


## MEAN WELL EPS-45S Series 45W Single Output Switching Power Supply Installation Guide

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## MEAN WELL WELL EPS-45S Series 45W Single Output Switching Power Supply Installation Guide





## Features

- 3"×2" miniature size
- Universal AC input / Full range
- ClassII(without FG) installations
- No load power consumption<0.1W
- High efficiency up to 91%
- For 1U applications
- Protections: Short circuit / Overload /Over voltage
- Cooling by free air convection
- -30~70°Cwide range of
- operating temperature
- LED indicator for power on
- 3 years warranty



## Application

- Industrial electrical equipment
- Mechanical equipment
- Factory automation equipment
- Handheld electronic device

## GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

EPS-45S is a 45W highly reliable green PCB type industrial power supply with a high power density on the 3" by 2" footprint. It accepts 80~264VAC input and offers various output voltages between 3.3V and 48V. The working efficiency is up to 91% and the extremely low no load power consumption is down below 0.1W. EPS-45S is able to be used for ClassII(no FG) system design.

**EPS - 45 S - 3.3**

Output voltage

Small size

Output wattage

Series name

ORDER NO.		EPS-45S-3.3	EPS-45S-5	EPS-45S-7.5	EPS-45S-12	EPS-45S-15	EPS-45S-24	EPS-45S-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	48V
	RATED CURRENT	8A	8A	5.4A	3.8A	3A	1.9A	0.94A
	CURRENT RANGE	0 ~ 8.8A	0 ~ 8.8A	0 ~ 5.95A	0 ~ 4.18A	0 ~ 3.3A	0 ~ 2.1A	0 ~ 1.03A
	RATED POWER	26.4W	40W	40.5W	45.6W	45W	45.6W	45.1W
	PEAK LOAD(10sec.)	29W	44W	44.6W	50.2W	49.5W	50.2W	49.4W
	Notes	2						
	RIPPLE & NOISE (max.)	80mVp-p	80mVp-p	80mVp-p	120mVp-p	150mVp-p	240mVp-p	300mVp-p
	VOLTAGE ADJ. RANGE	3.1~3.6V	4.7~5.5V	7.12~8.3V	11.4~13.2V	13.5~16.5V	22.8~27.6V	45.6~52.8V
	VOLTAGE TOLERANCE	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
LOAD REGULATION	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	
SETUP, RISE TIME	500ms, 30ms / 230VAC      500ms, 30ms / 115VAC at full load							
HOLD UP TIME (Typ.)	30ms / 230VAC      12ms / 115VAC at full load							
INPUT	VOLTAGE RANGE	80 ~ 264VAC						
	FREQUENCY RANGE	47 ~ 63Hz						
	EFFICIENCY (Typ.)	80%	83%	85%	88%	89%	90%	91%
	AC CURRENT (Typ.)	1.2A / 115VAC      1A / 230VAC						
	INRUSH CURRENT (Typ.)	COLD STAR 30A/115VAC    60A/230VAC						
	LEAKAGE CURRENT(max.)	0.25mA/264VAC						
OVERLOAD	115 ~ 150% rated output power							
	Protection type : Hiccup mode, recovers automatically after fault condition is removed							

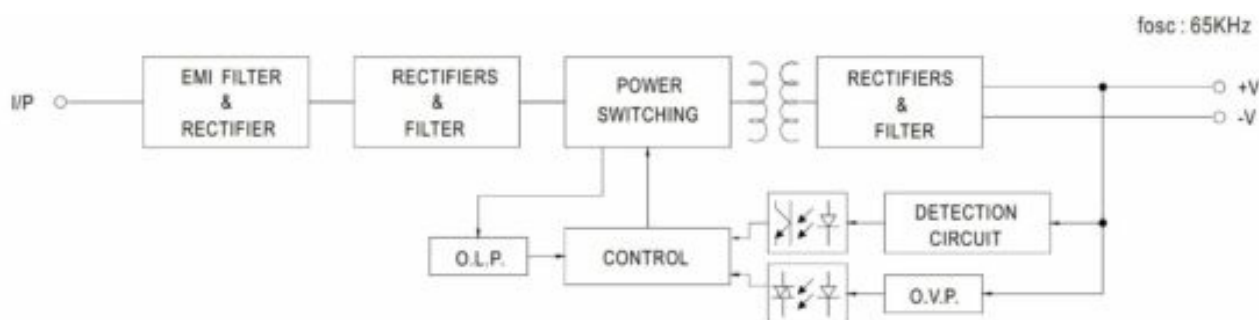
PROTECTION	OVER VOLTAGE	3.8~5V	5.7~6.8V	8.62~11.3V	13.8~16.2V	17.25~20.3V	28.4~32.4V	55.2~64.8V
		Protection type : Shut down o/p voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")						
	WORKING HUMIDITY	20% ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03% / °C (0 ~ 50°C)						
	OPERATING ALTITUDE <small>Note.7</small>	5000 meters						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
SAFETY & EMC (Note. 8)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, CCC GB4943.1, EAC TP TC 004 approved						
	WITHSTAND VOLTAGE	I/P-O/P: 3KVAC						
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH						
	EMC EMISSION	Compliance to BS EN/EN55032(CISPR32) Class B, BS EN/EN61000-3-2,3, GB9254.1 Class B, GB17625 Class A, EAC TP TC 020						
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, Heavy industry Level, EAC TP TC 020						
OTHERS	MTBF	3334.3K hrs min. Telcordia SR-332 (Bellcore); 706.6K hrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	76.2*50.8*24mm or 3" * 2" *0.945" inch (L*W*H)						
	PACKING	0.11Kg; 120pcs/14.2Kg/0.94CUFT						

## NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.
3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.
4. Tolerance : includes set up tolerance, line regulation and load regulation.
5. Derating may be needed under low input voltages. Please check the derating curve for more details.
6. Touch current was measured from primary input to DC output.
7. The ambient temperature derating of 3.50C/1000m with fanless models and of 50C/1000m with fan models for operating altitude higher than 2000m(6500ft).
8. 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.

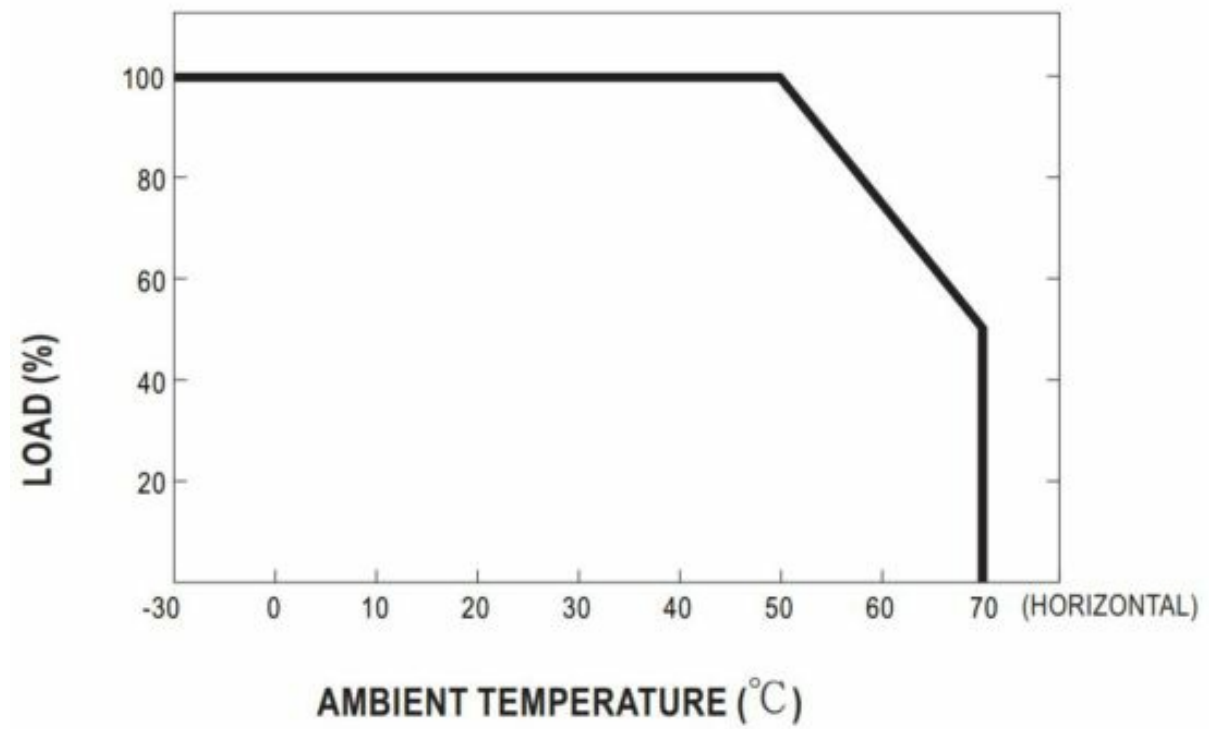
For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on [https://www.meanwell.com//Upload/PDF/EMI\\_statement\\_en.pdf](https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf) )  
<https://www.meanwell.com/serviceDisclaimer.aspx>

## Block Diagram

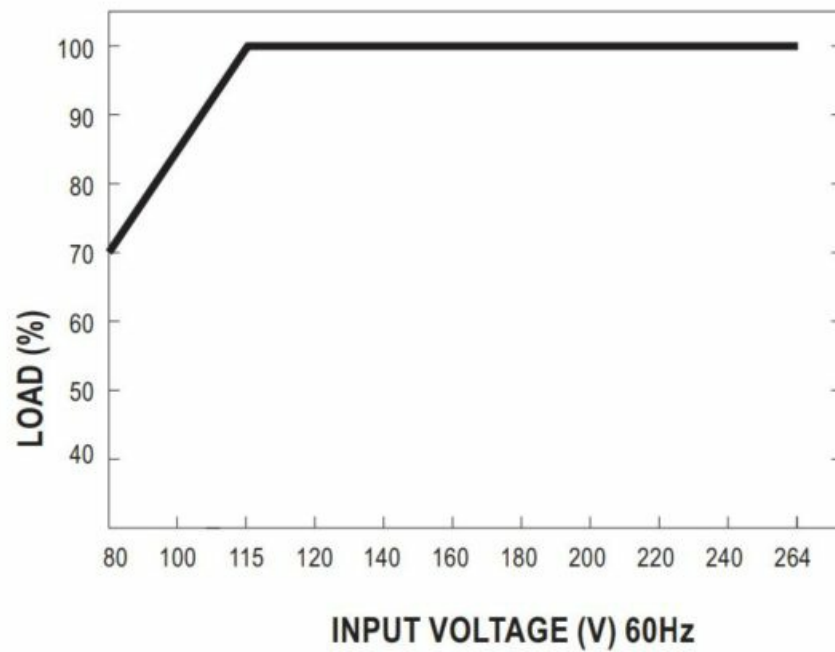




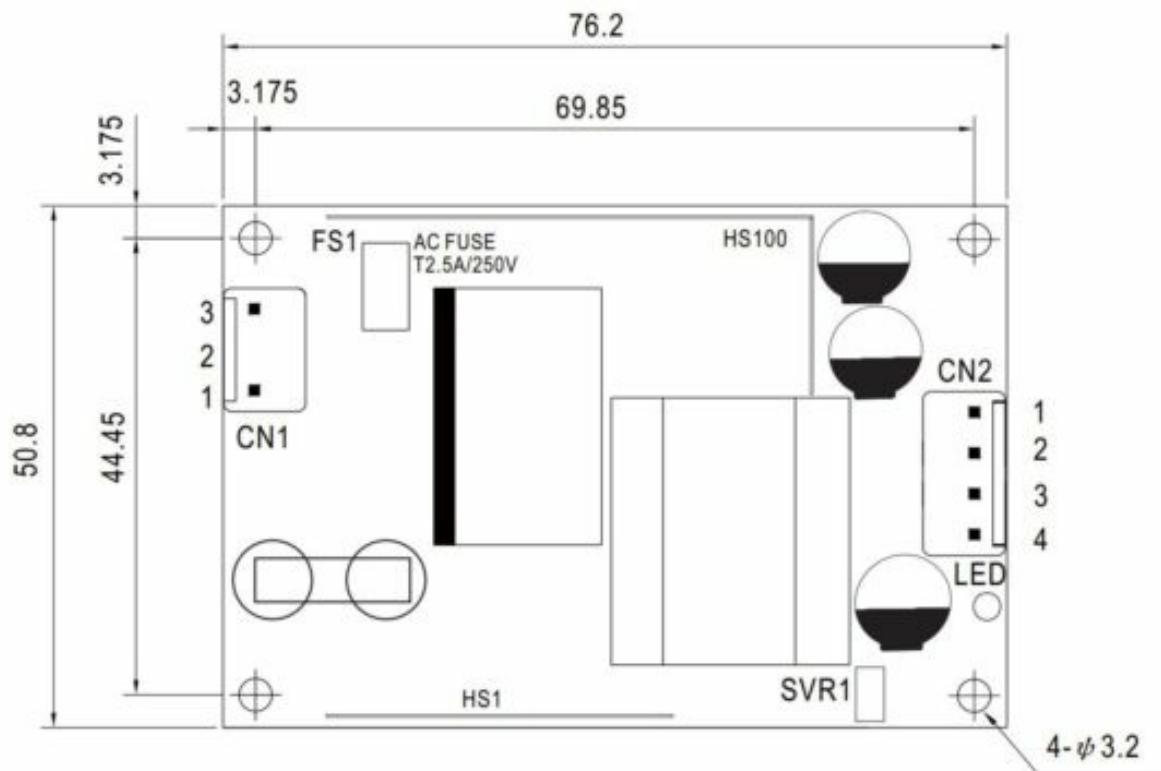
## Derating Curve



## Static Characteristics



## Mechanical Specification



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

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

DC Output Connector (CN2) : JST B4P-VH or equivalent

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

## Installation Manual

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

Read More About This Manual & Download PDF:

Documents / Resources



[MEAN WELL EPS-45S Series 45W Single Output Switching Power Supply](#) [pdf] Installation Guide  
EPS-45S-12, EPS-45S-20240126, WELL EPS-45S Series 45W Single Output Switching Power Supply, WELL EPS-45S Series, 45W Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply, Supply

References

- [User Manual](#)

[Manuals+.](#) [Privacy Policy](#)

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