HIS150

DIN rail power supplies for 1-phase system
AC-DC 150W

Product Family Features

- Universal Input 85~264VAC;
- Cooling by Free Air Convection
- Low ripple, noise
- High efficiency, perfect protection function
- Protection, no-load loss＜0.3W
- 3 years of quality assurance
- 100% high temperature aging and testing

EN IEC62368-1 EN IEC62368-1 EN IEC62368-1 I.T.E E507552 UL 62368-1 IEC62368-1 TP TC 004/020

Models

Model Number	Output Voltage	Input Voltage	Output Current	Efficiency	Ripple
HIS150-12	12VDC	100-120VAC	8.5A	88%	120mV P-P
		200-240VAC	10.5A		
HIS150-15	15VDC	100-120VAC	6.8A	89%	120mV P-P
		200-240VAC	8.4A		
HIS150-24	24VDC	100-120VAC	5.31A	89%	150mV P-P
		200-240VAC	6.25A		
HIS150-48	48VDC	100-120VAC	2.72A	89%	200mV P-P
		200-240VAC	3.2A		

Product Datasheet

Input Specifications

Parameter	Min.	Typ.	Max.	Note
Input Voltage Range (AC)	85V	-	264V	
Input Voltage Range (DC)	127V	-	370V	
Input Frequency	47Hz	-	63Hz	
Nominal Input Voltage	100VAC	-	120VAC	
	200VAC	-	240VAC	
Input current	-	-	3.0A	115Vac&full load
	-	-	1.8A	230Vac&full load
Inrush Current Cold Start	-	-	45A	115Vac&full load
	-	-	60A	230Vac&full load
Leakage Current	-	-	1mA	230Vac&full load

* The power supply can operate with DC input. Please connect the positive terminal to the L terminal and the negative terminal to the N terminal.

Output Specifications

Parameter	Min.	Typ.	Max.	Note
Output Voltage Accuracy	-	-	±2%	
Line Regulation	-	-	±1%	
Load Regulation IOUT=0%~100% of IOUT,Rated	-	-	±1%	
Output Voltage adjust-range	11.3V	-	12.6V	HIS150-12
	13.7V	-	16.3V	HIS150-15
	23.1V	-	25.9V	HIS150-24
	44.0V	-	50.0V	HIS150-48

General Specifications

Parameter	Min.	Typ.	Max.	Note
Temperature Coefficiency	-	-	±0.03%/˚C	0~45˚C
Turn-on time	-	-	3000mS	115Vac&full load
	-	-	1500mS	230Vac&full load
Hold-up time	-	-	10mS	115Vac&full load
	-	-	20mS	230Vac&full load
Rise time	50mS	-	-	115Vac&full load
	30mS	-	-	230Vac&full load
Recommended External Fuse	-	-	-	
Operating Temperature Range	-30˚C	-	70˚C	
Storage Temperature	-40˚C	-	85˚C	
Storage Humidity	20%	-	95%	non-condensing
Operating Altitude	0m	-	5000m	
Case Material	Plastic Case			
Cooling Method	Air convection cooling			
Vibration	10 ~ 500Hz, 2G 10minutes/cycle, X、Y、Z axis/60 minutes Installation: meet IEC60068-2-6			
MTBF	200K hrs min. MIL-HDBK-217F(25)			
Size	105*90*58.4mm			
Weight	310g			

Safety&EMC Compliance

Safety	TUV Mark	EN 62368-1:2020+A11
	CB scheme	IEC 62368-1:2018
	SAA	-
	EAC	TP TC 004/2011
	CE	-
	UKCA	-
Industrial Control Equipment	UL/cUL listed	UL 62368-1and CSA C22.2 No.62368-1:19(File No. E507552)
Isolation Voltage 1 minute, leakage current 5mA max	Ip to Op:3kV	
Isolation Resistance 500VDC, 25°C, 70%RH	100M Ω	
RoHS	RoHS(2011/65/EU) (EU)2015/863	
EMC	CE&RE	Generic Standards: EN 55032:2015+A11:2020 EN 55035:2017/A11:2020
	ESD	IEC 61000-4-2 Criteria A Air Discharge:8KV Criteria A contact Discharge :4 kV
	RS	IEC 61000-4-3 Criteria A 80 MHz to 1000 MHz 10V/m(measured unmodulated), 1 kHz, Sine wave,80%, AMp modulation
	EFT	IEC 61000-4-4 Criteria A ±2 kV(peak) 5/50ns Tr/Th 5kHz Repetition Frequency

Safety&EMC Compliance

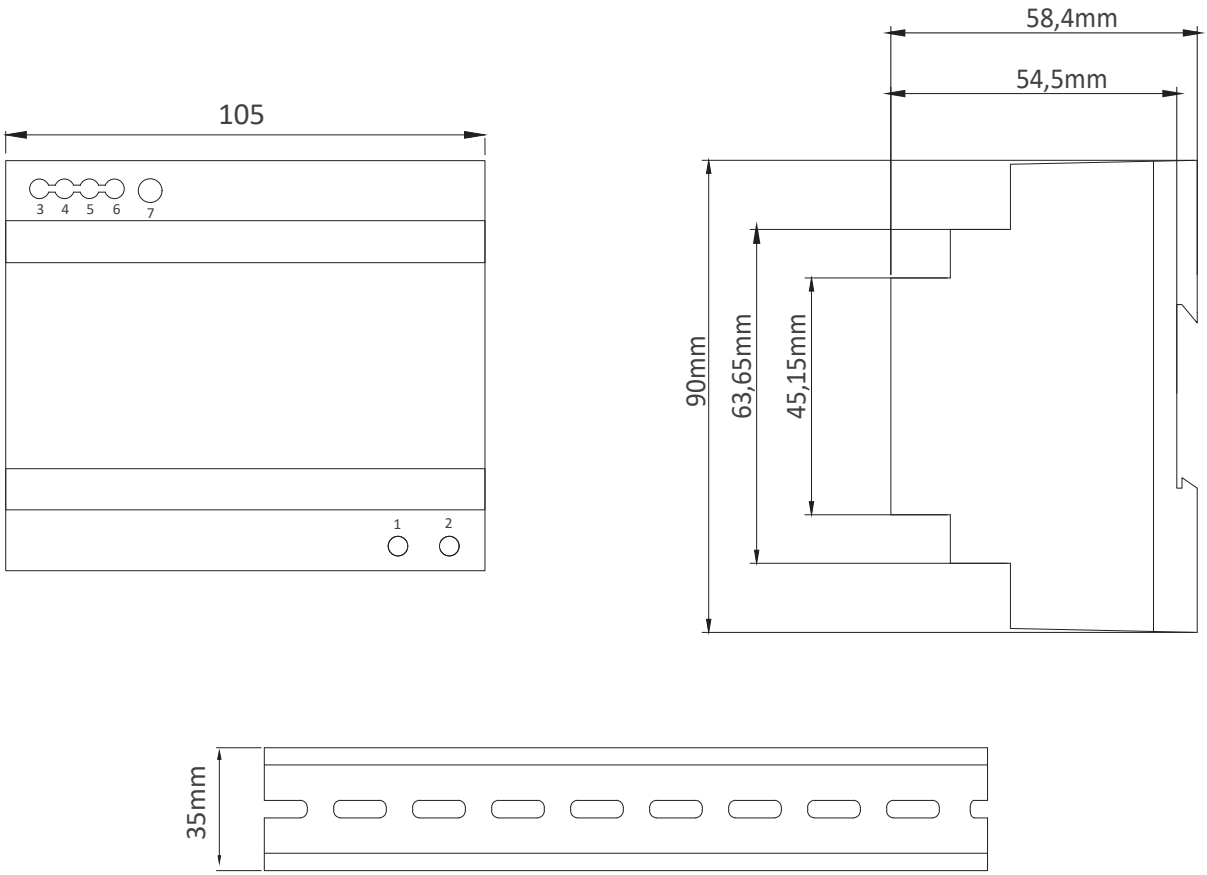
EMC	Surge	IEC 61000-4-5 Criteria A Differential ±2kV(peak)1.2/50(8/20)Tr/Thμs (line to line) ±4kV(peak)1.2/50(8/20)Tr/Thμs (line to earth or ground)
	CS	IEC 61000-4-6 Criteria A 0.15 MHz to 80 MHZ 10V(unmodulated, r.m.s), 1kHz 80%, AM 150 Ω source impedance
	DIP	IEC 61000-4-11 Voltage dips: Residual voltage<5% Criteria B 0.5 cycle Residual voltage<70% Criteria C 25 cycle(50Hz), 30 cycle (60Hz) Voltage interruptions: Residual voltage<5% Criteria C 250 cycle (50Hz), 300 cycle (60Hz)
	PFMFI	IEC 61000-4-8 Criteria A 50Hz or 60Hz 30A/Meter(r.m.s)

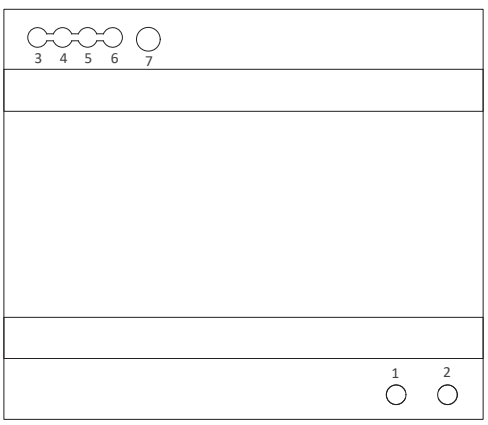
Protection Functions

Over Voltage Protection	HIS150-12	≤21VDC
	HIS150-15	≤23.5VDC
	HIS150-24	≤33.5VDC
	HIS150-48	≤59.5VDC
	(1)When the output voltage meets the above values, it will enter the protection mode. (2)Protection mode: Hiccup and auto-restart mode, it will recover automatically after output voltage goes down.	
Short Circuit Protection	(1)When the V+ output line and the V- output line are shorted, it will enter the protection mode. (2)Protection mode: Hiccup and auto-restart mode, it will recover automatically after fault condition isremove.	
Over Current Protection	HIS150-12	Output current:≥11.0A
	HIS150-15	Output current: ≥8.8A
	HIS150-24	Output current:≥6.5A
	HIS150-48	Output current:≥3.5A
	(1)When the output current meets the above values, it will enter the protection mode. (2)Protection mode: Hiccup and auto-restart mode, it will recover automatically after output current goes down.	

1. Unless otherwise specified, the above data were measured at TA=25℃, humidity<75%, input nominal voltage of 230Vac, and output rated load;
2. Ripple and noise were measured at 20MHz using a 300mm twisted pair cable, with a 0.1uF high- frequency ceramic capacitor and a 47uF electrolytic capacitor connected in parallel at the terminal.
3. The power supply is considered a component within the system and requires confirmation of electromagnetic compatibility in conjunction with terminal equipment

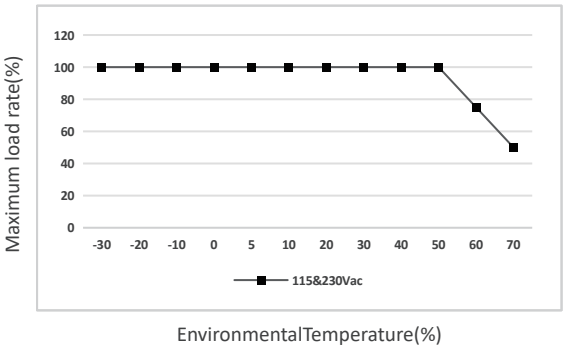
Dimensions & Lnterface Definition





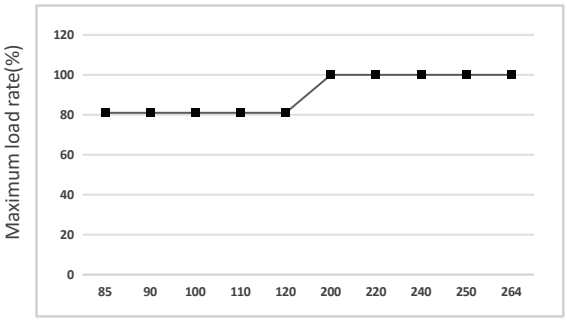
NO	Marking	Assignment
1	AC(L)	AC(L)input terminal
2	AC(N)	AC(N)input terminal
3.4	DC(-)	DC(-)Output terminal
5.6	DC(+)	DC(+)Output terminal
7	V-DJ	Output voltage adjustment

Electrical Curve



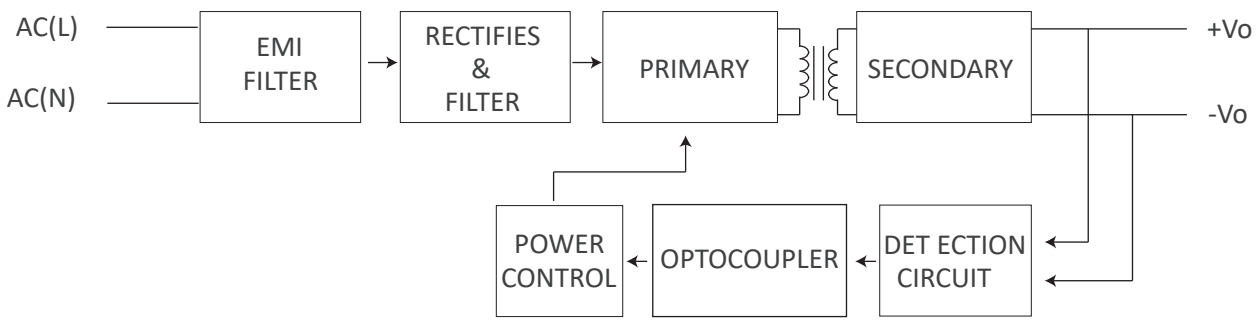
EnvironmentalTemperature(%)

1.If the power supply is continuously used outside the range specified by the derating curve, it may cause degradation or damage to its components. For details, please refer to Figure 1.
2.The power supply will have a relatively long rise time when the ambient temperature is between -30°C and -40°C.
3.To ensure normal functionality, the power supply must maintain a safe distance from other equipment.
4.If the ambient temperature is higher than 50°C, attention must be paid to power derating.



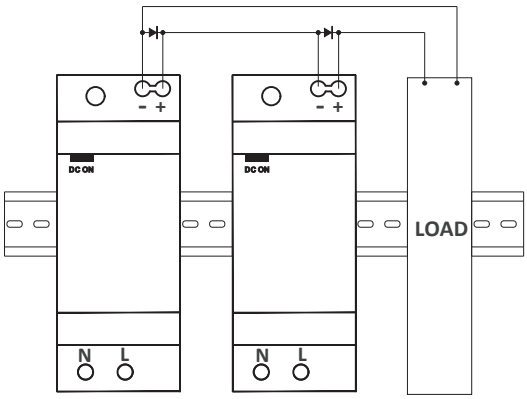
InputVoltage(Vac)

Block diagram

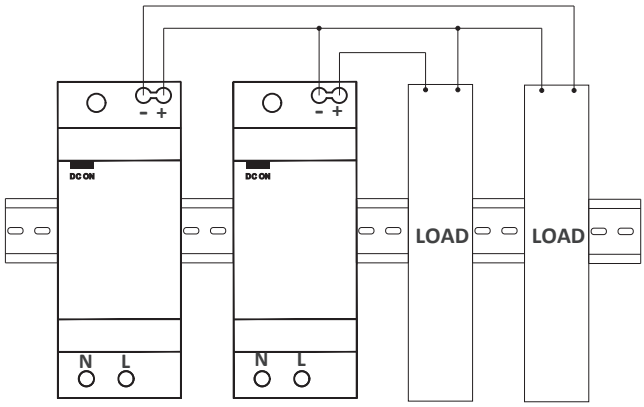


Applicationnote

Series operation



Series operation A

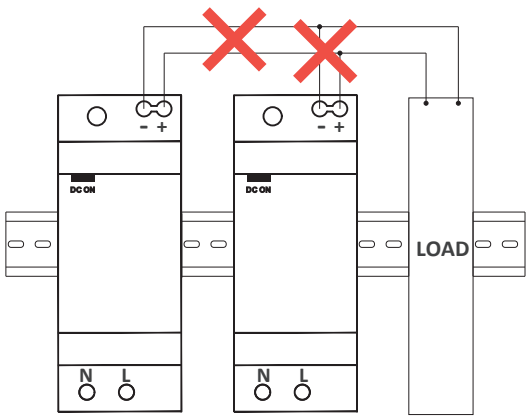


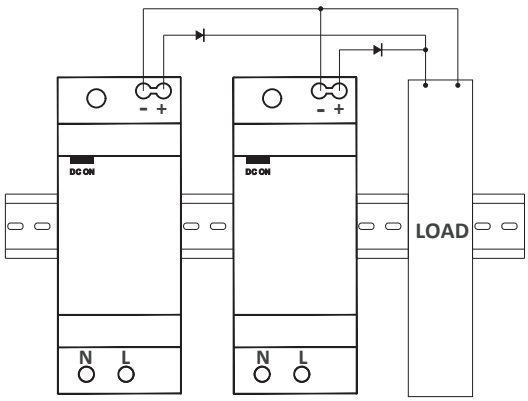
Series operation B

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.

Parallel operation





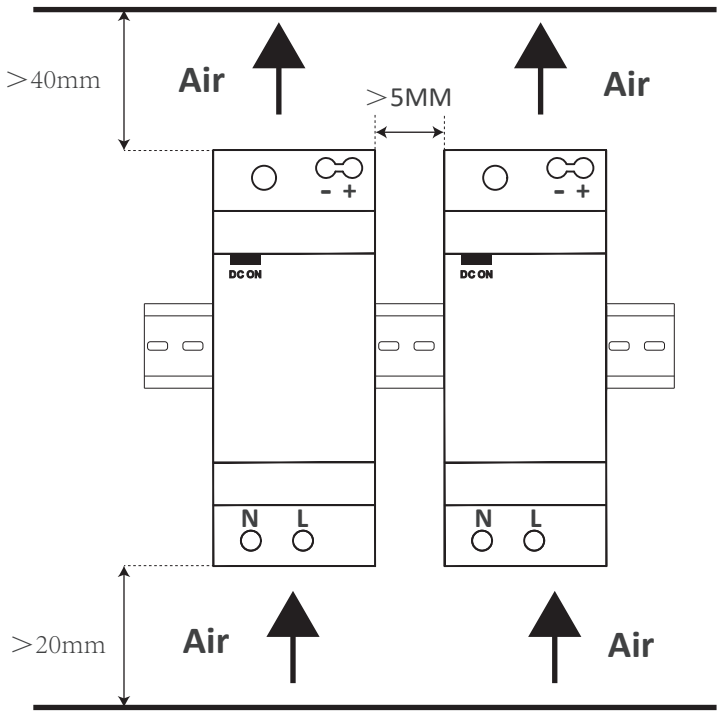
Note:

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 it’s voltage drop, output voltage and current capacity.

Applicationnote

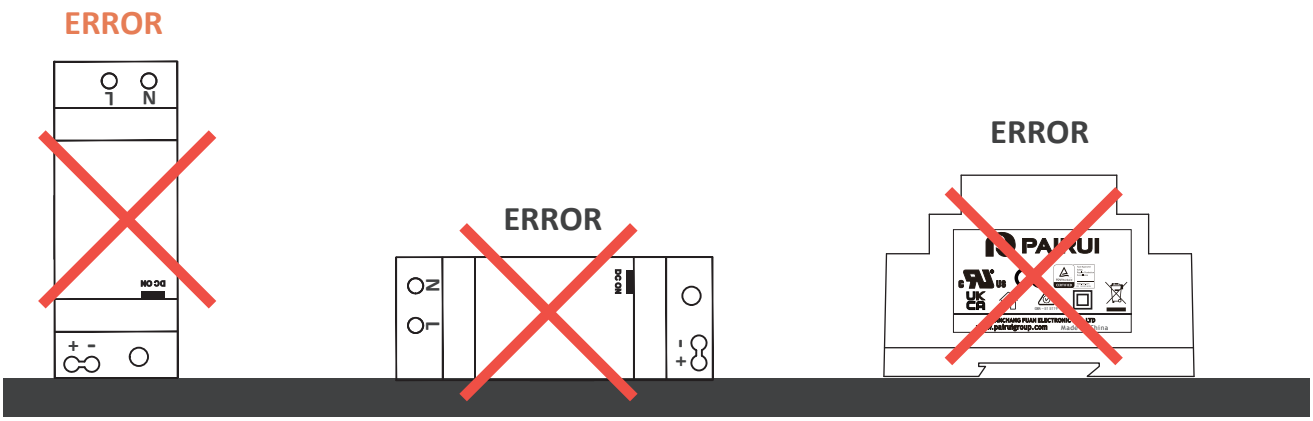
Mounting method should be considered with airflow. Leave enough space between the units when several units are mounted together. Forced air cooling makes protection against heat better.

Mounting spacing



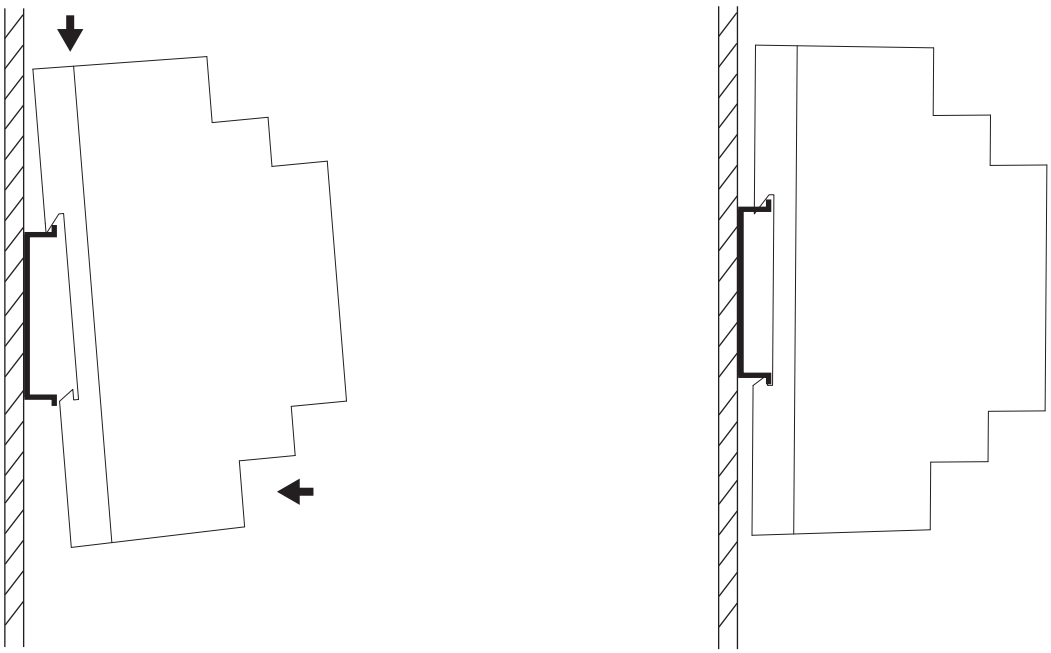
(1)Always allow good ventilation clearances, 5mm left and right, 40mm above and 20mm below, around the unit in use to prevent it from overheating.

(2)The appropriate mounting orientation for the unit is vertical, the input terminals at the bottom and output onthe top. Mounting orientations other than that, such as upside down, horizontal, or table-top mounting, is not allowed.



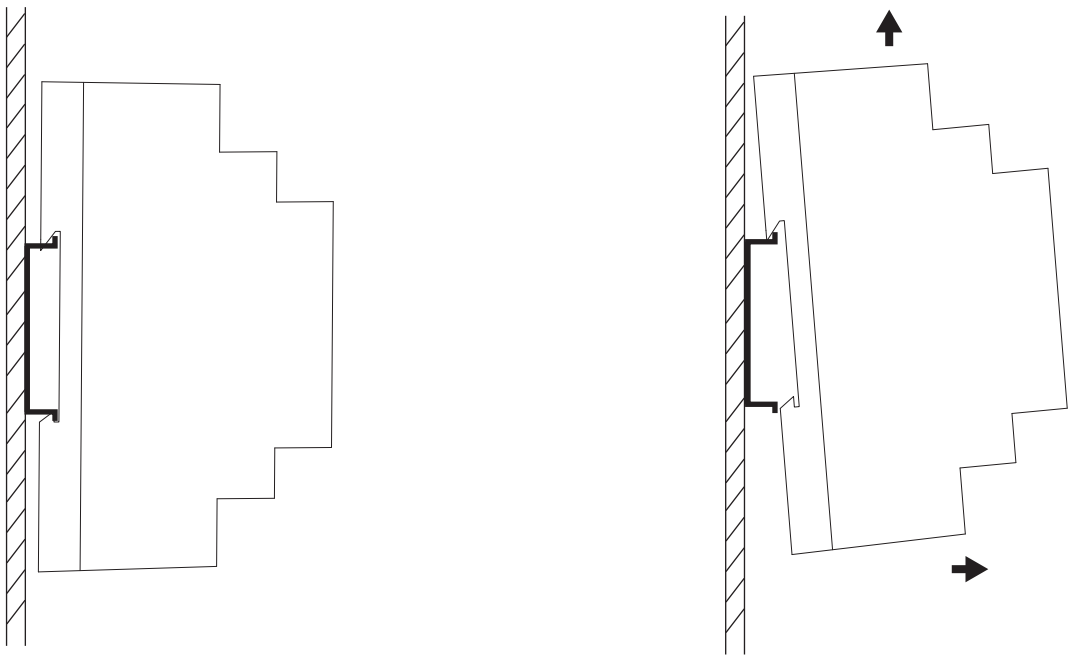
install

First, hang the component at the top of the track, and then push it towards the track direction to complete the installation , as shown in the figure below



Uninstall

Use a small flathead screwdriver to pry up the bottom buckle, and then remove the device outward as shown in the following figure



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 electromagnetic 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 being functioned 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 following sites :
- 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

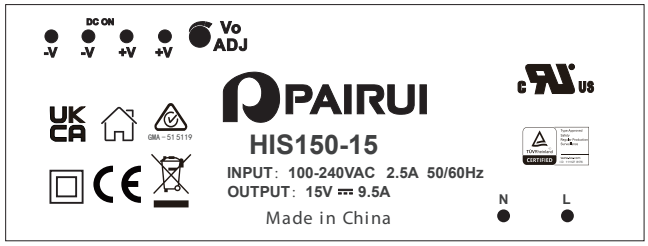
(10) Do not inspect or repair the product while the power is applied;
(11) Unauthorized modification should be avoided in order to prevent series injury or physical loss due to any malfunction;

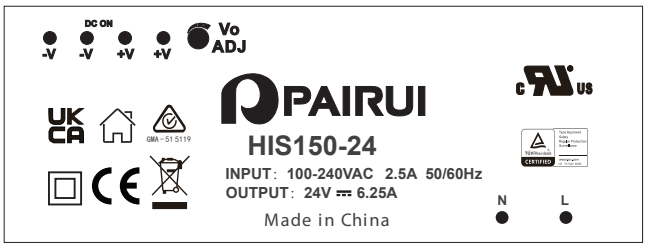
Warranty

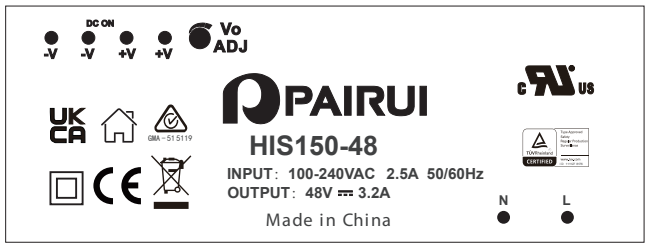
(1) Repair service will be provided for free upon any mechanical, technical or functional defects during the guaranteed warranty, however, any defects or malfunction due to international damage or negligence by customers will be repaired at the customer's expense;
(2) Guaranteed warranty of the product 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.

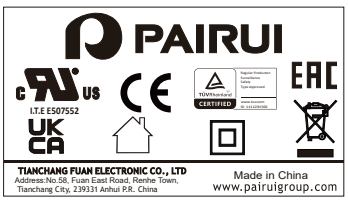
Label

Front Label









Packaging Information

Quantity per box (PCS)	Outer Box Size L * W * H (mm)	Net Weight (kg)	Gross Weight (kg)
25	425*320*200	8.2	9.5

Update News

2024.06.8	Publication and distribution
2025.8.27	1. Increase EMC project testing standards and levels