Product datasheet

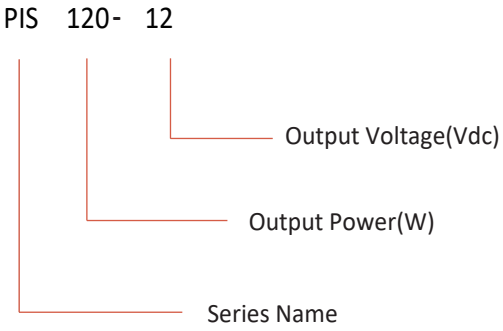
PIS120 120W

AS/NZS 62368.1 EN IEC 62368-1 IEC62368-1 EN IEC62368-1 EN IEC62368-1 TP TC 004/020 UL508

Product family features

- Universal Input 90~264Vac/127-370Vdc
- 100% Full Load Burn-in Test
- 150% peak load capability
- Cooling by Free Air Convection
- All Round Protections: SCP/OLP/OVP/OTP
- LED Indicator for DC Power On
- LED Indicator for DC Low
- 3 Years Warranty

Naming rules



Model List

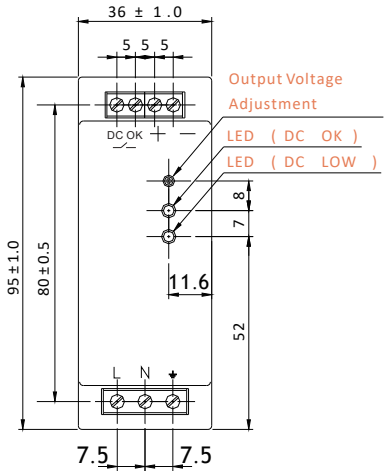
Product Modle	Input voltage	Output power	Output voltage	VoltageADJ. Range	Output current	Ripple	Efficiency
PIS120-12	90-264Vac 127-370Vdc	120W	12V	12-14V	10A	100mv	86%
PIS120-24		120W	24V	24-28V	5A	120mv	88%
PIS120-48		120W	48V	48-55V	2.5A	150mv	89%

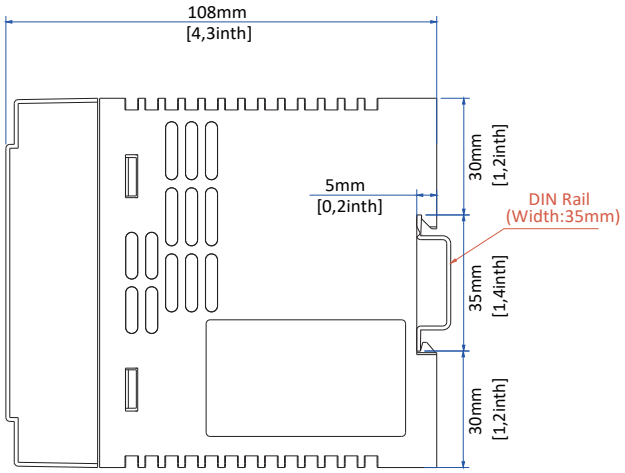
Electrical Specifications

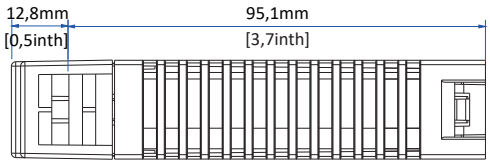
	Parameter	Notes / Conditions
Output	Line regulation	±1%
	Load regulation	±2%
	Voltage accuracy	±1%
	Turn-on time	<2500ms(115VAC Full load),<1200ms(230VAC Full load)
	Hold-up time	>10ms (115VAC Full load), >16ms (230VAC Full load)
	Rise time	<200ms (115VAC Full load), <200ms (230VAC Full load)
Input	Input voltage range	90-264VAC [127 ~ 370VDC]
	Input current	<3A (115V AC & Full load) ;<1.5A (230V AC & Full load)
	Input frequency	0/50-60Hz
	On/off times	> 10,000 times
	Inrush current	<40A（115VAC Full load），<70A（230VAC Full load）
	Standby loss	<1W （115/230VAC No load）
Protection & Safety	Short protection	Shut off output voltage, the power supply will recover after the power is turned on again
	Over load protection	Normally works within 105-150% rated output power for more than 3 seconds and then shut down o/p voltage Protection type: ＞150% rated power,Constant current limiting, recovers automatically after fault condition is removed
	Over output voltage protection	PIS120-12: 15-17V; PIS120-24: 28-34V; PIS120-48: 60-66V Enter the overvoltage protection state, the input power consumption of the power supply is less than its no-load power, there is no output voltage, the fault source needs to be eliminated, and the AC voltage should be restarted to resume normal operation.
	Over temp protection	(1) When the ambient temperature exceeds above over temperature protection value, the protection will bestarted and the output voltage will be cut off in order to protect the power supply; (2) The power supply will recover after the power is turned on again
	Hi-potĀ	I/P-O/P：3kV & 5mA & 60S；
	Surge	L-N:2KV
	Leakage current	<1mA (230V AC & Full load)
	Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/ 70% RH

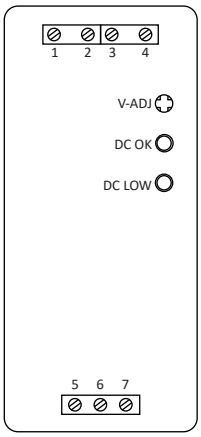
	Parameter	Notes / Conditions
Environment	Surrounding air temperature	Ta= -20-70°C Pls refer the derating curve
	Operating Humidity	20-95% RH, non-condensing
	Storage Temp./Humidity	-40-+85°C, 10-95% RH, non-condensing
	Temp-coefficient	±0.03%/°C (0 ~ 50°C)
	Vibration Resistant	10 ~ 500Hz, 2G 10minutes/cycle, X、Y、Z axis/60 minutes Installation: meet IEC60068-2-6
Certification & Standards	Certified	CE, EAC, UL508, UKCA, TUV, RCM+SAA,
	Safety	IEC 62368-1:2018; TP TC 004/2011; EN 55035:2017+A11:2020; BS EN 55035:2017+A11:2020;AS/NZS 62368.1:2022
	EMC	TP TC 002/2011:EN55032:2015+A11:2020(CIass B); EN IEC 61000-3-3:2019 +A2:2021; EN61000-3-3:2013+A2:2021: EN 55035:2017+A11:2020:BS EN 55032:2015+A11:2020:BS EN IEC61000-3-2:2019+A1:2021(CaSSA);BS EN61000-3-3:2013+A2:2021:BS EN 55035:2017+A11:2020
Miscellaneous	MTBFĀ	50,000H,MIL-HDBK-217F(25°C)
	Dimension	36 x 95.3 x 108.0mm
	Packaging	450g 22pcs/9.9kg/0.7cuft/carton 425*320*200mm (L*W*H)
	DC-OK led	LED(Green) DC OK LED light will be ON when the power supply is properly operated
	DC-Low led	LED(Red)： 1. the output voltage are lower than rating voltage*80%(±5%）.
Note	All specifications valid at nominal voltage 230VAC, Rated full load and +25°C after warm-up time, unless otherwise stated. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor 3. Accuracy： include the setting tolerance, line regulation and load regulation. 4. Power supply that is as a part of system， must be test before install in the end of system. 5. Installation clearances : 25mm on top, 25mm on the bottom, 25mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source. 25mm clearance is recommended. 6. Derating may be needed under low input voltage. Please check the derating curve for more details. 7.The ambient temperature derating of 3.5°C/1000m with fan-less models and of 5°C /1000m with fan models for operating altitude higher than 2000m(6500ft).	

Derating curve chart







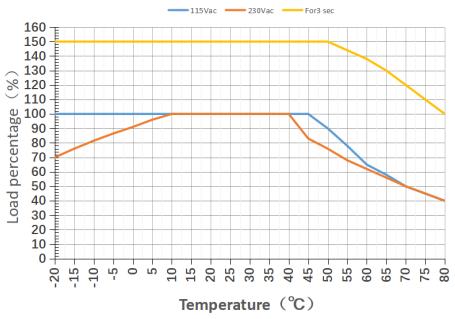


No	Marking	Assignment
1	DC OK	DC OK
2		
3	DC(+)	DC(+)Output terminal
4	DC(-)	DC(-)Output terminal
5	AC(L)	AC(L)input terminal
6	AC(N)	AC(N)input terminal
7		NC
/	V-ADJ	DC Output voltage adjustment trimmerÃ
/	DC OK	DC Output OK indication LED(Green)
/	DC LOW	DC Output Low indication LED(Red)

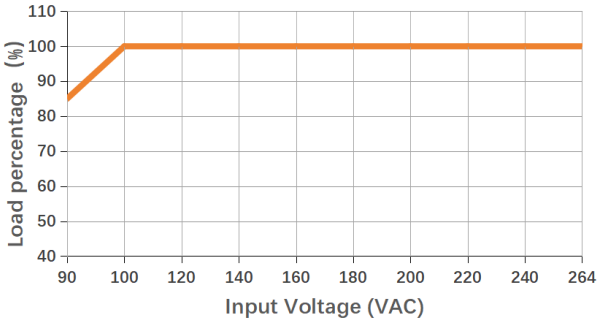
Product datasheet

Reduction Curve Chart

Temperature reduction curve

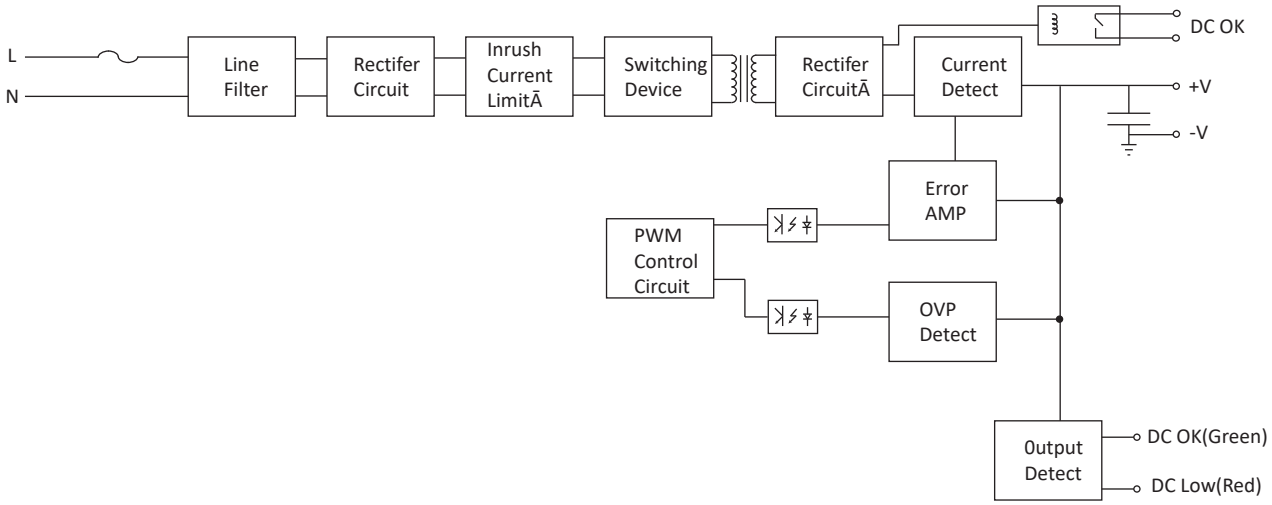


Input Voltage Derating Curve



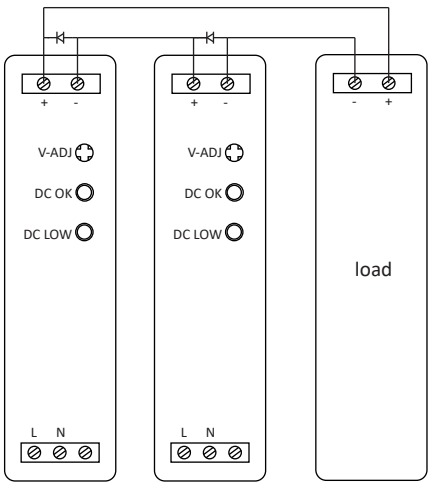
Note:Input Derating not evaluated by UL

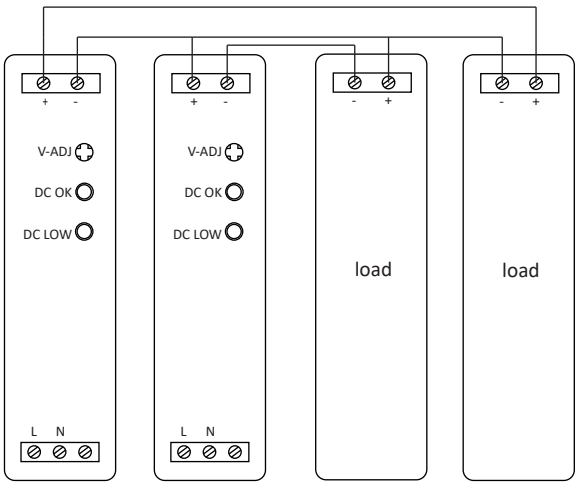
Block diagram



Application note

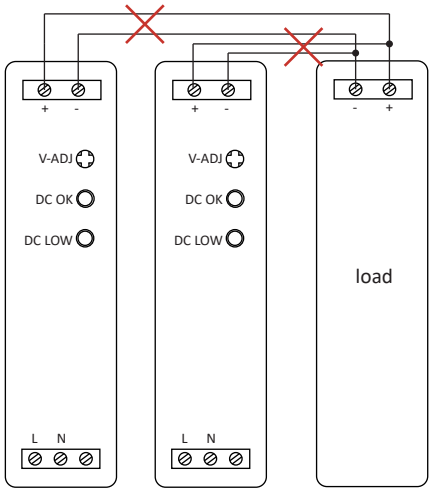
A. Series operation



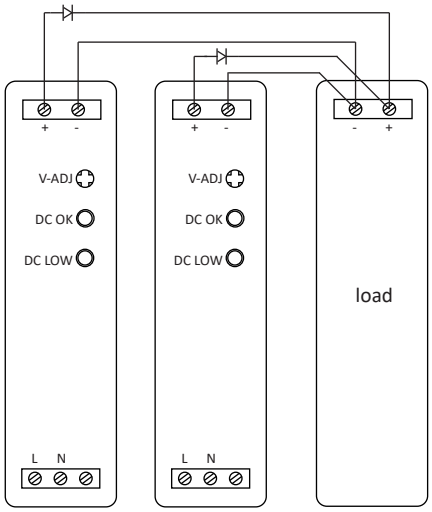


Note：
1. Series operation can be connected as shown in above;
2. Load current should be less than the current value of the product with the lowest output current specified at the product specification with the power supply at series connection.

B. Series operation



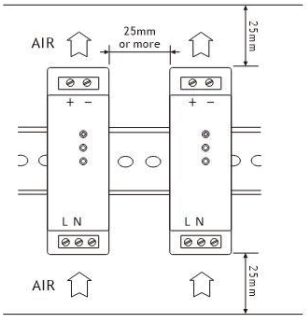
Parallel Operation A
(Unable to use)



Parallel Operation B
(Backup)

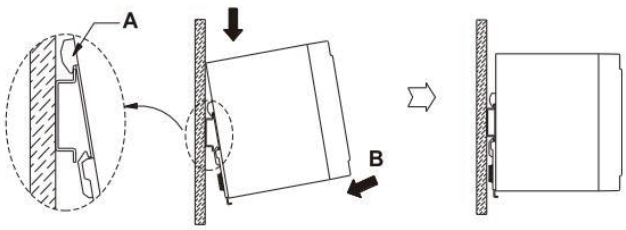
Note:
1. Parallel operation should be composed with the same products, while the connection should be as shown as“Parallel operation B”;
2. In parallel operation B, current capacity cannot be increased, while it should be used for backup only. Moreover,diode that is to be added during parallel operation should be selected after considering its voltage drop, output voltage and current capacity.

C. Mounting spacing



Mounting method should be considered with airflow. Leave enough space between the units when several units are mounted together. Forced air cooling makes protection against heat better.

How to fixĀ



Remove the power supply to D direction, pulling C part by using tools, such as a screwdriver, to downward direction.

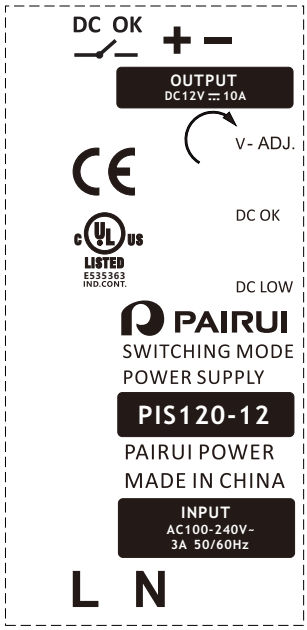
d. Cautions

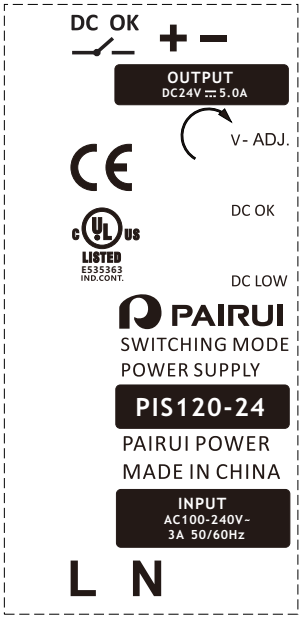
(1) Please confirm if the capacity of the product is suitable for your intended application before putting it in use;
(2) Only the rated input voltage specified on the product should be used;
(3) Only the wires with rated capacity should be connected to this product, as allowable voltage and current is varied according to each type of wire;
(4) Ground terminal of the power supply must be grounded before use to prevent electric shock or electro-magnetic interference;
(5) Be cautions to keep the product clean as foreign matter near the input & output terminal or inside if the product could cause series damages;
(6) If a fuse installed in the product blows off, the product should experience damages not only to the fuse but also to other parts as well. Therefore, the product is to be required for maintenance work from customer service department as well as replacement of the fuse;
(7) Due to constant leakage current flows within the product, extra caution should be made if multiple number of products are used connecting to each other as total leakage current could be amounted beyond the capacity;
(8) Be sure to avoid any physical contact with the product since some of the parts inside of the product are beingfunctioned at high voltage, which could cause serious electric shock;
(9) For the purpose of safety as well as reliability of the product, please avoid using the product at the followingsites: - A place near water or fire - A place with high room temperature and poor ventilation - A place with a presence of foreign subject or dust - A place near volatile or flammable compounds - A place with high humidity- A place vulnerable for vibration or shock;
(10) Do not inspect or repair the product while the power is applied;
(11) Unauthorized modification should be avoided in order to prevent series injury or physical loss due to any malfunction;
(12) In case of power outage while in operation, be sure to turn off the power supply.

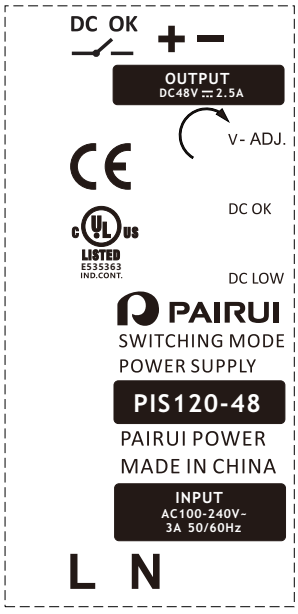
e. Warranty

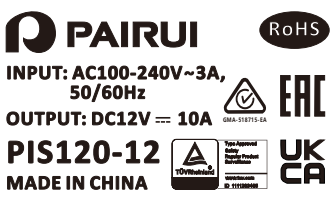
(1) Repair service will be provided for free upon any mechanical, technical or functional defects during theguaranteed warranty, however, any defects or malfunction due to international infliction or negligence by customers will be repaired at the customer's expense;
(2) Guaranteed warranty of the product runs for 3 years, while appearance and specification of the product is subject for change without any prior notification for the purpose of quality improvement of the product.

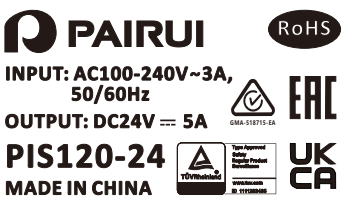
Tag information

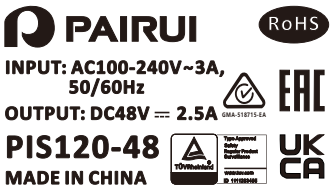












NOTE: FOR USE IN A CONTROLLED ENVIRONMENT.REFER TO MANUAL FOR ENVIRONMENTAL CONDITIONS.
REMARQUE :POUR UNE UTILISATION DANS UN ENVIRONNEMENT CONTRÔLÉSE RÉFÉRER AU MANUEL POUR LES CONDITIONS ENVIRONNEMENTALES.

Revision history

2024.06.8	Publication and distribution
2025.03.25	Add on page 1 VoltageADJ. Range,Remove packaging information,increase 150% peak load capability, Modify the temperature derating curve； Adjust the input voltage range