65W Single Output Switching Power Supply EPS-65S series

User's Manual
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TPTC004 UL62368-1 BS EN/EN62368-1 BS EN/EN60335-1 GB4943.1 IEC62368-1

ECO Automate Industrial Security Network Telecom

Features

- 3"×2" miniature size
- Universal AC input / Full range
- Class Ⅱ (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℃ wide range of operating temperature
- Operating altitude up to 5000 meters
- LED indicator for power on
- 3 years warranty

Applications

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

GTIN CODE

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

Description

EPS-65S is a 65W 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-65S is able to be used for Class Ⅱ (no FG) system design.

Model Encoding

EPS - 65 S - 3.3

- 3.3: Output voltage
- S: Small size
- 65: Output wattage
- EPS: Series name

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SPECIFICATION

ORDER NO.		EPS-65S-3.3	EPS-65S-5	EPS-65S-7.5	EPS-65S-12	EPS-65S-15	EPS-65S-24	EPS-65S-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	48V
	RATED CURRENT	10A	10A	8A	5.42A	4.34A	2.71A	1.36A
	CURRENT RANGE	0 ~ 11A	0 ~ 11A	0 ~ 8.8A	0 ~ 5.96A	0 ~ 4.77A	0 ~ 2.98A	0 ~ 1.49A
	RATED POWER	33W	50W	60W	65W	65.1W	65W	65.3W
	PEAK LOAD(10sec.) Note.2	36.3W	55W	66W	71.5W	71.6W	71.5W	71.5W
	RIPPLE & NOISE (max.) Note.3	80mVp-p	80mVp-p	80mVp-p	120mVp-p	150mVp-p	240mVp-p	300mVp-p
	VOLTAGE ADJ.RANGE	2.9~3.6V	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 Note.4	±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 Note.5	80 ~ 264VAC						
	FREQUENCY RANGE	47 ~ 63Hz						
	EFFICIENCY (Typ.)	80%	84%	85%	88%	89%	90%	91%
	AC CURRENT (Typ.)	1.5A / 115VAC 1A / 230VAC						
	INRUSH CURRENT (Typ.)	COLD STAR 30A/115VAC 50A/230VAC						
	LEAKAGE CURRENT(max.)	0.25mA/264VAC						
PROTECTION	OVERLOAD	115 ~ 150% rated output power						
		Protection type : Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	3.8~4.46V	5.75~6.75V	8.62~11.3V	13.8~16.2V	17.25~20.25V	27.6~32.4V	55.2~64.8V
		Protection type : Shut down o/p voltage, re-power on to recover						
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, period for 60min. each along X, Y, Z axes						
SAFETY & EMC (Note. 7)	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℃/ 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℃)						
	DIMENSION	76.2*50.8*24mm or 3" * 2" *0.945" inch (L*W*H)						
	PACKING	0.11Kg; 120pcs/14.2Kg/0.94CUFT						

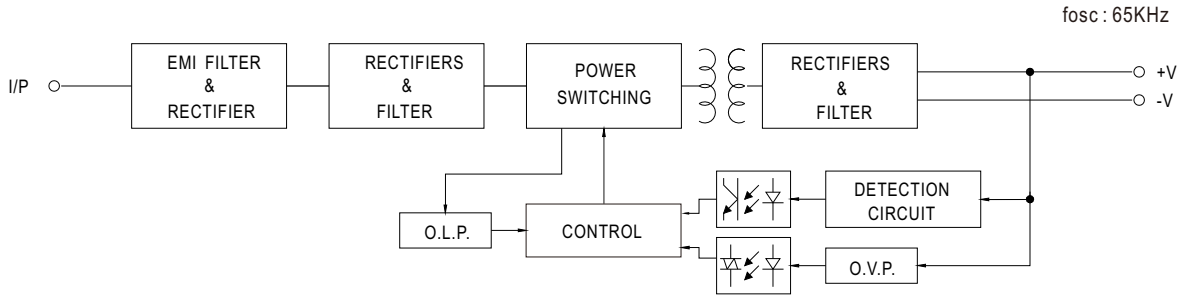
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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 0.1 μF & 47 μF 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. 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).
7. The power supply is considered a component which will be installed into a final equipment. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)

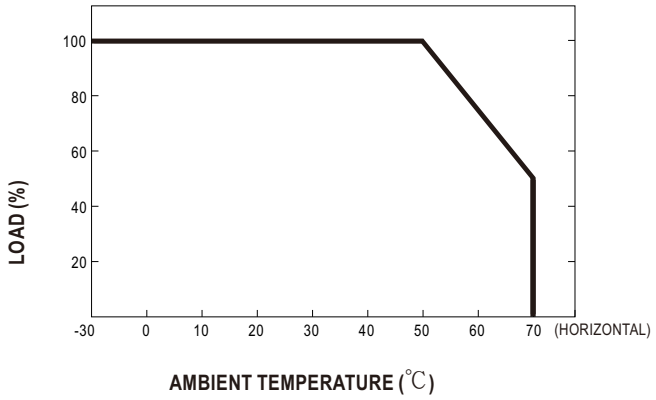
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Block Diagram

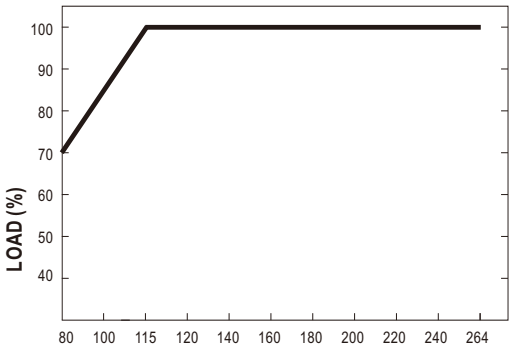


Derating Curve



AMBIENT TEMPERATURE (℃)

Static Characteristics

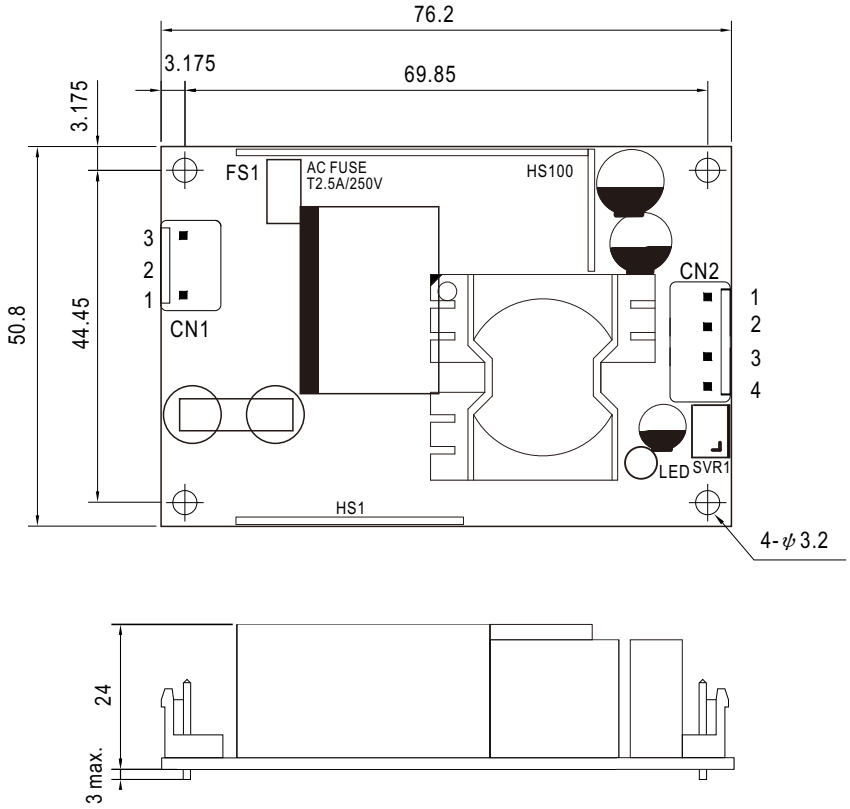


INPUT VOLTAGE (V) 60Hz

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■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)



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

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