

HIS30

DIN rail power supplies for 1-phase system
AC-DC 30W



Product Family Features

- Universal Input 85~264VAC;
- Cooling by Free Air Convection
- All Round Protections: SCP/OLP/OVP/OC
- Certified UL62368/IEC62368/TP TC 004/2011(Safety)
- Protection, no-load loss < 0.3W
- Low power consumption, green environmental
- Low ripple, noise



EN IEC62368-1



EN IEC62368-1



EN IEC62368-1



AS/NZS 62368-1



UL 62368-1



IEC62368-1



TP TC 004/020

Models

Model Number	Output Voltage	Input Voltage	Output Current	Efficiency	Ripple
HIS30-5	5VDC	85-264VAC	5A	85%	80mV P-P
HIS30-12	12VDC	85-264VAC	2.5A	89%	120mV P-P
HIS30-15	15VDC	85-264VAC	2A	89%	120mV P-P
HIS30-24	24VDC	85-264VAC	1.25A	89%	120mV P-P
HIS30-48	48VDC	85-264VAC	0.625A	89%	120mV P-P

Product Datasheet

Input Specifications

Parameter	Min.	Typ.	Max.	Note
Input Voltage Range (AC)	85V	230V	264V	
Input Voltage Range (DC)	127V	-	370V	
Input Frequency	47Hz	-	63Hz	
Nominal Input Voltage	100V	-	240V	
Input current	-	-	1.0A	115Vac&full load
	-	-	0.5A	230Vac&full load
Inrush Current Cold Start	-	-	30A	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 IO _{UT} =0%~100% of IO _{UT, Rated}	-	-	±1%	
Output Voltage adjust- range	5V	-	5.2V	HIS30-5
	11.3V	-	12.6V	HIS30-12
	13.7V	-	16.3V	HIS30-15
	23.1V	-	25.9V	HIS30-24
	44V	-	50V	HIS30-48

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General Specifications

Parameter	Min.	Typ.	Max.	Note
Temperature Coefficiency	-	-	±0.03%/°C	0~50°C
Turn-on time	-	-	3500mS	115Vac&full load
	-	-	1500mS	230Vac&full load
Hold-up time	-	-	10mS	115Vac&full load
	-	-	50mS	230Vac&full load
Rise time	50mS	-	-	115Vac&full load
	30mS	-	-	230Vac&full load
Recommended External Fuse	-	-	-	
Operating Temperature Range	-40°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	50,000H,MIL-HDBK-217F(25°C)			
Size	35 x 58.4 x 90mm			
Weight	110g			

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Safety&EMC Compliance

Safety	TUV Mark	EN IEC 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 62368-1 and CSA C22.2 No. 62368-1:19
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
	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(unmodulated, r.m.s), 1 kHz, 80%, AM modulated
	EFT	IEC 61000-4-4 ± 2 kV(peak)1.2/50(8/20)Tr/Th μ s (line to line) ± 2 kV(peak)1.2/50(8/20)Tr/Th μ s (line to earth or ground)

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 0.15 MHz to 10 MHZ 10V(unmodulated, r.m.s), 10 MHz to 30 MHZ 3V to 1V(unmodulated, r.m.s), 30 MHz to 80 MHZ 1V(unmodulated, r.m.s), 1kHz 80%, AM
	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)

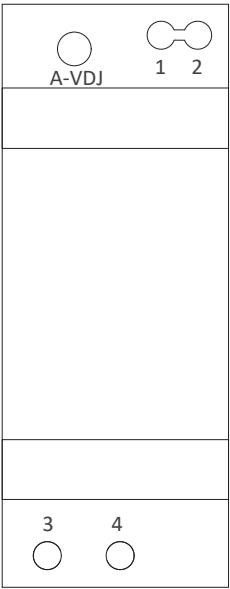
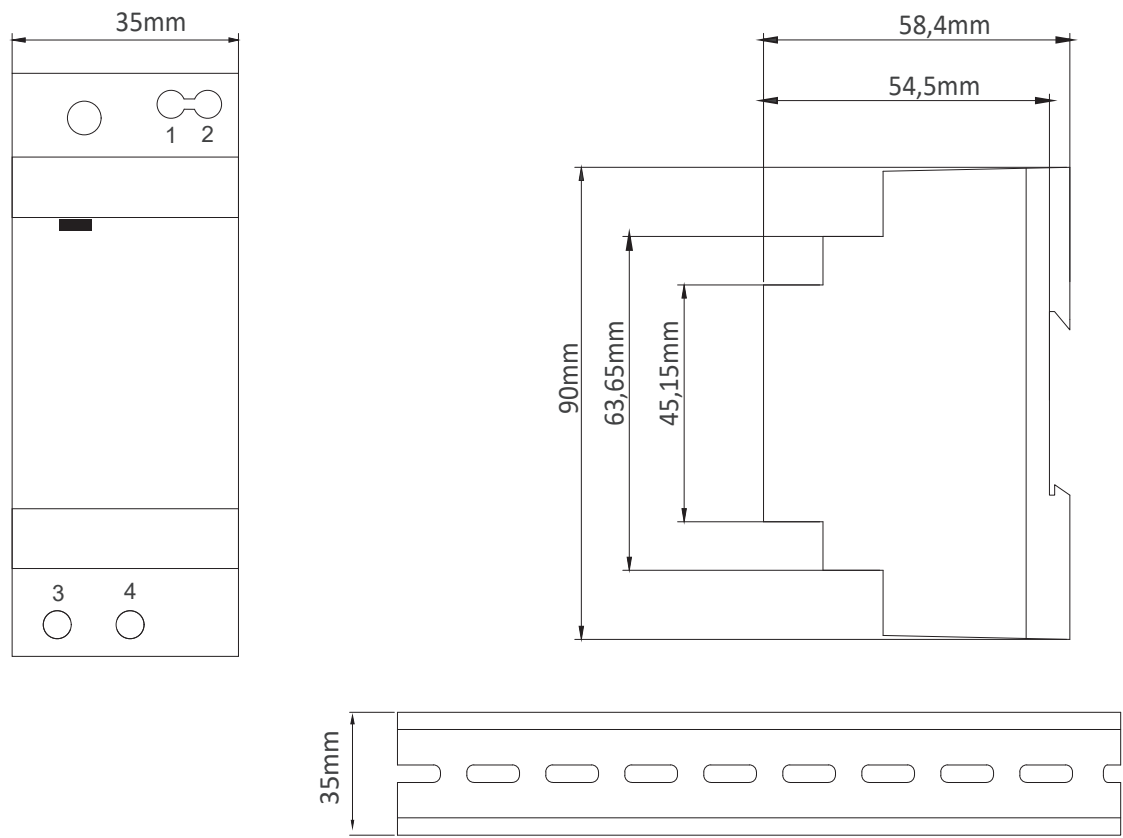
Protection Functions

	5V≤7.5Vdc 12V≤16Vdc 15V≤22.5Vdc 24V≤36Vdc 48V≤67.2Vdc
Over Voltage Protection Hiccup or clamping by Zener diode	(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.
Over Current Protection	Rated output power:105%~ 130% (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
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 is remove.

- 1.All parameters are measured at 230VAC input, rated full load and 25°C of ambient temperature, unless otherwise stated.
- 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μf & 47μf parallel capacitor.
- 3. Accuracy: includes set up tolerance, line regulation and load regulation.
- 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
- 5. Please refer to “Protection & Safety: Over Load Protection”.
- 6. Derating may be needed under low input voltage. Please check the "derating curve" for more details.
- 7. After 10 minutes of burn-in.
- 8. 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)

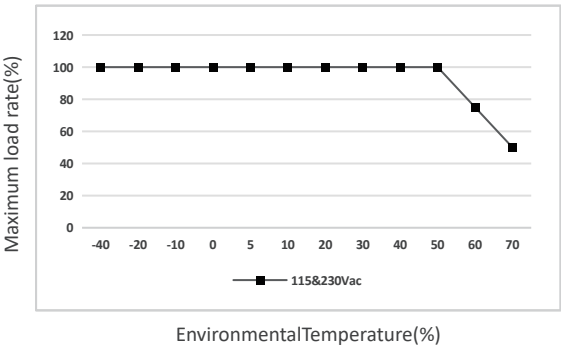
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Dimensions & Interface Definition

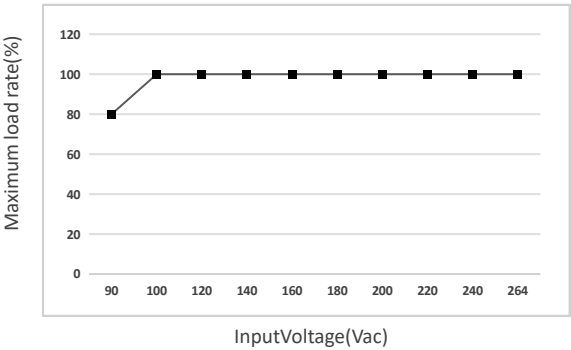


NO	Marking	Assignment
1	DC(-)	DC(+)Output terminal
2	DC(+)	DC(-)Output terminal
3	AC(N)	AC(L)input terminal
4	AC(L)	AC(N)input terminal
/	V-ADJ	DC Output voltage adjustment trimmer

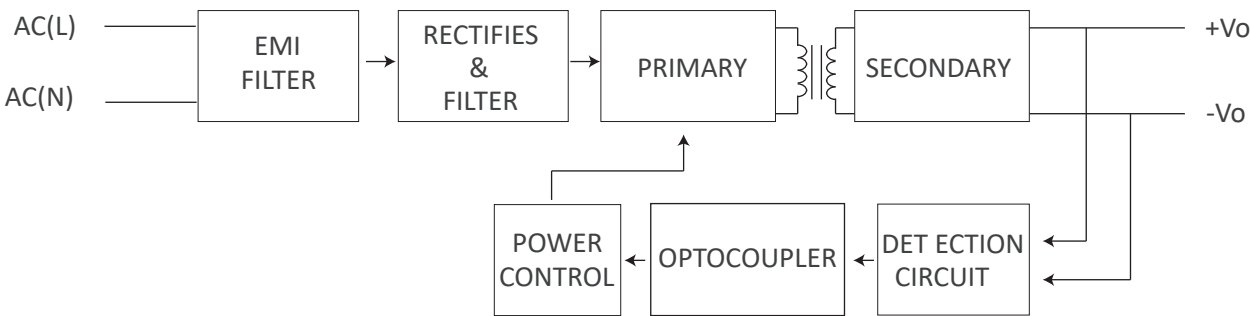
Electrical Curve



- 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.

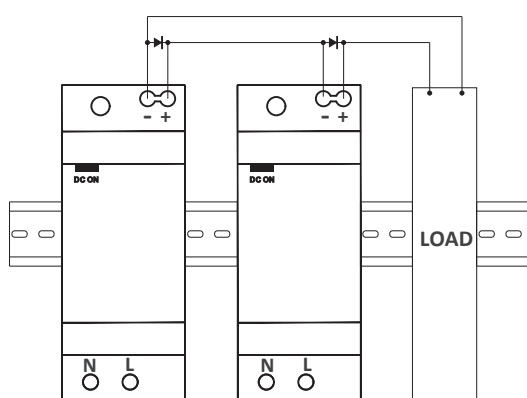


Block diagram

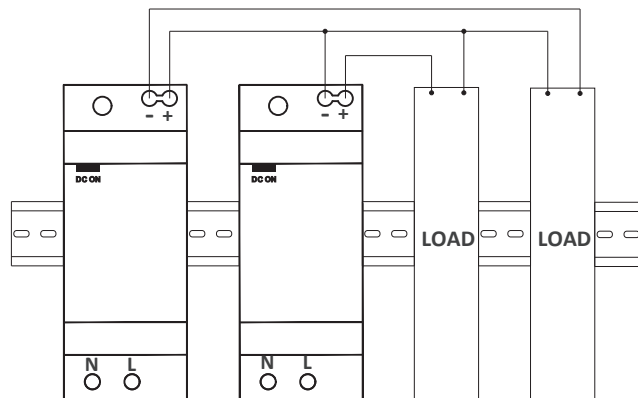


Applicationnote

Seriesoperation



Series operation A

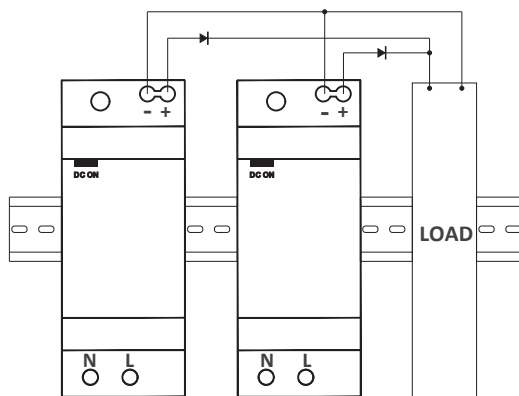
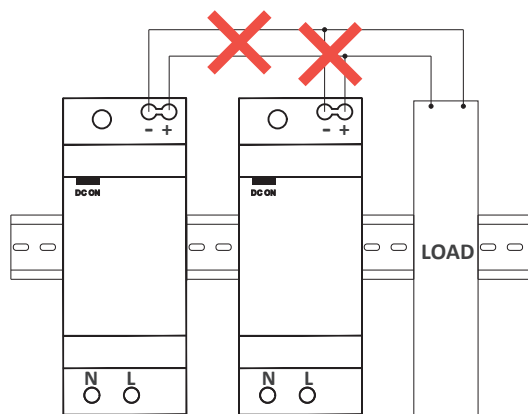


Series operation B

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



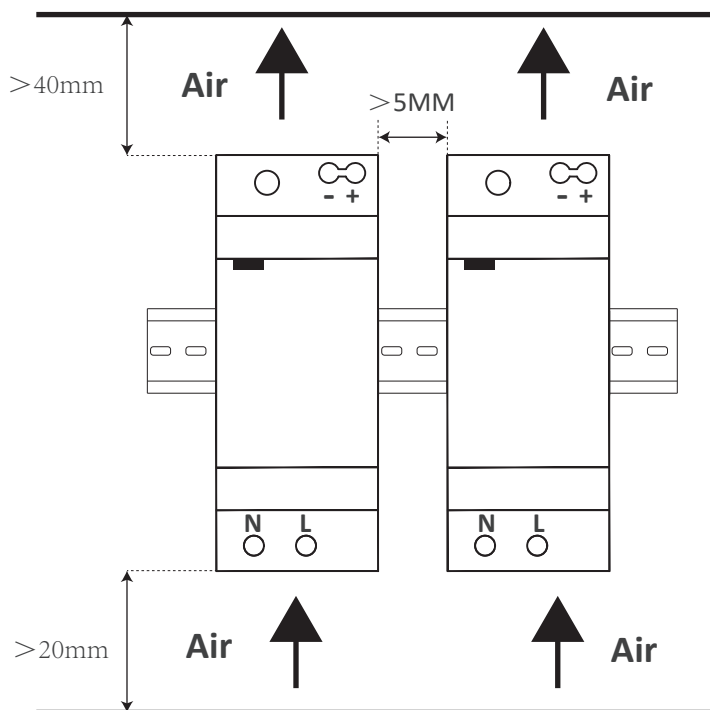
Note:

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 its voltage drop, output voltage and current capacity.

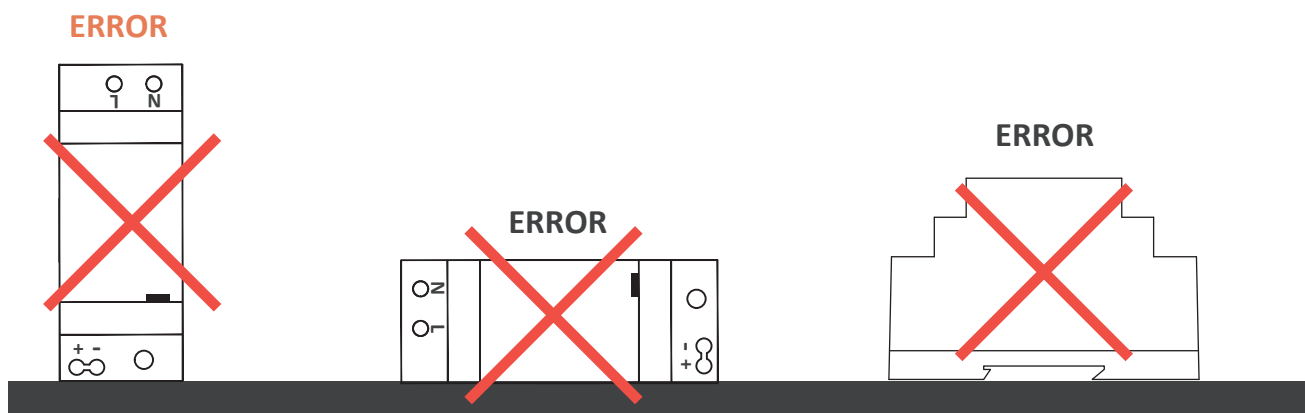
Applicationnote

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



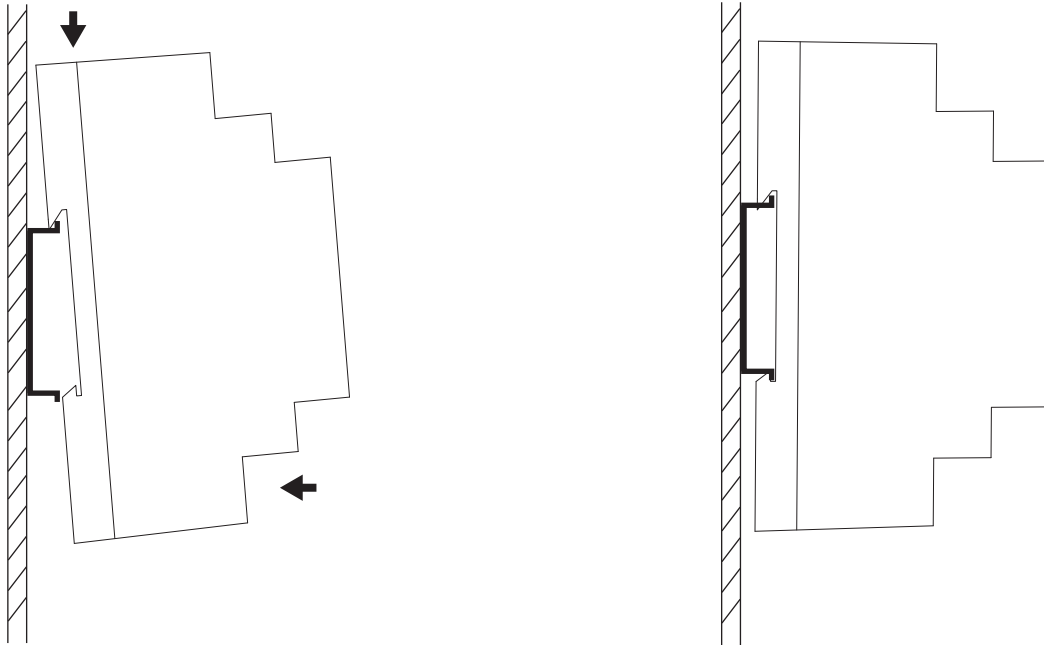
- (1) Always allow good ventilation clearances, 5mm left and right, 40mm above and 20mm below, around the unit in use to prevent it from overheating.
- (2) The appropriate mounting orientation for the unit is vertical, the input terminals at the bottom and output on the top. Mounting orientations other than that, such as upside down, horizontal, or table-top mounting, is not allowed.



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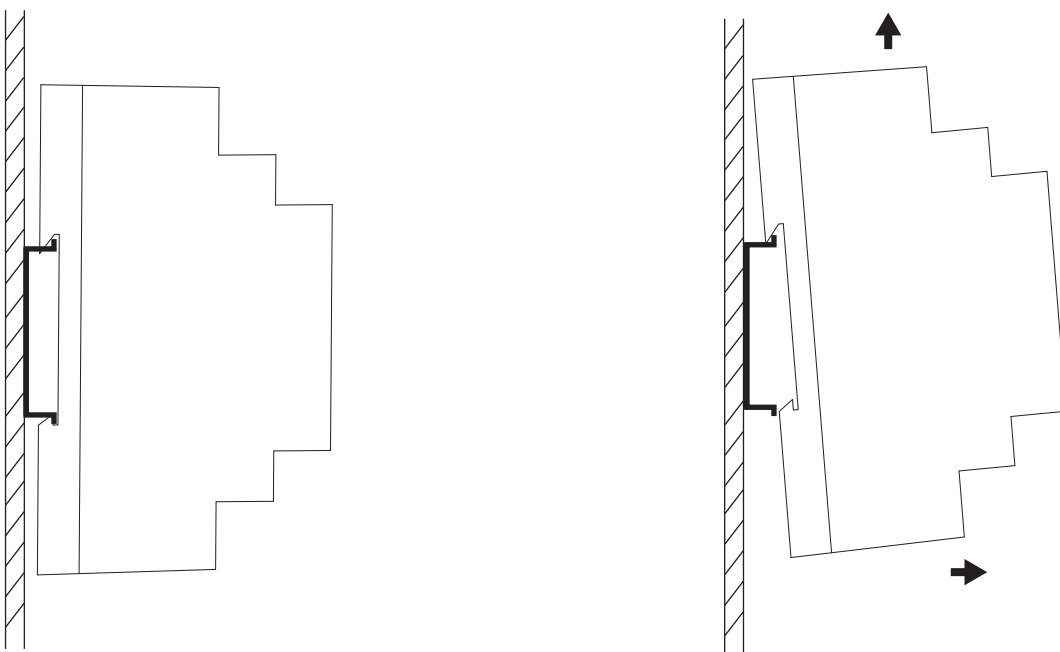
install

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



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Cautions

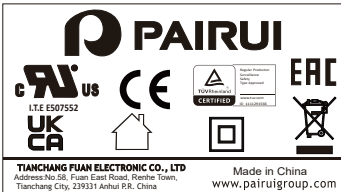
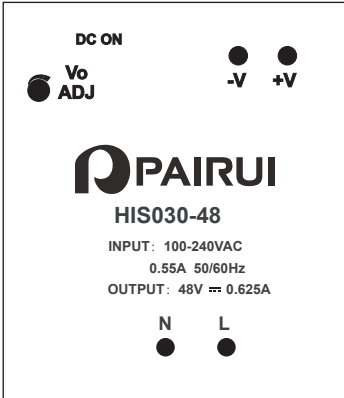
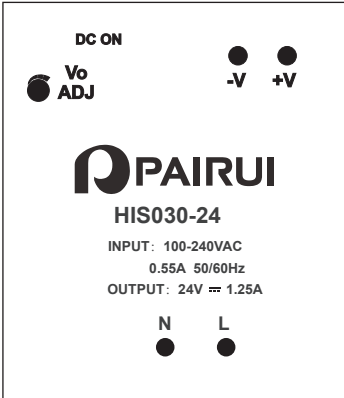
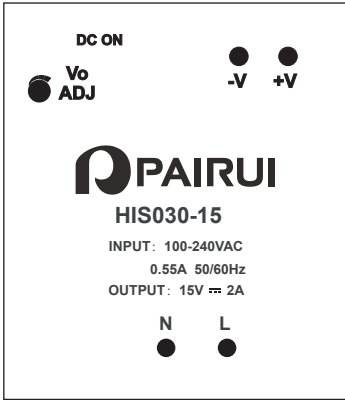
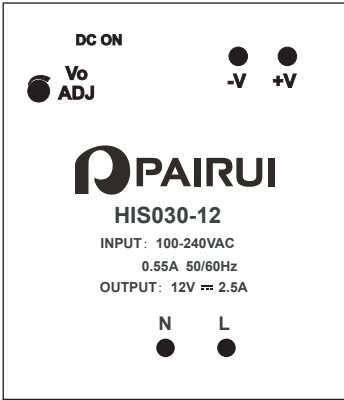
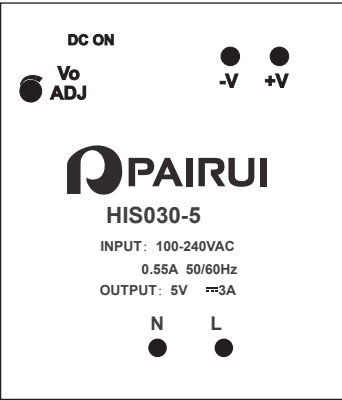
- (1) Please confirm if the capacity of the product is suitable for your intended application before putting it in use;
- (2) Only the rated input voltage specified on the product should be used;
- (3) Only the wires with rated capacity should be connected to this product, as allowable voltage and current 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 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.

Product Datasheet

Label



Packaging Information

Quantity per box (PCS)	Outer Box Size L * W * H (mm)	Net Weight (kg)	Gross Weight (kg)
56	425*320*200	6.2	8.0

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Update News

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