

MEAN WELL EPS-45 Series 45W Single Output Switching Power Supply Owner's Manual

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EPS-45 series
45W Single Output Switching Power Supply



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Features:

- Universal AC input / Full range
- Optional L-Bracket and cover
- High efficiency up to 90%
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 4"x2" compact size
- LED indicator for power on
- No load power consumption<0.3W
- Operating altitude up to 4000 meters
- 3 years warranty



https://www.meanwell.com/Upload/PDF/PCB_EN.pdf



GTIN CODE

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

EPS-45-3.3 -C ☐ =Blank.-C . Blank=PCB only. -C=Enclosed type

SPECIFICATION

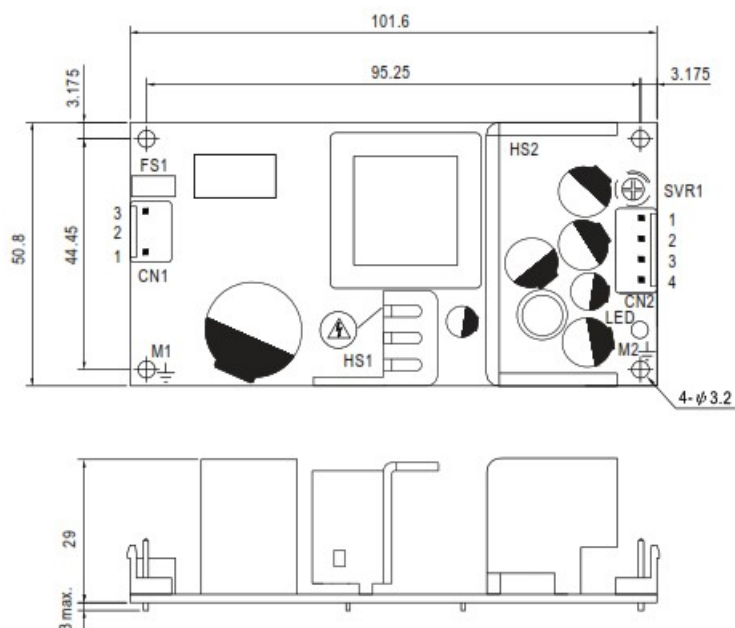
MODEL		EPS-4 5-3.□	EPS-4 5-5□	EPS-4 5-7.5□	EPS-4 5-12□	EPS-4 5-15□	EPS-4 5-24□	EPS-4 5-36□	EPS-45- 48□
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	21V	36V	48V
	RATED CURRENT	8A	BA	5.4A	3.75A	3A	1.9A	1.25A	IA
	CURRENT RANGE	0 -9A	0 -9A	0 -6A	0-42A	0 – 3.3A	0-2.1A	0-IAA	0-1.1A
	RATED POWER	26.4W	40W	40. 5W	45W	45W	45.6W	45W	48W
	PEAK LOAD(10 sec.) Note.6	29.7W	45W	42W	50.4W	49.5W	50.4W	50AW	52.8W
	RIPPLE & NOISE (max.) Note. 2	80mVp-p	80mVp-p	100mVp-p	120mVp-p	150mVp-p	240mVp-p	280mVp-p	300mVp-p
	VOLTAGE ADJ. RANGE	3.1 – 3.6V	4.75 – 5.5V	7.13-825V	10.8 – 13.5V	13.5 – 16.5V	21.6 – 2N	32.4 – 39.6V	43.2 – 521V
	VOLTAGE TOLERANCE Note. 3	±3.0%	±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%	±13.5%
	LOAD REGULATION	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	1000ms. 5Orns1230VAC 2000ms. 50ms/115VAC at full load							
	HOLD UP TIME (Typ.)	50ms230VAC IEmS/115VAC at full load							
INPUT	VOLTAGE RANGE Nole.5	90 ~ 264VAC 127 ~ 370VDC [DC input operation possible by connecting AC/N(+), AC/L(-)]							
	FREQUENCY RANGE	47 -63Hz							
	EFFICIENCY (Typ.)	80%	182%	184%	187%	188%	189%	189%	190%
	AC CURRENT (Typ.)	1.8A/115VAC I A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 60A/230VAC							
	LEAKAGE CURRENT	<2mA/240VAC							
	OVER LOAD	115 – 160% rated output pow							

PROTECTION		Protection type : Hiccup mode. recovers atamatically after fall condition is r emoved							
	OVER VOLTAGE	3.7 ~ 4.45V	5.6 ~ 6.75V	8.63 ~ 10.1V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	39.7 ~ 46.8V	53.3 ~ 64.8V
		Protection type : Shut down oip voltage. re-power on to recover							
EIMRIMMENT	WORKING TEMP.	-30 – +70°C (Refer lo output load derating curve)							
	WORKING HUMIDITY	20 – 93% RH non-condensing							
	STORAGE TEMP.. HUMIDITY	40~ +85°C. 10~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 – 50°C)							
	OPERATING ALTITUDE Note. 7	4000 meters							
	VIBRATION	10 – 500Hz. 2G 10min./1cycle. period for 60min. each along X. Y. Z axes							
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL62368-1. 11.IV BS EN/EN623138-1. EAC TP TC 004 approved							
	WITHSTAND VOLTAGE	UP-O;P:3KVAC IIP.FO2KVAC OP-FG:0.5KVAC							
	ISOLATION RESISTANCE	VP-0/P. I/P-FG. 0/12-FG:100M Ohms / 500VDC/25°C/ 70% RH							
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B. BS EN/EN81000-3-2. -3. EAC TP TC 020							
	EMC IMMUNITY	Compliance to BS EPPEN61000-4-2.3.4.5.6.8.11. BS EN/BMWS. heavy in dustry level. EAC TP TC 020							
OTHERS	MTBF	2981.8K hrs min. Telo:rdia SR-332 (Bellcore): 652.4K hrs me. MIL-HDBK-217F (25°C)							
	DIMENSION	PCB:101.6*50.8*19mm (L*W*H); with optional CASE:103.41217mm (L*W*H)							
	PACKING	PCB: 0.14Kg: Repos/ 14.5Kg/1.39CUFT; with optional CASE: 0.3Kg:45pcsl 14.5Kg0.63CUFT							

NOTE	<p>1. All parameters NOT specially watered are measured at 230VAC input rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of frequency by using a 12" Misted pay/rare terminated with a 0.1uF & 47uF parallel capacitor.</p> <p>3. Tolerance: inductor set up tolerance. Line regulation and load regulation</p> <p>4. Dwell time may be needed under low input voltage. Please check the static characteristics for more details.</p> <p>5. 33% Duty cycle maximum value every 30 seconds, Average MN power should not exceed the rated power.</p> <p>6. The power supply is considered a component which must be installed into a RS equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1 mm of thickness. The final equipment must be re-certified 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)</p> <p>7. The ambient temperature derating of 3.5°C /1000m with fanless models and of 5°C/1000m with fan models for operation altitude higher than 2000m(6500ft).</p> <p>✕ Product Liability Disclaimer : For detailed information please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>
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Mechanical Specification

Unit:mm



- 1.HS1,HS2 cannot be shorted.
- 2.HS1 must have safety isolation distance with system case.

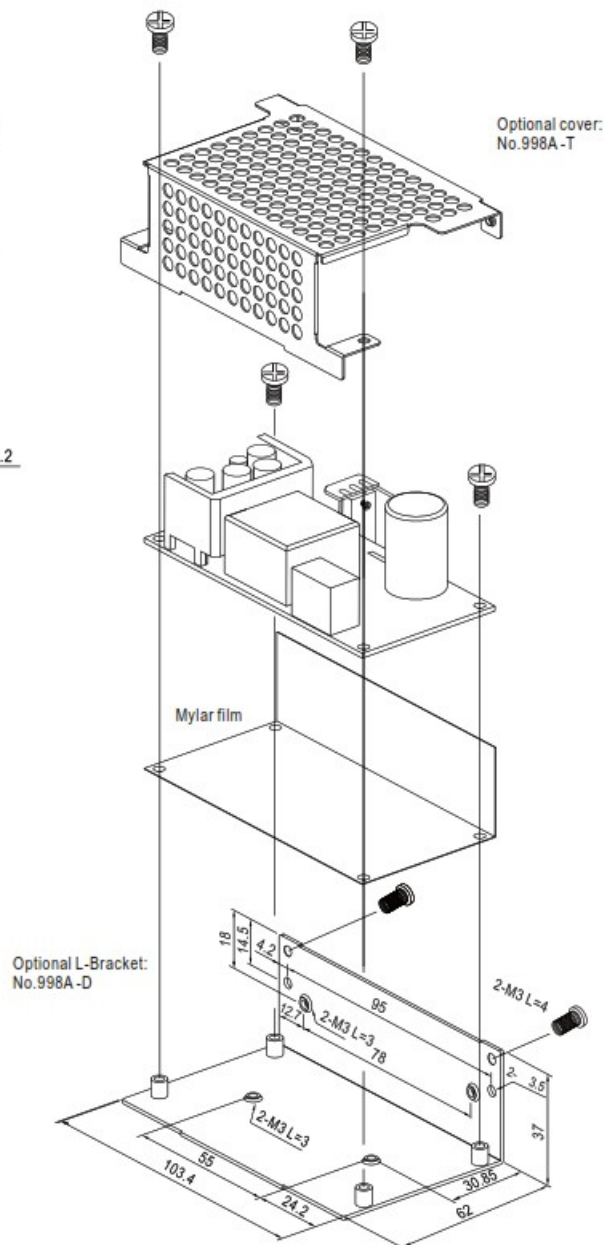
AC Input Connector (CN1) : JST B3P-VH or equivalent

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		

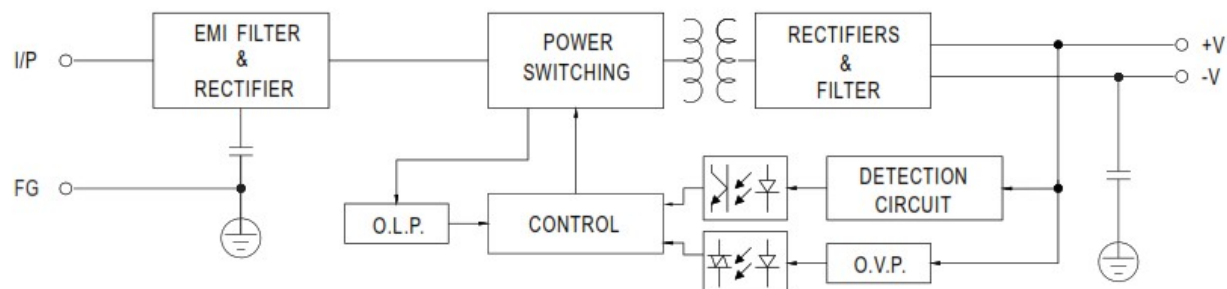
DC Output Connector (CN2) : JST B4P-VH or equivalent

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

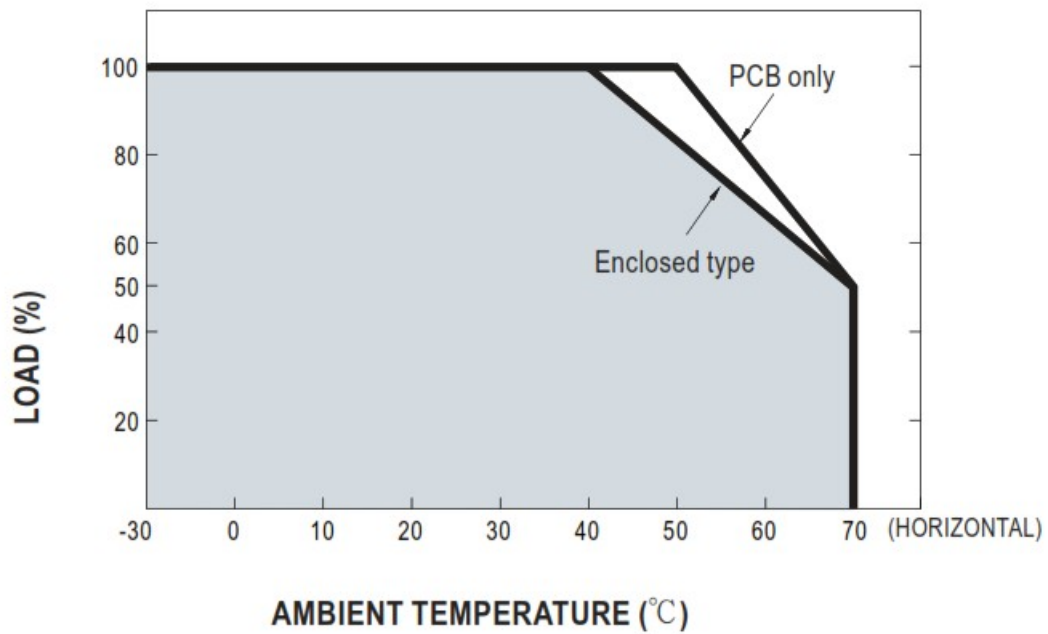
⏏ : Grounding Required ;M1 and M2 are
Safety ground and should all be grounded.



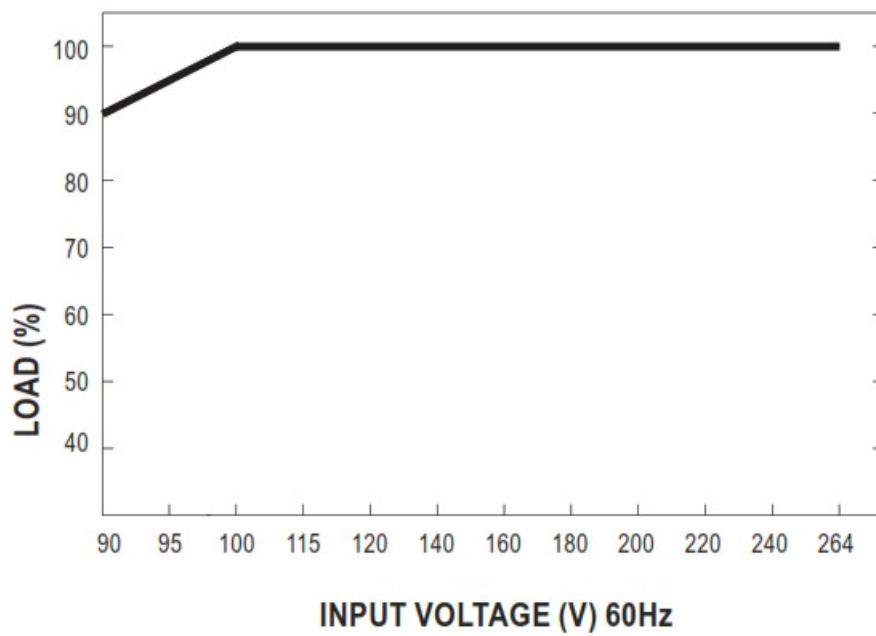
Block Diagram



Output Derating



Static Characteristics



File Name:EPS-45-SPEC 2022-09-20
Downloaded from [Arrow.com](https://www.arrow.com).

Documents / Resources



[MEAN WELL EPS-45 Series 45W Single Output Switching Power Supply](#) [pdf] Owner's Manual
EPS-45 Series 45W Single Output Switching Power Supply, EPS-45 Series, 45W Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply

References

- [MEAN WELL Switching Power Supply Manufacturer](#)