs min. MIL-HDBK-217F (25°C)						
OTHERS	DIMENSION	193*62.5*40.5mm (L*W*H)						
	PACKING	0.6Kg; 24pcs/15.4Kg/1.11CUFT						

NOTE

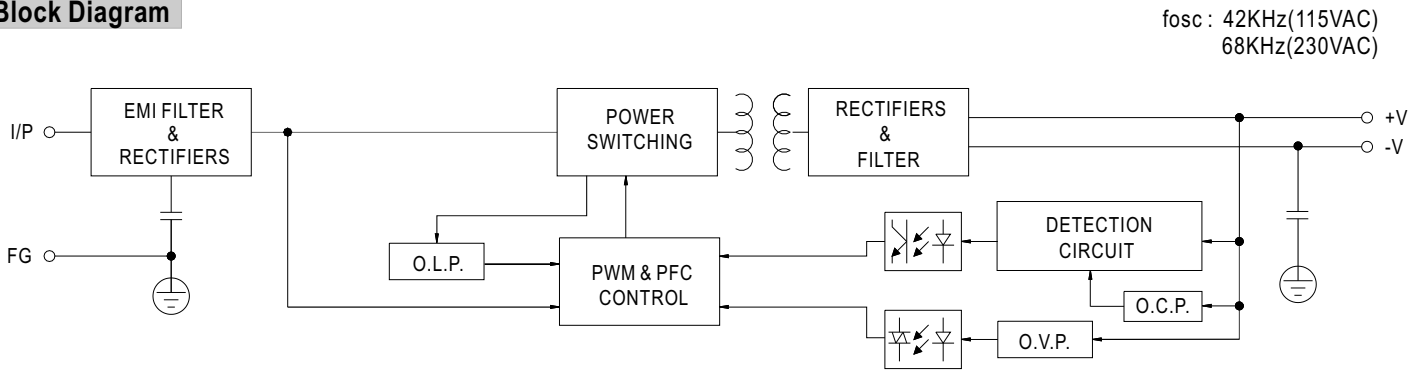
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Direct connecting to LEDs is not suggested for models with "RIPPLE & NOISE" >±10% and using additional drivers is highly recommended.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Please refer to OLP characteristics.
5. Derating may be needed under low input voltage. Please check the derating curve for more details.
6. 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.
7. 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.

Mechanical Specification

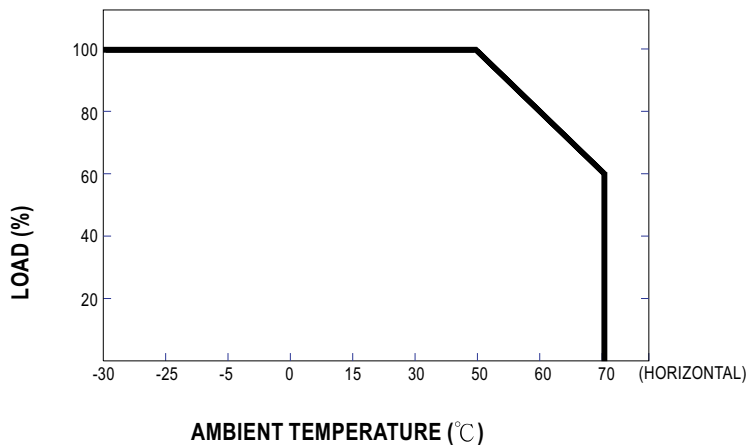
Case No. 993A Unit:mm



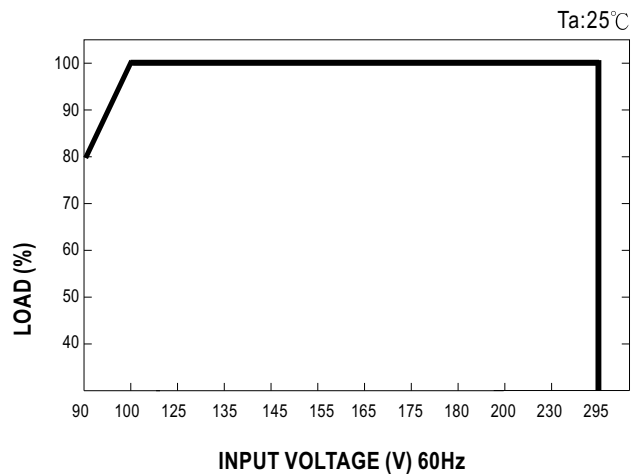
Block Diagram



Derating Curve



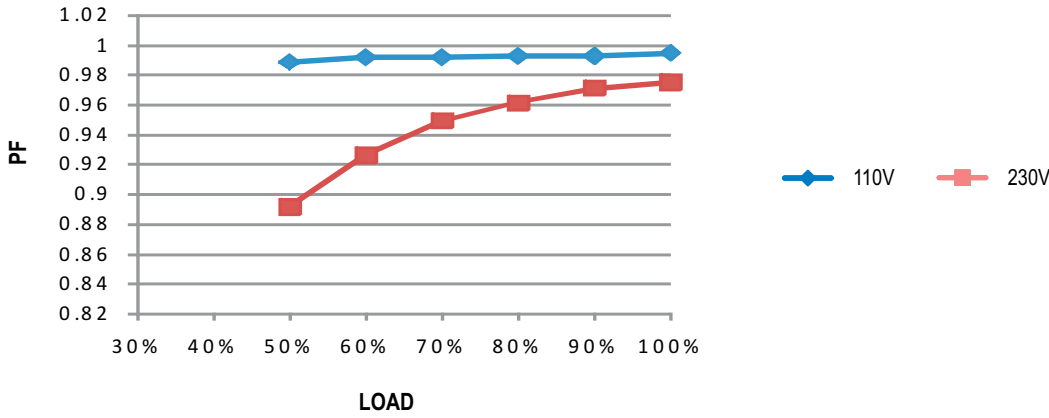
Static Characteristics



Power Factor Characteristic

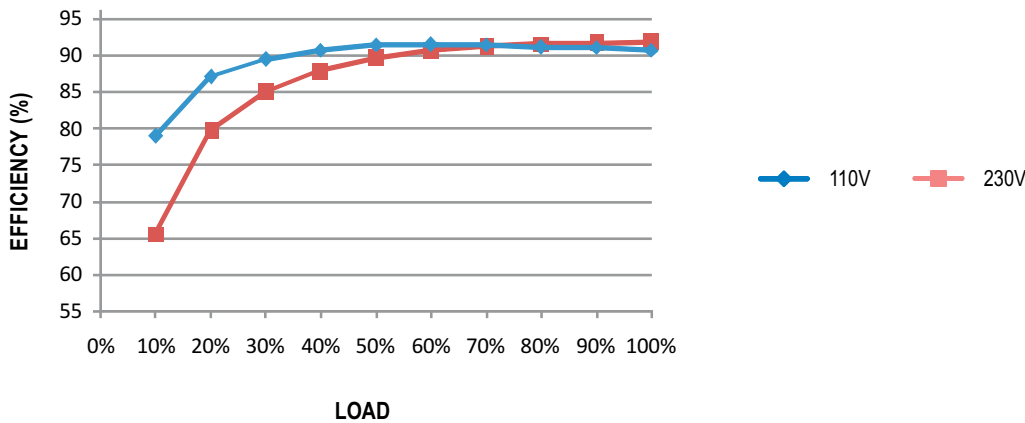
Power factor will be higher than 0.9 when output loading is 60% or higher.

Constant Current Mode



EFFICIENCY vs LOAD (48V Model)

CEN-100 series possess superior working efficiency that up to 91% can be reached in field applications.

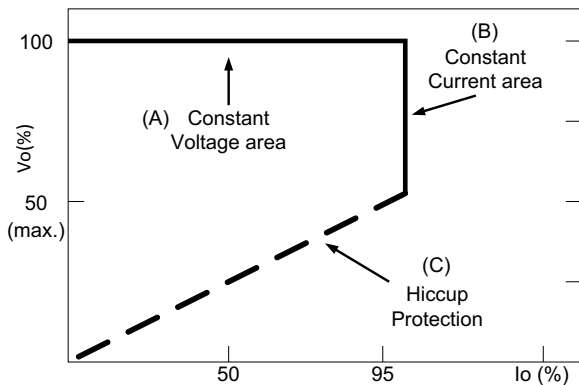


DRIVING METHODS OF LED MODULE

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