

# EPS-65S Series

65W Single Output Switching Power Supply



## ■ 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

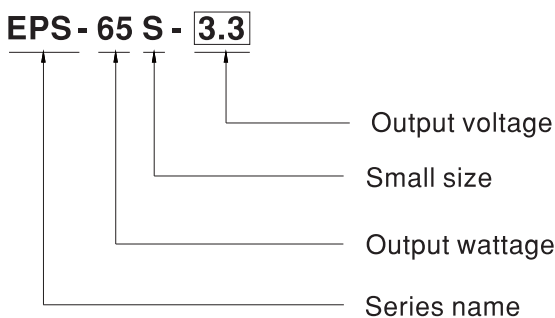
## GTIN CODE

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



### SPECIFICATION

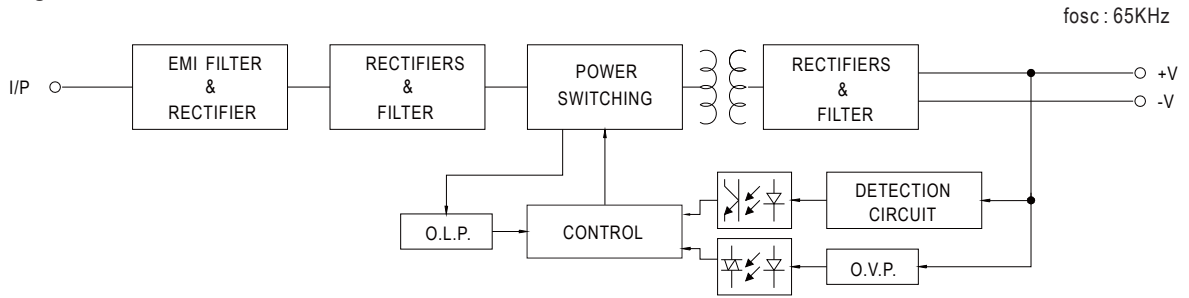
ORDER NO.		EPS-65S-3.3	EPS-65S-5	EPS-65S-7.5	EPS-65S-12	EPS-65S-15	EPS-65S-24	EPS-65S-48	
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	48V	
	RATED CURRENT	10A	10A	8A	5.42A	4.34A	2.71A	1.36A	
	CURRENT RANGE	0 ~ 11A	0 ~ 11A	0 ~ 8.8A	0 ~ 5.96A	0 ~ 4.77A	0 ~ 2.98A	0 ~ 1.49A	
	RATED POWER	33W	50W	60W	65W	65.1W	65W	65.3W	
	PEAK LOAD(10sec.) <small>Note.2</small>	36.3W	55W	66W	71.5W	71.6W	71.5W	71.5W	
	RIPPLE & NOISE (max.) <small>Note.3</small>	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 <small>Note.4</small>	± 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 <small>Note.5</small>	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 <small>Note.6</small>	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	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μ F &amp; 4μ F parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>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).</li> <li>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 <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>) Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></li> </ol>								

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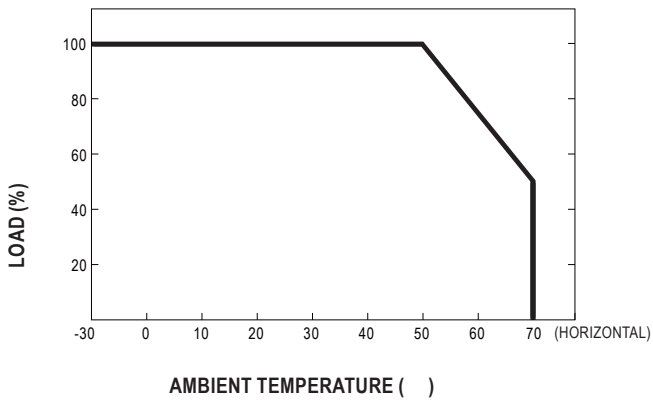
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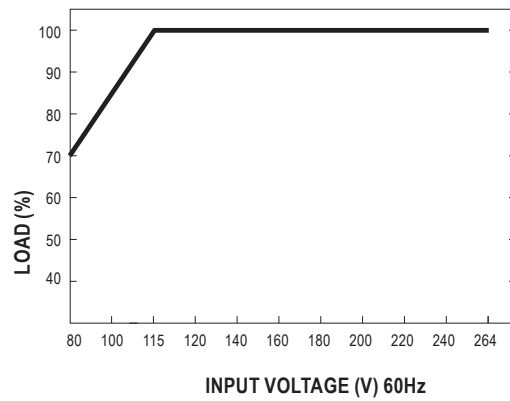
## Block Diagram



## Derating Curve

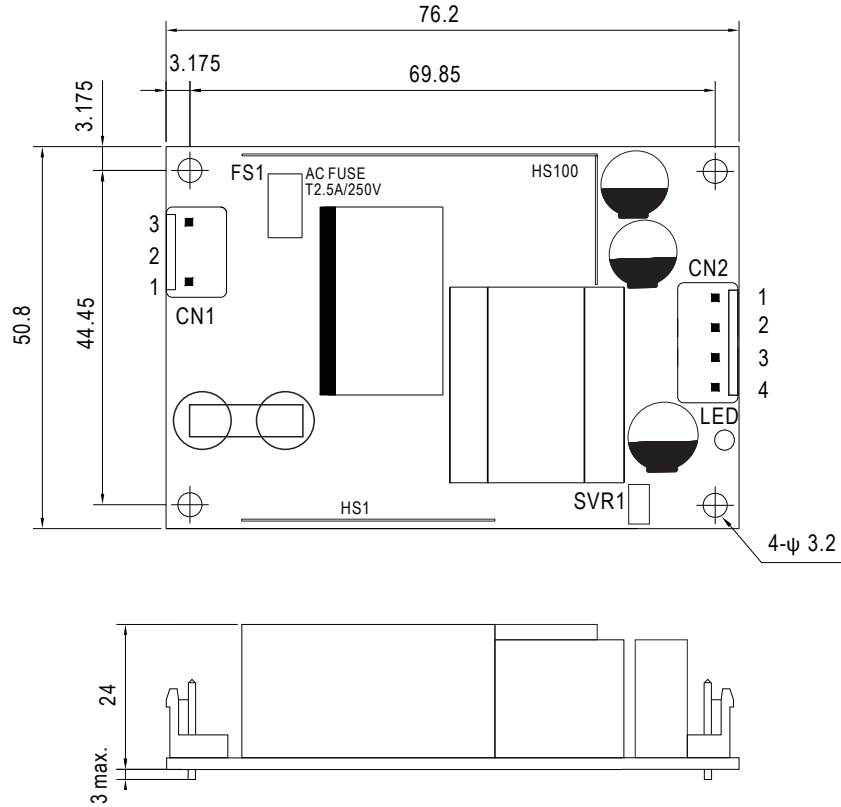


## Static Characteristics



### Mechanical Specification

(Unit: mm , tolerance  $\pm 1$ mm)



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>