

MEAN WELL EPS-65S Series 65W Single Output Switching Power Supply Owner's Manual

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MEAN WELL EPS-65S Series 65W Single Output Switching Power Supply





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













Applications

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

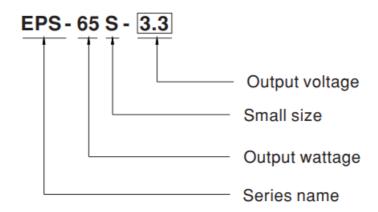
GTIN CODE

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 ClassII(no FG) system design.

Model Encoding



SPECIFICATION

| ORDEF | R NO. | EPS-65S -3.3 | EPS-65S -5 | EPS-65S -7.5 | EPS-65S -12 | EPS-65S -15 | EPS-65S -24 | EPS-65S -48 |
|------------|---------------------------------|--|---------------|-----------------|----------------|----------------|----------------|----------------|
| | DC VOLTAGE | 3.3V | 5V | 7.5V | 12V | 15V | 24V | 48V |
| | RATED CURREN T | 10A | 10A | 8A | 5.42A | 4.34A | 2.71A | 1.36A |
| | CURRENT RANG E | 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(10s ec.) 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.R ANGE | 2.9~3.6V | 4.7~5.5V | 7.12~8.3 V | 11.4~13. 2V | 13.5~16. 5V | 22.8~27. 6V | 45.6~52. 8V |
| OUTP UT | VOLTAGE TOLERANCE Not e.4 | ±2.0% | ±2.0% | ±2.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATI | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATI | ±2.0% | ±2.0% | ±2.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% |
| | SETUP, RISE TIM E | 500ms, 30ms / 230VAC 500ms, 30ms / 115VAC at full load | | | | | | |

| | HOLD UP TIME (Typ.) | 30ms / 230VAC 12ms / 115VAC at full load | | | | | | | |
|---------------------|-----------------------------|--|----------------|----------------|----------------|------------------|----------------|----------------|--|
| | VOLTAGE RANG E Note.5 | 80 ~ 264VAC | | | | | | | |
| | FREQUENCY RA | 47 ~ 63Hz | | | | | | | |
| | EFFICIENCY (Ty p.) | 80% | 84% | 85% | 88% | 89% | 90% | 91% | |
| INPU T | AC CURRENT (T yp.) | 1.5A / 115VAC 1A / 230VAC | | | | | | | |
| • | INRUSH CURRE NT (Typ.) | COLD STAR 30A/115VAC 50A/230VAC | | | | | | | |
| | LEAKAGE CURR ENT(max.) | 0.25mA/264VAC | | | | | | | |
| | | 115 ~ 1509 | % rated outp | out power | | | | | |
| | OVERLOAD | Protection type: Hiccup mode, recovers automatically after fault condition is removed | | | | | | | |
| PROT ECTI | OVER VOLTAGE | 3.8~4.46 V | 5.75~6.7 5V | 8.62~11. 3V | 13.8~16. 2V | 17.25~20 .25V | 27.6~32. 4V | 55.2~64. 8V | |
| ON | | Protection type : Shut down o/p voltage, re-power on to recover | | | | | | | |
| | WORKING TEMP. | -30 ~ +70°C (Refer to "Derating Curve") | | | | | | | |
| | WORKING HUMI DITY | 20% ~ 90% RH non-condensing | | | | | | | |
| | STORAGE TEMP. , HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | | | | | | |
| ENVI RON | TEMP. COEFFICI ENT | ±0.03% / °C (0 ~ 50°C) | | | | | | | |
| MENT | OPERATING ALT ITUDE Note.6 | 5000 meters | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | | | | |
| | SAFETY STAND ARDS | UL62368-1, TUV BS EN/EN62368- 1, BS EN/EN60335-1, CCC GB4943.1, EAC TP TC 004 approved | | | | | | | |
| | WITHSTAND VO LTAGE | I/P-O/P: 3KVAC | | | | | | | |
| SAFE TY & EMC | ISOLATION RESI STANCE | STANCE //P-O/P:100M Onms / 500VDC / 25°C/ /0% RH Compliance to BS EN/EN55032(CISPR32) Class B_BS EN/EN61000-3-2.3 GB9 | | | | | | | |
| (Note. 7) | EMC EMISSION | | | | | 3-2,3, GB9 | | | |
| | 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 | | | | | | | |
| | | | | | | | | | |

| | MTBF | 3334.3K hrs min. Telcordia SR-332 (Bellcore) ; 706.6K hrs min. MIL-HDBK-217F (25°C) | | | | |
|------------|-----------|---|--|--|--|--|
| OTHE RS | DIMENSION | 76.2*50.8*24mm or 3" * 2" *0.945" inch (L*W*H) | | | | |
| | PACKING | 0.11Kg; 120pcs/14.2Kg/0.94CUFT | | | | |

- 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of a mbient temperature.
- 2. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the ra ted power.
- 3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated wit h a 0.1uf & 47uf 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

NOTE

- 6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/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 fina I equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform the ese EMC tests, please refer to "EMI testing of component power.

(as available on http://www.meanwell.com)

* Product Liability Disclaimer For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

Block Diagram

fosc: 65KHz

EMI FILTER

RECTIFIERS

RECTIFIERS

SWITCHING

POWER

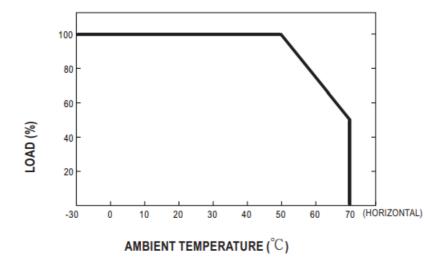
SWITCHING

FILTER

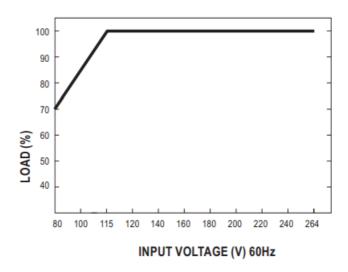
DETECTION
CIRCUIT

O.V.P.

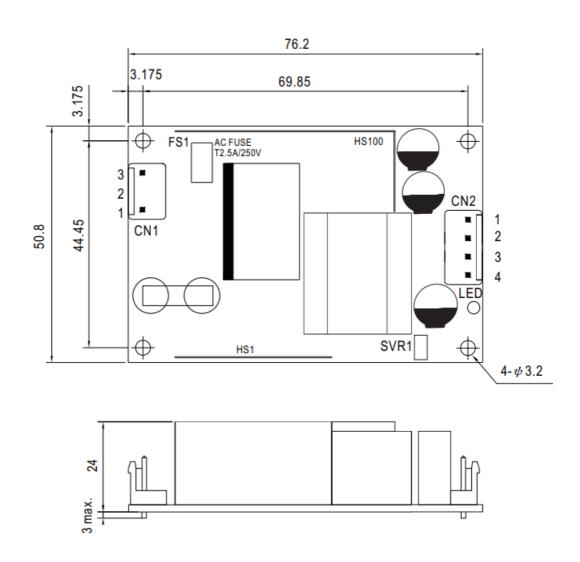
Derating Curve



Static Characteristics



Mechanical Specification



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

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

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

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

Installation Manual

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

Documents / Resources



MEAN WELL EPS-65S Series 65W Single Output Switching Power Supply [pdf] Owner's M anual

EPS-65S-SPEC_2023-09-18-082428_wbra.PDF, EPS-65S, EPS-65S Series 65W Single Output t Switching Power Supply, 65W Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply

Manuals+,