

Datasheet

RS Pro CEN-75-30, Constant Voltage Dimmable LED Driver 75W 30V 2.5A

RS Stock number 721-2008



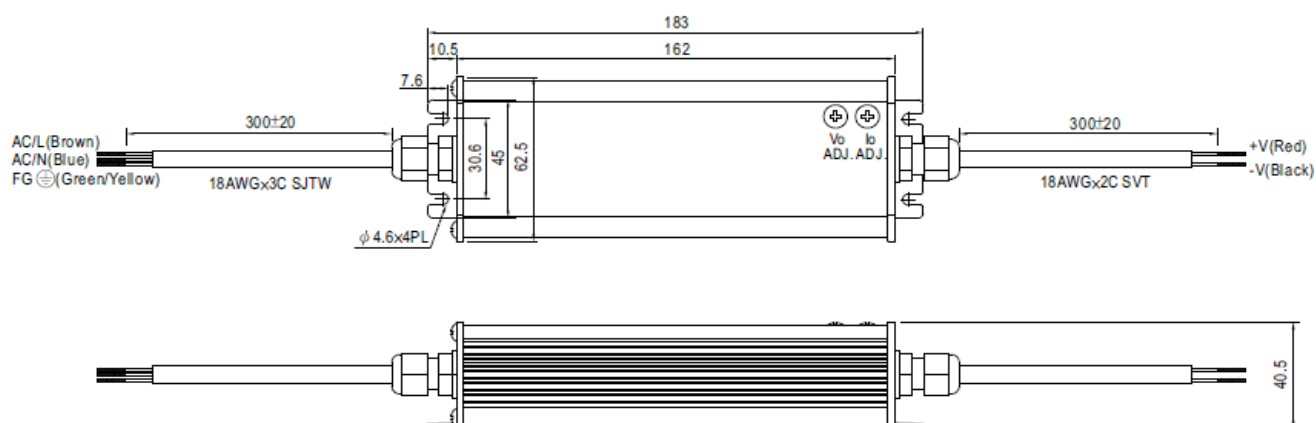
■ Features :

- 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 locations

MODEL		CEN-75-15	CEN-75-20	CEN-75-24	CEN-75-30	CEN-75-36	CEN-75-42	CEN-75-48	CEN-75-54
OUTPUT	DC VOLTAGE	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT OPERATION VOLTAGE Note.5	11.25 ~ 15V	15 ~ 20V	18 ~ 24V	22.5 ~ 30V	27 ~ 36V	31.5 ~ 42V	36 ~ 48V	40.5 ~ 54V
	RATED CURRENT	5A	3.75A	3.15A	2.5A	2.1A	1.8A	1.57A	1.4A
	CURRENT RANGE	0 ~ 5A	0 ~ 3.75A	0 ~ 3.15A	0 ~ 2.5A	0 ~ 2.1A	0 ~ 1.8A	0 ~ 1.57A	0 ~ 1.4A
	RATED POWER	75W	75W	75.6W	75W	75.6W	75.6W	75.36W	75.6W
	RIPPLE & NOISE (max.) Note.2	2.7Vp-p	2Vp-p	2.7Vp-p	3Vp-p	3.6Vp-p	4Vp-p	4.6Vp-p	5Vp-p
	VOLTAGE ADJ. RANGE (SVR1)	13.5 ~ 17V	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	37 ~ 46V	43 ~ 53V	49 ~ 58V
	CURRENT ADJ. RANGE (SVR2)	3.75 ~ 5A	2.81 ~ 3.75A	2.36 ~ 3.15A	1.88 ~ 2.5A	1.58 ~ 2.1A	1.35 ~ 1.8A	1.18 ~ 1.57A	1.05 ~ 1.4A
	VOLTAGE TOLERANCE Note.3	±10%							
	LINE REGULATION	±3.0%							
	LOAD REGULATION	±5.0%							
	SETUP TIME	1400ms / 230VAC 2800ms / 115VAC at full load							
INPUT	VOLTAGE RANGE Note.4	90 ~ 295VAC 127 ~ 417VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF ≥ 0.9 at 75 ~ 100% load, 115VAC / 230VAC ; PF > 0.97 / 115VAC PF > 0.95 / 230VAC at full load							
	EFFICIENCY (Typ.)	87%	88%	89%	90%	90%	90%	91%	91%
	AC CURRENT (Typ.)	1.1A/115VAC 0.55A/230VAC							
	INRUSH CURRENT (Typ.)	45A/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	17.5 ~ 21V	22.8 ~ 26V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 52V	54 ~ 60V	59 ~ 65V
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover							
		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 & EMC	SAFETY STANDARDS	UL879, UL8750, TUV EN61347-1, EN61347-2-13, IP66 approved							
	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 (≥ 75% 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	522.2Khrs min. MIL-HDBK-217F (25°C)							
OTHERS	DIMENSION	183*62.5*40.5mm (L*W*H)							
	PACKING	0.56Kg/24pcs/14.4Kg/1.11CUFT							

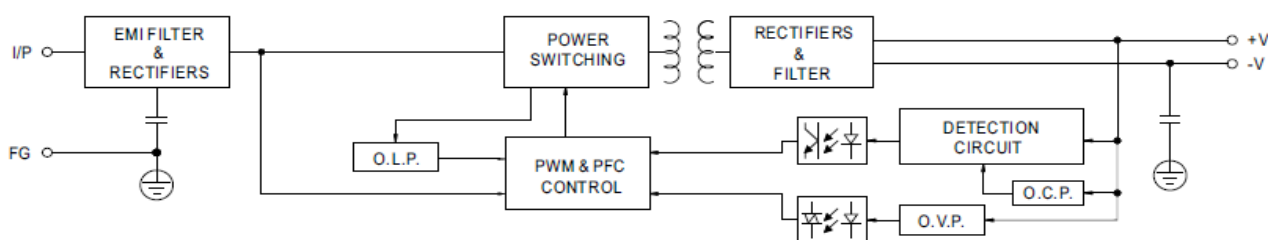
Mechanical Specification

Case No.993B Unit:mm

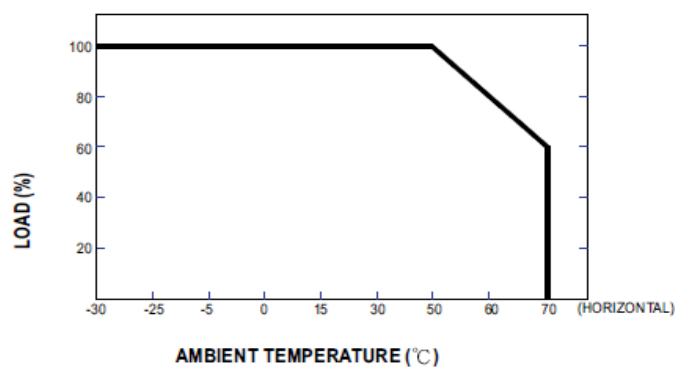


Block Diagram

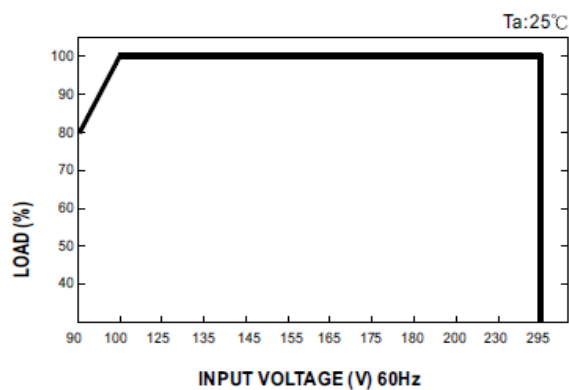
fosc: 50KHz(115VAC)
75KHz(230VAC)



Derating Curve



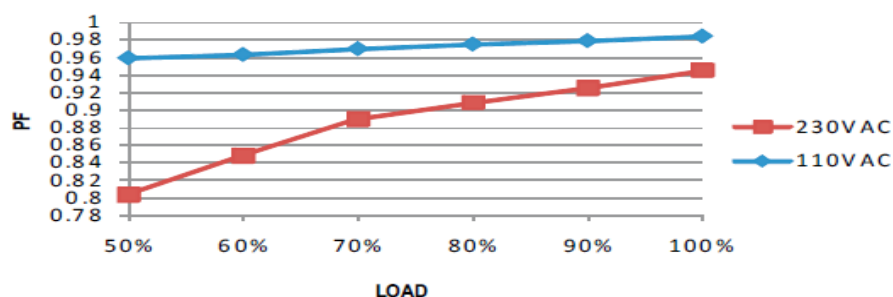
Static Characteristics



Power Factor Characteristic

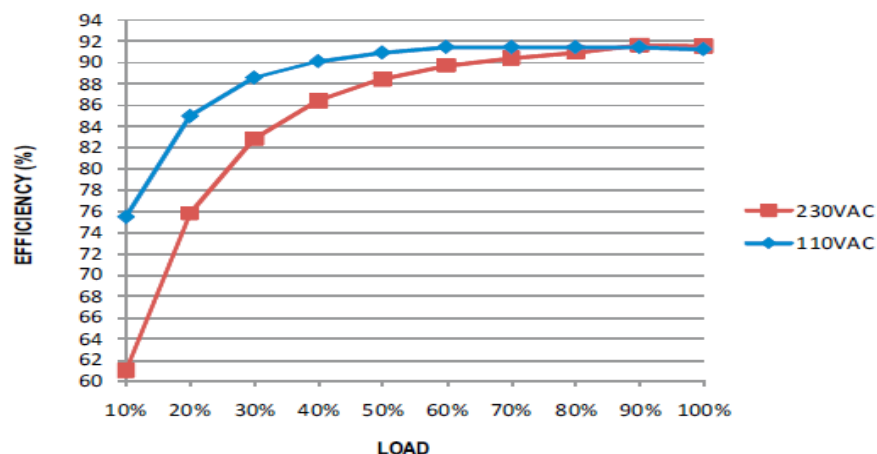
Power factor will be higher than 0.9 when output loading is 75% or higher.

Constant Current Mode

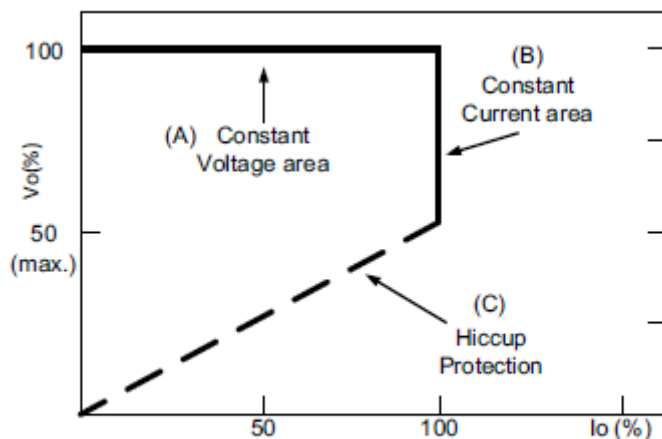


EFFICIENCY vs LOAD (48V Model)

CEN-75 series possess superior working efficiency that up to 91% can be reached in field applications.



DRIVING METHODS OF LED MODULE



Typical LED power supply I-V curve