



E-Star Power Development Co., Ltd. (E-STAR)
1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City
22069, Taiwan (R.O.C.)
Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

65W Open Frame type Single output power supply > EPS-65



■ 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"×2" compact size
- LED indicator for power on
- No load power consumption<0.3W
- Operating altitude up to 4000 meters
- 3 years warranty



EPS-65-3.3 ☐ -C ☐ =Blank, -C ; Blank=PCB only, -C=Enclosed type

SPECIFICATION

MODEL		EPS-65-3.3	EPS-65-5	EPS-65-7.5	EPS-65-12	EPS-65-15	EPS-65-24	EPS-65-36	EPS-65-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	36V	48V
	RATED CURRENT	11A	11A	8A	5.42A	4.34A	2.71A	1.81A	1.36A
	CURRENT RANGE	0 ~ 12A	0 ~ 12A	0 ~ 8.8A	0 ~ 6A	0 ~ 4.8A	0 ~ 3A	0 ~ 2A	0 ~ 1.5A
	RATED POWER	36.3W	55W	60W	65.04W	65.1W	65.04W	65.16W	65.28W
	PEAK LOAD(10sec.) <small>Note.6</small>	39.6W	60W	66W	72W	72W	72W	72W	72W
	RIPPLE & NOISE (max.) <small>Note.2</small>	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 ~ 8.25V	10.8 ~ 13.5V	13.5 ~ 16.5V	21.6 ~ 27V	32.4 ~ 39.6V	43.2 ~ 52.8V
	VOLTAGE TOLERANCE <small>Note.3</small>	±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%	±0.5%
	LOAD REGULATION	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
SETUP, RISE TIME		1000ms, 50ms/230VAC 2000ms, 50ms/115VAC at full load							
HOLD UP TIME (Typ.)		50ms/230VAC 12ms/115VAC at full load							
INPUT	VOLTAGE RANGE <small>Note.5</small>	90 ~ 264VAC 127 ~ 370VDC [DC input operation possible by connecting AC/N(+), AC/L(-)]							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY (Typ.)	80%	82%	84%	86%	87%	88%	89%	90%
	AC CURRENT (Typ.)	1.8A/115VAC 1 A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 60A/230VAC							
LEAKAGE CURRENT		<2mA/240VAC							
PROTECTION	OVER LOAD	115 ~ 160% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	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 o/p voltage, re-power on to recover							
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to output load 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 <small>Note.7</small>	4000 meters							
SAFETY & EMC <small>(Note 4)</small>	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	SAFETY STANDARDS	UL62368-1, TUV EN62368-1, 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, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH							
	EMC EMISSION	Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020							
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, heavy industry level, criteria A, EAC TP TC 020							
	MTBF	563Khrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	PCB:101.6*50.8*29mm (L*W*H) ; with optional CASE:103.4*62*37mm (L*W*H)							
PACKING		PCB: 0.15Kg; 96pcs/ 15.4 Kg/1.39CUFT ; with optional CASE: 0.3Kg; 45pcs/ 14.5Kg/0.63CUFT							
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 voltage. Please check the static characteristics for more details. 5. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power. 6. 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." 7. 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)							



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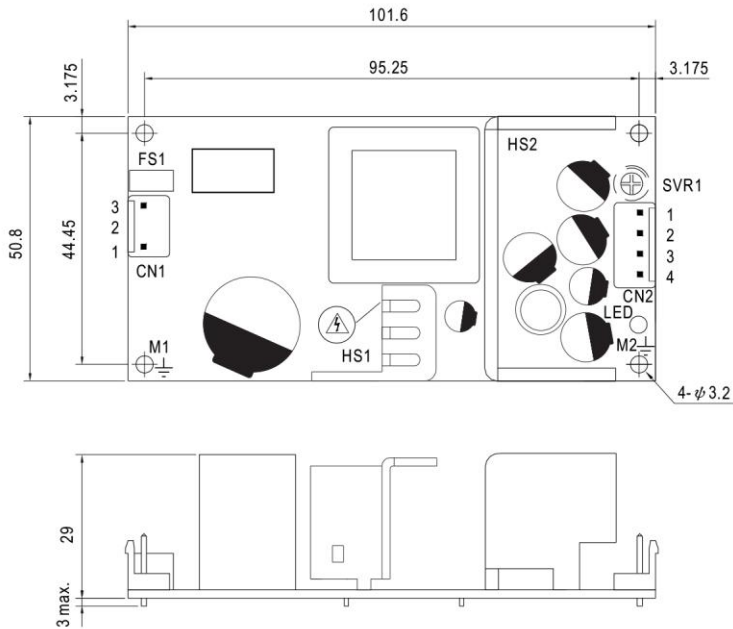
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Mechanical Specification

Unit:mm



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

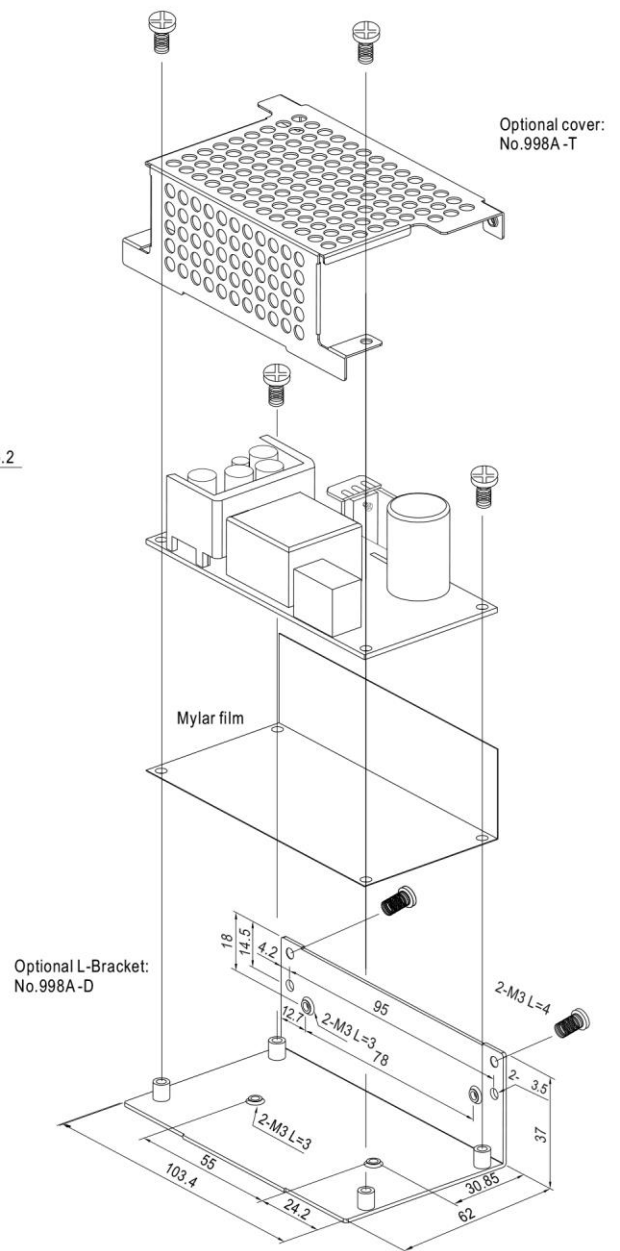
AC Input Connector (CN1) : JST B3P-VH or equivalent

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		

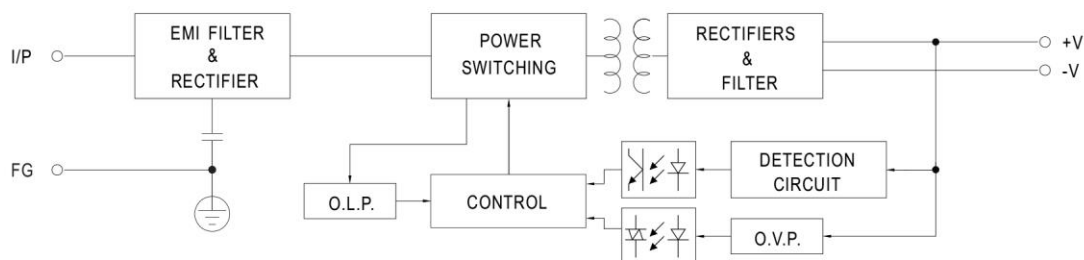
DC Output Connector (CN2) : JST B4P-VH or equivalent

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





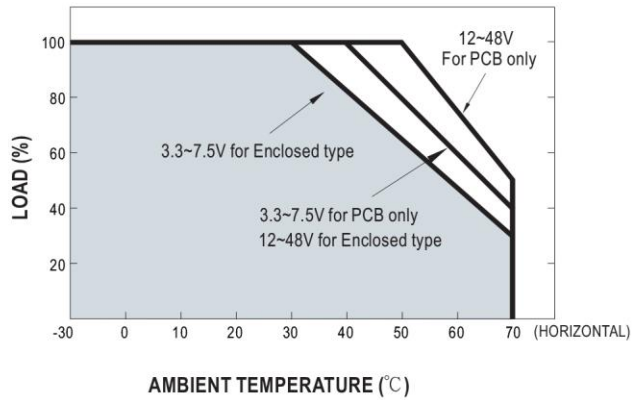
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■ Output Derating



■ Static Characteristics

