

DIN-rail Power Adapter

WI-DP120V-48V



Overview

Wi-Tek has launched a series of DIN-rail power adapter, supporting a full range of 100~240V AC input, respectively, can output 30W,75W,120W,240W,480W power supply for industrial switch continuous power supply. The metal shell design is conducive to the heat dissipation of the equipment. In addition, it has over-current protection, over-voltage protection, short circuit protection, etc., to ensure the safe power supply of the equipment. The series are single phase PSU, providing adjustable DC output voltage. They have high efficiency and operate in wide temperature range.

Features

DC Output Voltage Adjustable

The DC voltage output range can be flexibly adjusted to meet the requirements of the project site.

Universal AC input/ Full range

Wide voltage design, can support 100~240V AC voltage input, adapt to the global mains voltage, to meet the needs of various industrial environments.

Multiple protection mechanisms

Support Short Circuit/Overload/Over Voltage/Over Temperature protection to ensure long-term stable equipment operation.

Great partner with industrial switch

The series adapters can output up to 480W of power, providing a powerful and stable power supply system for industrial PoE switches

Specifications



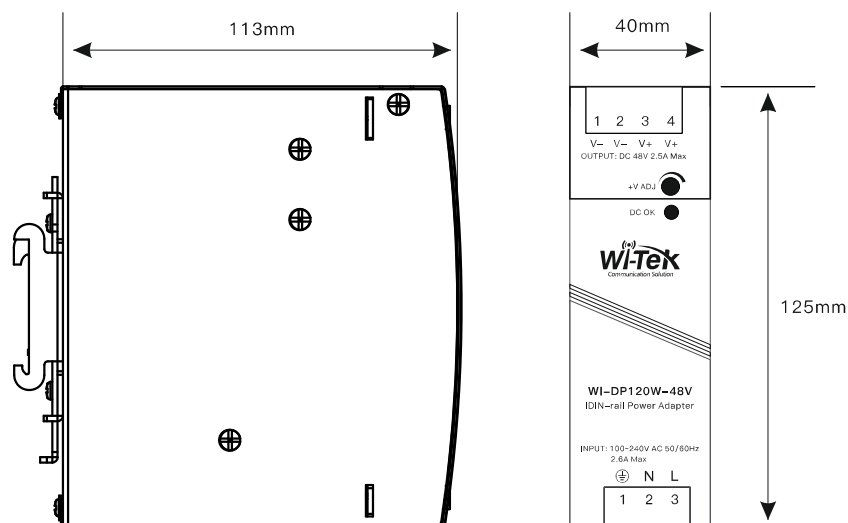
Model	WI-DP120W-48V
Output	
DC Voltage	48V
Rated Current(Max.)	2.5A
Current Range	0-2.5A
Rate Power(Max.)	120W
Ripple & Noise(Max.)	150mVp-p
Volatge ADJ. Range	48-55V
Voltage Tolerance	± 2.0%
Link Regulation	± 0.5%
Load Regulation	± 1.0%
Setup, Rise Time	1200ms, 60ms/230VAC at full load 2500ms, 60ms/115VAC at full load
Hold Up Time (Typ.)	16ms/230VAC at full load 10ms/115VAC at full load
Input	
Rated Input	100~240VAC
Voltage Range	90~264VAC 127~370VDC
Frequency Range	47-63Hz
Efficiency	89%
AC Current (Typ.)	2.25A/115VAC 1.3A/230VAC
Inrush Current (Typ.)	20A/115VAC 35A/230VAC
Leakage Current	<1mA/240VAC

Model	WI-DP120W-48V
Protection	
Overload	105~130% rated output power Protection type: Hiccup Mode- recovers automatically after fault condition is removed
Over Voltage	56~65V Protection type : Shut down o/p voltage, re-power on to recover
Over Temperature	Protection type : Shut down o/p voltage, re-power on to recover
Environment	
Working Environment	-20°C~+70°C(Refer to "Derating Curve") ; 20%~95% (Non-condensation)
Storage Environment	-40°C~+85°C; 10%~95% (Non-condensation)
Other	
Product Dimension(W.H.D)	40*125*113mm
Product Weight	0.6kg
Installation	DIN-rail

Note

1. All parameters NOT specially mentioned at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple&noise are measured from peak to peak with band width limit of 20MHz(0.1uF and 47uF/50V parallel capacitor under DC output full load,AC nominal input 25 °C ambient temperature).
3. Installation clearances: top with 40mm, bottom with 20mm, left and right with 5mm. increase the space to10-15mm when the adjacent device is heat source.
4. Derating may be needed under low input voltage. Please check the derating curve for more details.
5. Efficiency test after 30 minutes of burn-in.
6. The ambient temperature derating of 3.5°C/1000m for operating altitude higher than 2000m(6500ft).

Mechanical Specification



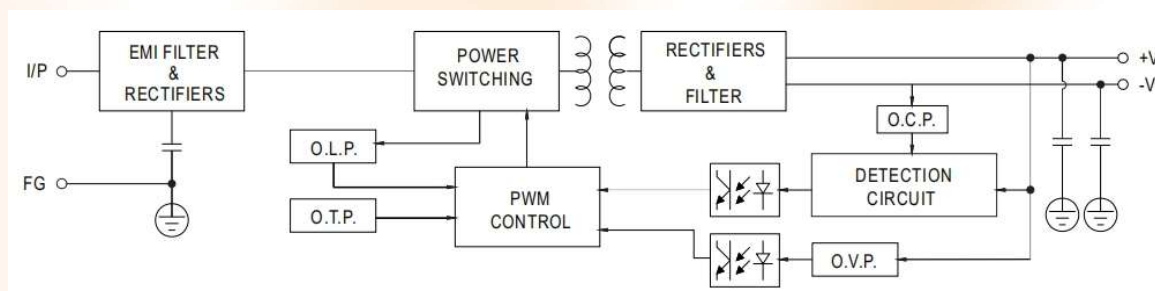
Input

No.	Description
1	FG ⊕
2	AC/N
3	AC/L

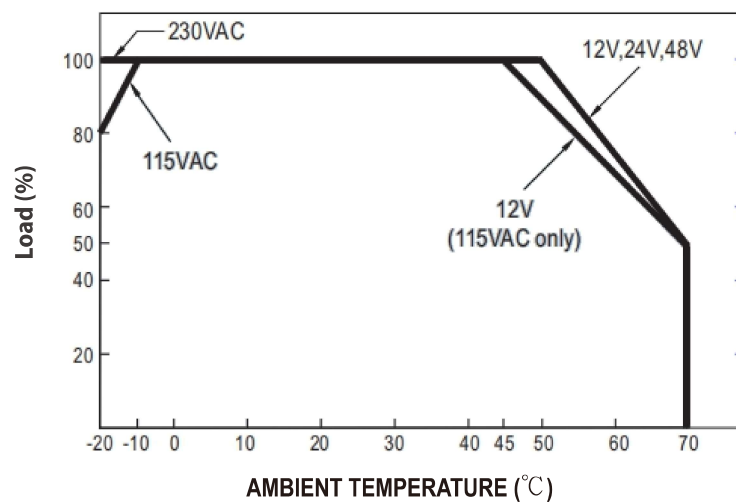
Output

No.	Description
1,2	DC OUTPUT -V
3,4	DC OUTPUT +V

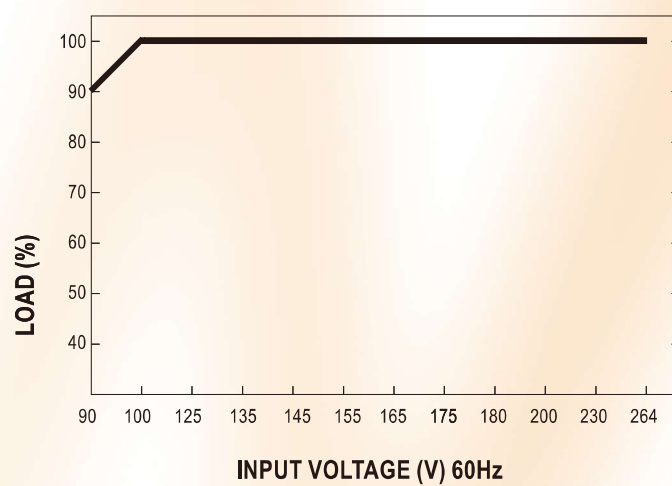
Block Diagram



Deduction Curve and Temperature



Minus Output and input Voltage Curves



Frequently asked questions

1. Precautions for selecting and installing power cables

The heat resistance of the power cord is generally at a minimum of 80°C, such as UL1007 wire.

Screwdriver A flat-head screwdriver with a width of 3mm is recommended.

Recommended parameters for selecting input and output cables and installing them are as follows:

Input Recommendation	Wire Size/AWG	Wire Diameter/mm ²	Strip Length/mm	Torque/N·m
WI-DP30W-12V	26-14	single core wire: 0.14-2.5 bunch wire: 0.14-1.5	6.8	0.5
WI-DP75W-48V	24-12	single core wire: 0.34-4 bunch wire: 0.34-2.5	7-8	0.4
WI-DP120W-48V	20-10	single core wire: 0.5-6 bunch wire: 0.5-4	7.5-8.5	0.5
WI-DP240W-48V	20-10	single core wire: 0.5-6 bunch wire: 0.5-4	8	0.6
WI-DP480W-48V	20-10	single core wire: 0.5-6 bunch wire: 0.5-4	8	0.6

Output Recommendation	Wire Size/AWG	Wire Diameter/mm ²	Strip Length/mm	Torque/N·m
WI-DP30W-12V	24-12	single core wire: 0.2-2.5 bunch wire: 0.2-1.5	6.8	0.5
WI-DP75W-48V	24-12	single core wire: 0.34-4 bunch wire: 0.34-2.5	7-8	0.4
WI-DP120W-48V	26-10	single core wire: 0.12-6 bunch wire: 0.12-4	7.2	0.5
WI-DP240W-48V	26-10	single core wire: 0.12-6 bunch wire: 0.12-4	7.5-8.5	0.5
WI-DP480W-48V	22-10	single core wire: 0.34-6 bunch wire: 0.34-4	7.5-8.5	0.5

2. 48V guide power supply DC output cable instructions

- A. Single Output Merge: Connect terminals 1 and 2 in parallel as one group, and terminals 3 and 4 in parallel as another group. Then, connect these two groups to the positive and negative terminals of the same DC load device. Note that terminals 1 and 2 are interconnected, and terminals 3 and 4 are also interconnected. Ensure that the total current does not exceed the rated current of the device during connection.
- B. Dual Output Merge: Connect terminals 1 and 3 to the positive and negative terminals of one DC load device, and connect terminals 2 and 4 to the positive and negative terminals of another DC load device. The polarity can be flexibly arranged. For example, terminal 1 can be connected to the positive terminal, and terminal 3 or terminal 4 can be connected to the negative terminal.

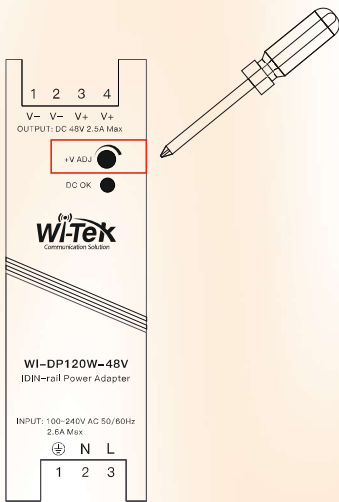


Output

No.	Description
1,2	DC OUTPUT -V
3,4	DC OUTPUT +V

3. The output voltage adjustment method

- A. A small plum screwdriver to turn the shift ADJ
- B. Use the voltmeter to check the specific voltage adjustment



4. What is DC OK Mean

LED indicator, shows normal operation when connected



5. Whether DC input is supported

127–370V DC input is supported. The connection modes are as follows



Input

No.	Description
1	FG $\oplus$
2	AC/N or DC -
3	AC/L or DC +

Package Contents

Welcome to order our products. After purchasing, you will receive:

Items	Quantity
Power Adapter	1 pcs



Wireless-Tek Technology Limited
Address:Building 3, Units 1801-1807, 1812, Huaqiang Era Plaza, Tangwei Community, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province, China.
Website:www.wireless-tek.com
Tel:86-0755-32811290
Email:sales@wireless-tek.com
Technical Support:tech@wireless-tek.com



Technical Support



Cloud Management



Company Website