MEAN WELL EPP-200 200W Single Output with PFC Function Instruction Manual

Contents

MEAN WELL EPP-200 200W Single Output with PFC Function

Features

- 4″×2″ miniature size
- Universal AC input / Full range
- Built-in active PFC function
- EMI Conduction for Class B Radiation for Class B with FG(Class I) and Class A without FG(Class Ⅱ)
- No load power consumption<0.5W
- High efficiency up to 94%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection for 140W and 200W with 10CFM forced air
- Built-in 12V/0.5A FAN supply
- LED indicator for power on
- Operating altitude up to 5000 meters
- 3 years warranty

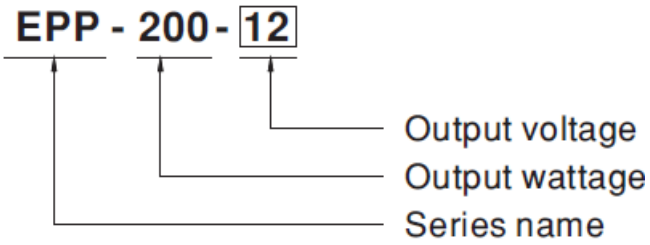
Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipment’s or apparatus

Description

EPP-200 is a 200W highly reliable green PCB type power supply with a high power density (21.9W/in3) on the 4″ by 2″ footprint. It accepts 80~264VAC input and offers various output voltages between 12V and 48V. The working efficiency is up to 94% and the extremely low no load power consumption is down below 0.5W. EPP-200 is able to be used for both ClassI(with FG) and Class Ⅱ(no FG) system design. EPP-200 is equipped with complete protection functions; it is complied with the international safety regulations such as TUV BS EN/EN62368-1, UL62368-1 and IEC62368-1. EPP-200 series serves as a high price-to-performance power supply solution for various industrial applications.

Model Encoding



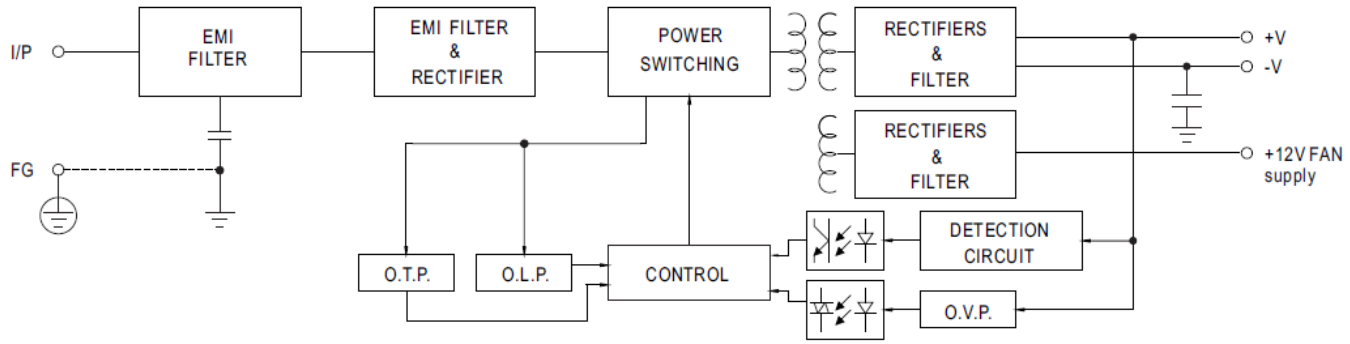
Specifications

MODEL			EPP-200-12	EPP-200-15	EPP-200-24	EPP-200-27	EPP-200-48
OUTPUT	DC VOLTAGE		12V	15V	24V	27V	48V
	CURRENT	10CFM	16.7A	13.4A	8.4A	7.5A	4.2A
		Convection	11.7A	9.4A	5.9A	5.3A	3A
	RATED POWER	10CFM	200.4W	201W	201.6W	202.5W	201.6W
		Convection	140.4W	141W	141.6W	143.1W	144W
	RIPPLE & NOISE (max.) Note.2		100mVp-p	100mVp-p	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE		11.4~12.6V	14.3~15.8V	22.8~25.2V	25.6 ~ 28.4V	45.6 ~50.4V
	VOLTAGE TOLERANCE Note.3		±2.0%	±2.5%	±1.0%	±1.0%	±1.0%
	LINE REGULATION		±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION		±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME		500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load				
	HOLD UP TIME (Typ.)		12ms/230VAC 12ms/115VAC at full load				
INPUT	VOLTAGE RANGE Note.4		80 ~ 264VAC 113 ~ 370VDC				
	FREQUENCY RANGE		47 ~ 63Hz				
	POWER FACTOR		PF>0.94/230VAC PF>0.98/115VAC at full load				
	EFFICIENCY (Typ.)		93%	93%	94%	94%	94%
	AC CURRENT (Typ.)		1.8A/115VAC 1A/230VAC				

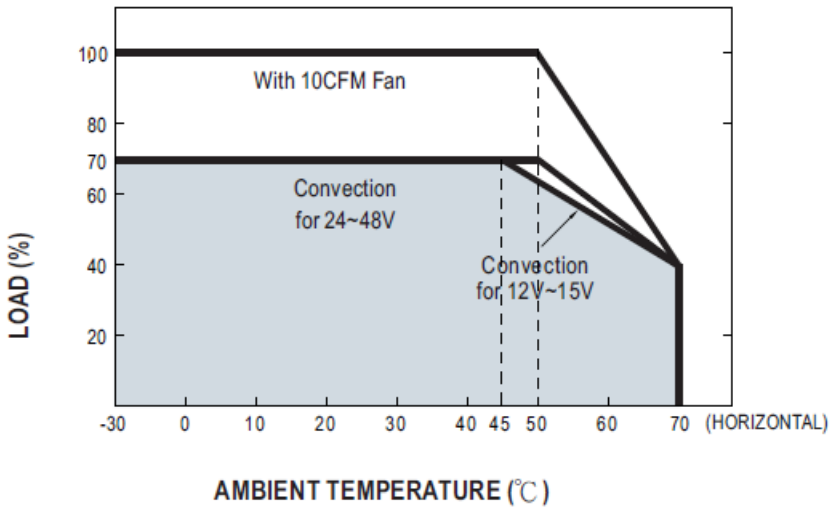
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC 60A/230VAC				
	LEAKAGE CURRENT	<0.75mA / 240VAC				
PROTECTION	**OVERLOAD**	110 ~ 140% rated output power				
		Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	13.2 ~ 15.6V	16.5 ~ 19.5V	26.4 ~ 31.2V	29.7 ~ 35V	52.8 ~ 62.4V
		Protection type : Shut down o/p voltage, re-power on to recover				
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover				
FUNCTION	**FAN SUPPLY**	12V@0.5A for driving a fan ; tolerance +15% ~ -15%				
ENVIRONMENT	**WORKING TEMP.**	-30 ~ +70℃ (Refer to “Derating Curve”)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)				
	OPERATING ALTITUDE Note.6	5000 meters				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 5)	**SAFETY STANDARDS**	UL62368-1, TUV BS EN/EN62368-1, IEC62368-1, EAC TP TC 004 approved				
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH				
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Conduction for Class B Radiation for Class B with FG(ClassI) and Class A without FG(ClassII), BS EN/EN61000-3-2,-3 , EAC TP TC 020				
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN61000-6-2, heavy industry level, criteria A, EAC TP TC 020				
OTHERS	**MTBF**	500.2Khrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	101.6*50.8*29mm (L*W*H)				
	PACKING	0.19Kg; 72pcs/14.7Kg/0.82CUFT				

NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 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. Derating may be needed under low input voltages. Please check the derating curve for more details. 5. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.” (as available on **http://www.meanwell.com**) 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). Product Liability Disclaimer For detailed information, please refer to **https://www.meanwell.com/serviceDisclaimer**.aspx

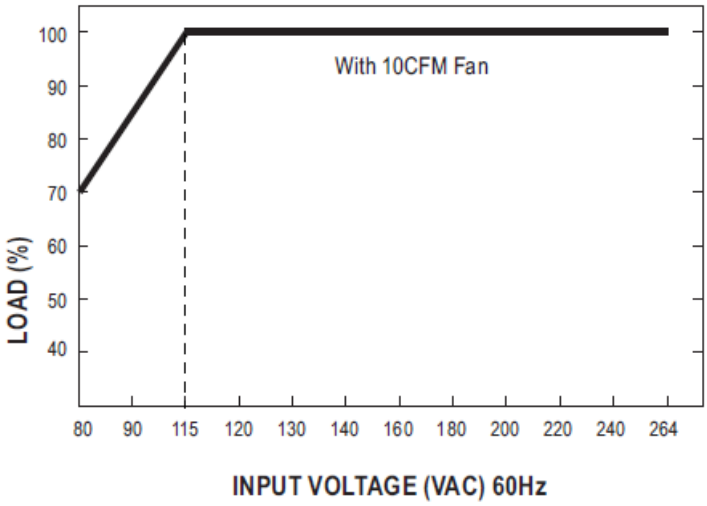
Block Diagram



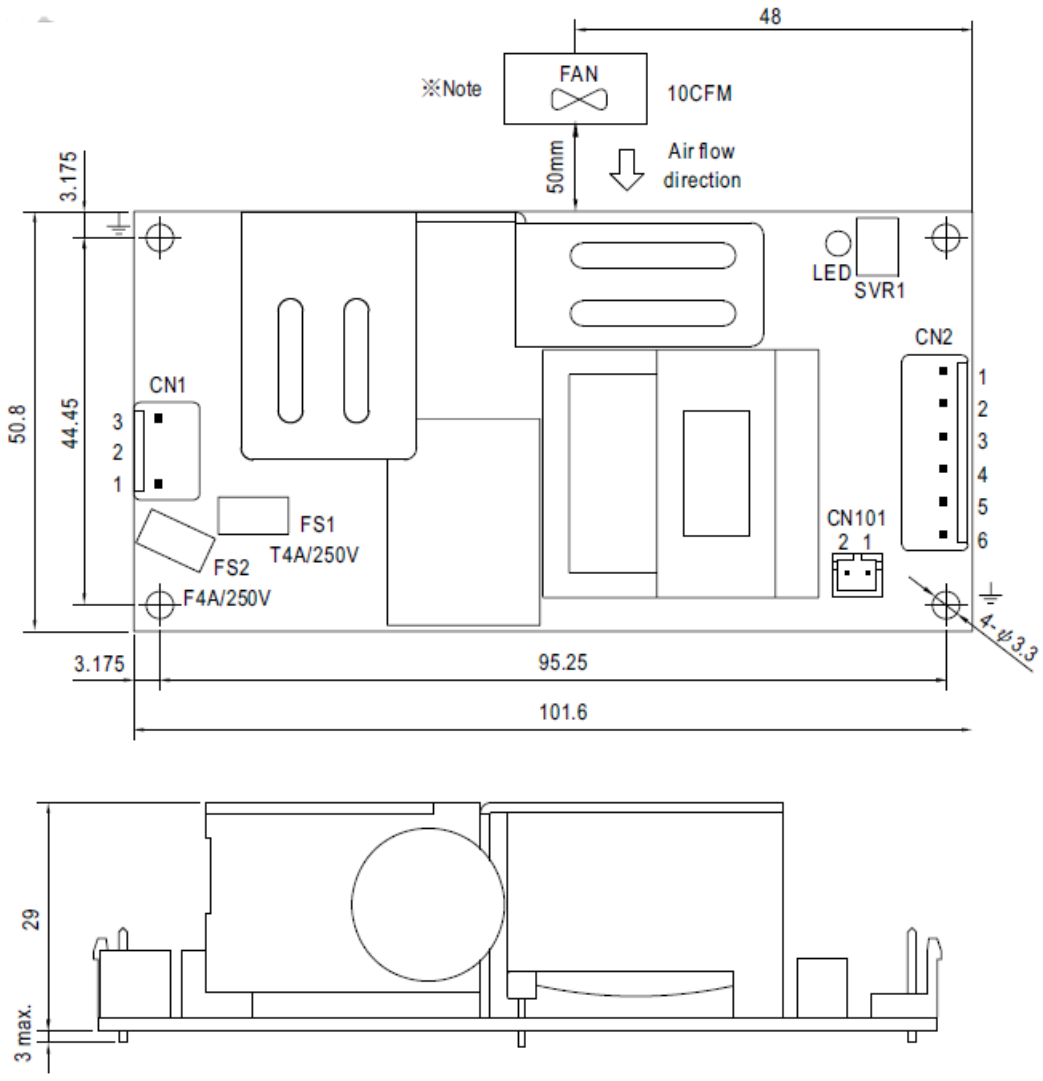
Derating Curve



Output Derating VS Input Voltage



Mechanical Specification



AC Input Connector (CN1) : JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/N		

Grounding required

DC Output Connector (CN2) : JST B6P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1,2,3	+V	JST VHRor equivalent	JST SVH-21T-P1.1 or equivalent

FAN Connector(CN101) : JST B2B-PH-K-S or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	DC COM	JST PHR-2 or equivalent	JST SPH-002T-P0.5S or equivalent
2	+12V		

Note :

1. The FAN supply is designed to serve as the source of the additive external fan for the cooling of the power supply, enabling the full load delivery and assuring the best life span of the product. Please do not use this FAN supply to drive other devices.
2. EMI Conduction for Class B Radiation for Class B with FG(ClassI) and Class A without FG(ClassII).

Installation Manual

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

Documents / Resources

	MEAN WELL EPP-200 200W Single Output with PFC Function [pdf] Instruction Manual EPP-200, 200W Single Output with PFC Function, 200W Single Output, Single Output, Output with PFC Function, EPP-200, PFC Function