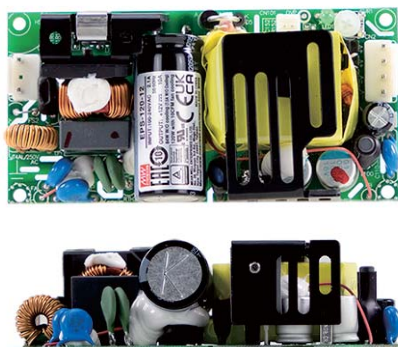




Наличие и актуальные цены на

**EPS-120-48**

<https://www.mean-well.ru/store/EPS-120-48/>



## Features

- 4"x2" miniature size
- Universal AC input / Full range
- EMI Class B for both Class I (with FG) and Class II (without FG) configuration
- No load power consumption < 0.3W
- High efficiency up to 91%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection for 84W and 120W with 10CFM forced air
- Built-in 12V/0.5A fan supply
- LED indicator for power on
- Operating altitude up to 5000 meters
- 3 years warranty

## Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus

## GTIN CODE

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

## Description

EPS-120 is a 120W highly reliable green PCB type power supply with a high power density on the 4" by 2" footprint. It accepts 80~264VAC input and offers various output voltages between 12V and 48V. The working efficiency is up to 91% and the extremely low no load power consumption is down below 0.3W. EPS-120 is able to be used for both Class I (with FG) and Class II (no FG) system design. EPS-120 has the complete protection functions; it is complied with the international safety regulations such as TUV BS EN/EN62368-1, UL62368-1 and IEC62368-1. EPS-120 series serves as a high price-to-performance power supply solution for various industrial applications.

## Model Encoding

EPS - 120 - 12

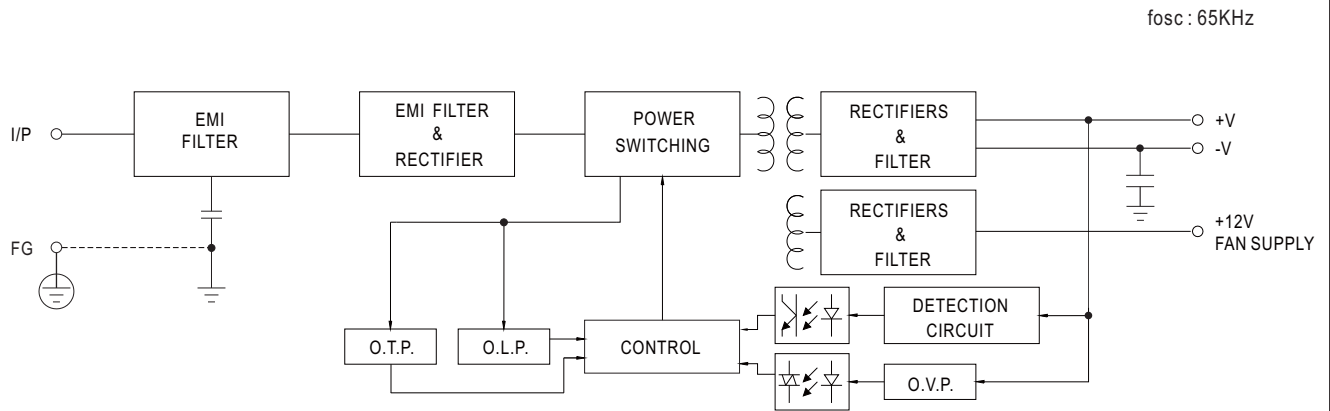
Output voltage  
Output wattage  
Series name



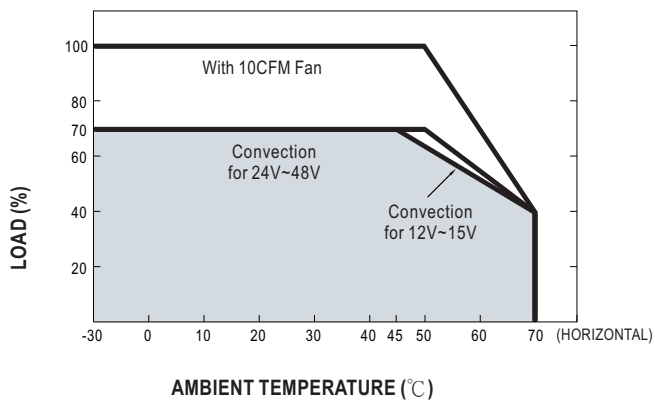
## SPECIFICATION

| MODEL                 |                              | EPS-120-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EPS-120-15   | EPS-120-24   | EPS-120-27   | EPS-120-48   |
|-----------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| OUTPUT                | DC VOLTAGE                   | 12V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 15V          | 24V          | 27V          | 48V          |
|                       | CURRENT                      | 10CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10A          | 8A           | 5A           | 4.5A         |
|                       |                              | Convection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 7.0A         | 5.6A         | 3.5A         | 3.15A        |
|                       | RATED POWER                  | 10CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 120W         | 120W         | 120W         | 121.5W       |
|                       |                              | Convection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 84W          | 84W          | 84W          | 85W          |
|                       | RIPPLE & NOISE (max.) Note.2 | 120mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 120mVp-p     | 150mVp-p     | 150mVp-p     | 200mVp-p     |
|                       | VOLTAGE ADJ. RANGE           | 11.4~12.6V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 14.3~15.8V   | 22.8~25.2V   | 25.6 ~ 28.4V | 45.6 ~50.4V  |
|                       | VOLTAGE TOLERANCE Note.3     | ± 2.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ± 2.5%       | ± 1.0%       | ± 1.0%       | ± 1.0%       |
|                       | LINE REGULATION              | ± 0.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ± 0.5%       | ± 0.5%       | ± 0.5%       | ± 0.5%       |
|                       | LOAD REGULATION              | ± 1.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ± 1.0%       | ± 1.0%       | ± 1.0%       | ± 1.0%       |
| INPUT                 | SETUP, RISE TIME             | 500ms, 30ms/230VAC      500ms, 30ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |              |              |              |
|                       | HOLD UP TIME (Typ.)          | 50ms/230VAC      10ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |              |              |              |
|                       | VOLTAGE RANGE Note.4         | 80 ~ 264VAC      113 ~ 370VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |              |              |              |
|                       | FREQUENCY RANGE              | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |              |              |              |
|                       | EFFICIENCY (Typ.)            | 88%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 88.5%        | 90%          | 90%          | 91%          |
|                       | AC CURRENT (Typ.)            | 2.1A/115VAC      1.2A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |              |              |              |
| PROTECTION            | INRUSH CURRENT (Typ.)        | COLD START 30A/115VAC      60A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |              |              |              |
|                       | LEAKAGE CURRENT              | <0.75mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |              |              |              |
|                       | OVERLOAD                     | 115~150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |              |              |              |
|                       | OVER VOLTAGE                 | 13.2 ~ 15.6V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 16.5 ~ 19.5V | 26.4 ~ 31.2V | 29.7 ~ 35V   | 52.8 ~ 62.4V |
| FUNCTION              | OVER TEMPERATURE             | Protection type : Shut down o/p voltage, re-power on to recover                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |              |              |              |
|                       | FAN SUPPLY                   | 12V@0.5A for driving a fan ; tolerance -15% ~ +10% at main output 40% rated current (10CFM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |              |              |              |
| ENVIRONMENT           | WORKING TEMP.                | -30 ~ +70°C (Refer to "Derating Curve")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |              |              |              |
|                       | WORKING HUMIDITY             | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |              |              |
|                       | STORAGE TEMP., HUMIDITY      | -40 ~ +85°C, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |              |              |              |
|                       | TEMP. COEFFICIENT            | ± 0.03%/°C (0 ~ 50°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |              |              |              |
|                       | OPERATING ALTITUDE Note.6    | 5000 meters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |              |              |              |
| SAFETY & EMC (Note 5) | VIBRATION                    | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |              |              |              |
|                       | SAFETY STANDARDS             | UL62368-1, TUV BS EN/EN62368-1, IEC62368-1, CCC GB4943.1, 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:100M Ohms / 500VDC / 25°C / 70% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |              |              |              |
| OTHERS                | 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, BS EN/EN61000-6-2, heavy industry level, criteria A, EAC TP TC 020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |              |              |              |
|                       | MTBF                         | 3746.9K hrs min.    Telcordia SR-332 (Bellcore) ; 491.2K hrs min.    MIL-HDBK-217F (25°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |              |              |              |
| NOTE                  | DIMENSION                    | 101.6*50.8*29mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |              |              |              |
|                       | PACKING                      | 0.15Kg; 72pcs/11.8Kg/0.82CUFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |              |              |              |
| NOTE                  |                              | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 <math>\mu</math>F &amp; 47 <math>\mu</math>F parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>5. 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." (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>)</p> <p>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).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |              |              |              |              |

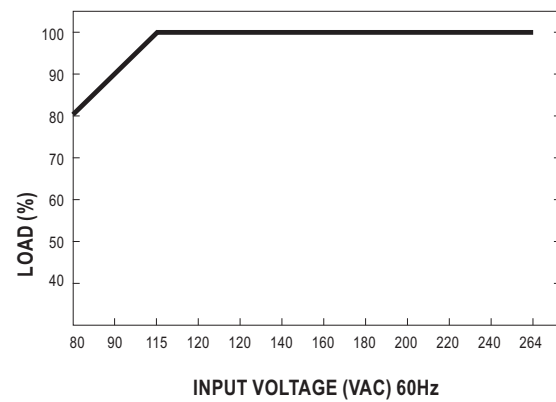
## Block Diagram



## Derating Curve

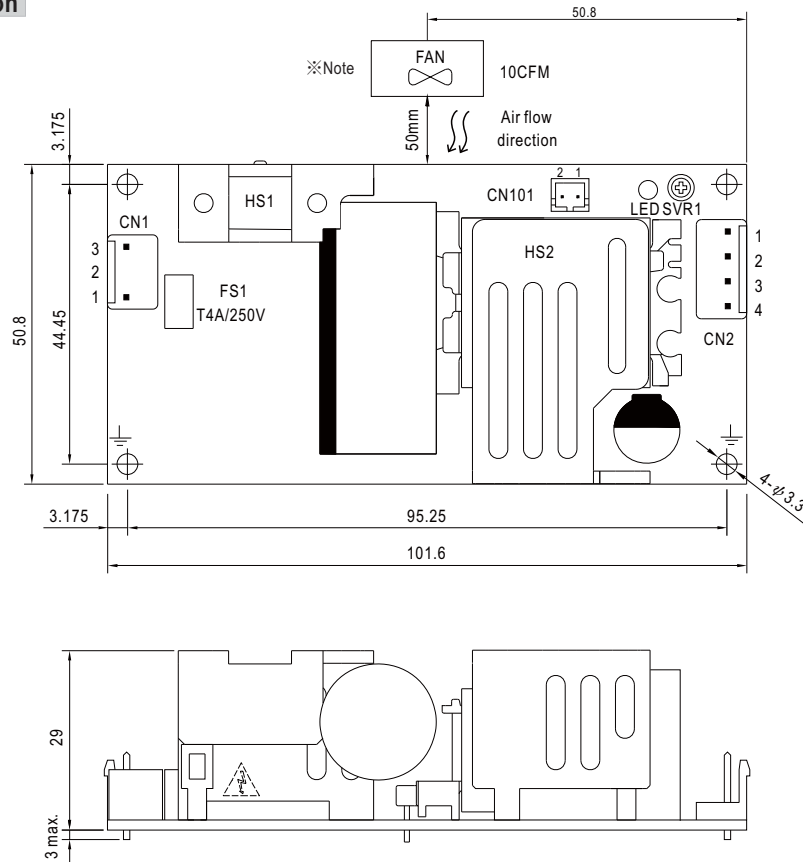


## Output Derating VS Input Voltage



## Mechanical Specification

Unit: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       |                       |                                |

⏏ : Grounding required



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

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         |                       |                                |

FAN Connector(CN101) : JST B2B-PH-K-S or equivalent

| Pin No. | Assignment | Mating Housing          | Terminal                         |
|---------|------------|-------------------------|----------------------------------|
| 1       | +12V       | JST PHR-2 or equivalent | JST SPH-002T-P0.5S or equivalent |
| 2       | DC COM     |                         |                                  |

※Note : 1. The FAN SUPPLY is designed to serve as the source of the additive external fan for the cooling of the power supply, enabling the full load delivery and assuring the best life span of the product. Please do not use this FAN SUPPLY to drive other devices.

2.The PCB type(Blank type)model delivers EMI Class B for both conducted emission and radiated emission for the power supply, when configured into either Class I (with FG) or Class II (without FG) system.

## Installation Manual

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