



HenLv

WORTHY OF YOUR TRUST



HENLV TECHNOLOGY

INDUSTRY AND MILITARY-- HIGH QUALITY CONVERTER

www.srdpower.com



HenLv

The Heaven and the Earth will be forever
The Sun and the Moon running according to the law

Introduction

HenLv Power Technology Co., Ltd., a manufacturer of quality industrial and military power converter, was founded in Shanghai in 2005. Ningbo manufacturing base, combining research& development, production and sales together, was established in 2008. Conveniently located in the Yangtze River Delta economic zone, we have a sales network across the country.

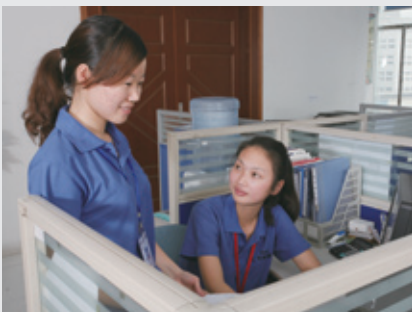
Working on multifunctional power supply products with constant pressure and current such as DC-DC and AC-DC power converter for nearly a decade, HenLv has become a new high-tech enterprise and a member of China Power Supply Society (CPSS). Product quality and after-sales service is guaranteed by strong technical force, advanced production equipments and modern management means. We have successfully passed certification of ISO9001 : 2008 quality control system, ISO14000 environmental management system and CE, UL, ROHS, possessing a number of national patented products.

Now HenLv products are widely used in automation, healthcare, lighting, instrument, power, factory control, aeronautics, railway, highway, shipping, network communication and petrochemicals sectors, which get recognition and bulk application in many national defense, scientific research and military institutions.

"Taking talent as the root, honesty as the tenet, customers as the priority and brand as the treasure" is the core value of HenLv. The mission of manufacturing industry is to provide customers with the best products and to win support with good quality as well as responsible service attitude giving top priority to the demand of customers. "Seeking survival on quality, building reputation on service, increasing efficiency on management and making greater achievements on innovation" is the quality principle of HenLv. Insisting on "quality and customers come first" , HenLv is worthy of your trust.

On the premise of respecting science, knowledge and laws, HenLv creates a trustworthy brand. We will devote to the development of power supply industry and maximize the value of the company taking every opportunity. HenLv aims to take the lead in power supply industry and become a world famous brand.

The strict management guidelines, rigorous work style and innovative spirit will help HenLv write a new chapter and create a more brilliant future. HenLv, a dazzling pearl, will always shine in the east of the world.



Company Growth

2005, The company was established in Shanghai

2007, Won the 2007 annual alibaba electrician electric industry's most concern enterprise

2007, Shanghai HenLv base in ningbo economic and technological development zone

2008, Most standard products through the CE certification, and through the ROHS testing

2008, Company series products realization resonant process

2008, Award The member unit of China power supply society

2008, Some products won the national patent and through the UL certification

2010, Establish Shenzhen branch office

2010, Ningbo factory successful implement TEP, CRM, ERP, etc Intelligent office software, to further improve and implement informatization office platform, become HenLv power headquarters

2012, Ningbo headquarters, Beijing, Shanghai, shenzhen, hefei, chengdu branch formal form a group scale



HenLv

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Worthy of your trust

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Company Goal

Build the world-renowned power converter brand , and strive to be the line leader

Company Core Values

Taking talent as the root, honesty as the tenet, customers as the priority and brand as the treasure.

Service ideas

Building good quality service, pursuing customer satisfaction, Attentively service, Reaching the acme of perfection, Knowing customer demand, Surmounting customers' expectation

Quality Policy

Seeking survival on quality, building reputation on service, increasing efficiency on management and making greater achievements on innovation.

Company Products

DC-DC power converter(range of power:0.1-200W)

AC-DC power converter(range of power:0.1-60W)

LED drive power supply and related specific field special products

Company Application Fields

Automation, healthcare, lighting, instrument, power, factory control, aeronautics, railway, highway, shipping, network communication and petrochemicals sectors, which get recognition and bulk application in many national defense, scientific research and military institutions.

management ideas

Thoughts+ Basic Faith+ Value Standard+ Rule of conduct

After-sales service

From the date of purchase, if occurrence quality problem within two years, can be replaced Products' management and produce strict do as ISO9001:2008 standard



ISO9001 certificates



DC series CE certificates



AC series CE certificates



Part of patent certificates



ROHS test reports



Brand certificates



Member of China Power Supply Society



■Professional technical force, Exquisite workmanship, Make domestic high-quality products

Our company always has been concentrate on industrial power supply industry research and innovation, accumulated the rich technical strength and experience. And it it one of the power converter manufacture that has dozens of patents, is the minority several with independent intellectual property rights of the power supply circuit topology, transformer structure, assembly process technology and the appearance of the structure of the power supply;
HenLv company is one of the few power converter factory that have sealants, potting and encapsulating craft power supply manufacturers; The country with laser marking technology, lead-free production process, workshop temperature and humidity control system.

■The strict quality testing process and quality control system

The company passed the ISO9001:2008 quality system authentication and 100% strict implementation of system management;
Products development in strict accordance with ISO process control, and is equipped with independent research and test group, for each products properties of test, for controlling each node of circuit to comply with the design requirements;
Implement a set of strict material supplier evaluation system, incoming inspection standards, finished goods inspection standard, and before products delivery to customer will make full load high temperature aging of finished products;
The advanced automatic production, reliability testing equipment, production environment temperature and humidity monitoring system etc ,to make the products' quality can be effectively guaranteed;
HenLv Series of products passed UL, CE certification, EN60601-1 authentication, ROHS test and SGS test, through the IEC61373, IEC/EN 61000-4 detection;
HenLv Series of products to meet the industrial and military grade product s' requirements.

■The leading level management of domestic

Company execute process in strict accordance with the ISO9001 quality management system regulation;
With information management, has been successfully lead-in ERP, CRM, and OA ect enterprise management software system, to ensure daily management and various business processing of accurate and fast;
Interactive and complete information of multi-language website, for the convenience of our customers knowing our company products and information, reduce customer's business risk.

■Standardized products process

HenLv company products all adopt international standard pin way, good compatibility, so that customers can effectively avoid purchasing channel and delivery risk;
Providing standardization of the SMD lace package, so that can convenient automation batch SMT production, save production cost of labor, increase production capacity.

■Continuously improve products performance

HenLv company provide customers the best valuable products, make customers' overall cost greatly decreased, broke through the erroneous idea of the traditional products' price competition.
Through promote products own service value to reduce the customers' time and inventory cost;
Through promote products performance and quality to reduce customers' accounting cost;
Promoting products' technical value to reduce customers' production cost;
Through promote products brand value to reduce the cost of customer to choose.

■In the pursuit of customers' satisfaction as the foundation, making the high-quality goods service system

Has established a professional technical service team, implement a set of standard customer service system;
Sales and service center: "whole-hearted service, do our best, check customers' demand, exceed customers' expectation" as the guiding ideology, on the basis of in fully understand customers' practical application demand, to provide overall solutions, to provide professional selection technology services, for reducing customer use cost;
Customer service center: with timely delivery to save customers time cost, to reduce customers' inventory pressure, with door-to-door delivery mode to reduce the client receiving risk; And when the first delivery enclosed the 《products use manual 》, so that customers can avoiding suffering loss; Periodically to do after-sales return visit, and the fast customers' complaint information feedback and tracking, un-regular technical discussion and the exchange, which let the customer buying enjoyable, use at ease.



>>> R & D Performance Test



>>> Repair Welding Assembly Line



>>> Auto-Reflow



>>> Automated Wave Soldering



>>> Automated Assembly Line



>>> Auto-Assembly Process



>>> Auto-Assembly Machine



>>> FQC Test



>>> Laser Marking Machine



>>> Auto-filling Glue Machine



>>>Intelligent Aging Room



>>>High Low Temperature Test-box



>>> Ningbo Headquarters



>>> Shanghai Branch



>>> Shenzhen Branch



>>> Beijing Branch



>>> Hefei Branch



>>> Customer Service Center



④ Output voltage form :

H: Isolation withstand voltage $\geq 3000\text{VDC}$

I: Output voltage regulated and some related protection; high accuracy output voltage: $\pm 0.5\%$ 、 $\pm 1\%$ 、 $\pm 2\%$

S: Single output

D: Dual output (the same ground)

TD: Dual output (independent ground)

M: Multiple output

⑤ Output voltage value :

XX : Any voltage value within $3\text{VDC} \sim 110\text{VDC}$ (such as, 05:5VDC, 13.8:13.8VDC)

⑥ Products grade:

M: Military grade products, working temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

⑦ Special package form:

T: SMD patch package form

⑧ Output power value :

1W : 1W Max **1W5:** 1.5W Max

AC-DC

AC(AS)XXS((T)D)(M)XXDCM-XW

①

②

③

④

⑤

① Input voltage value :

AC24: Voltage value: $18\text{VAC} \sim 36\text{VAC}$ 、**AC48 :** Voltage value: $36\text{VAC} \sim 72\text{VAC}$ 、

AC110 : Voltage value: $85\text{VAC} \sim 165\text{VAC}$ 、**AC220 :** Voltage value: $85\text{VAC} \sim 265\text{VAC}$ or $165\text{VAC} \sim 265\text{VAC}$

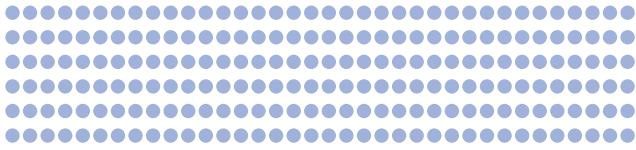
AS24: Voltage value $18\text{VAC} \sim 36\text{VAC}$ 、SIP Package

① Output voltage value : as the same as DC-DC "④"

② Output voltage value : as the same as DC-DC "⑤"

③ Products grade: **M:** military grade products, working temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

④ Output voltage value : as the same as DC-DC "⑧"



Fixed voltage isolation unregulated DC-DC power converter

>>>

Output characteristic:

1. Load efficiency: $\leq \pm 3\%$ 10%-100% load
2. Forbidden of non-load operation for a long time !
3. A short period of time (1s) short-circuit, overload, over-temperature protection circuit, self-resumption
4. Ripple/noise: 5VDC 50mV Max , 9VDC 60mV Max , 12VDC , 15VDC, 24VDC 100mV Max
5. Switch frequency: 50KHz - 800KHz
6. No-load voltage: 5VDC, 9VDC, (+0.8VDC Max), 12VDC, 15VDC, 24VDC (+1.5VDC Max)

General characteristic:

1. Source effects: input voltage from low to high
2. Temperature coefficient: $\leq \pm 0.03\%$ °C
3. Storage temperature: -45°C ~ +125°C
4. Shell: High inflaming retarding plastic (UL94-V0)
5. Cooling method: natural cooling without increasing the radiator
6. Mean Time Between Failures (MTBF): 2000000h
7. Operating temperature: -45°C ~ +85°C
8. Welding pin : $\leq 10S$ 300°C Max
9. Max operating temperature: 85°C , relative temperature: 10% ~ 90%

S(D)XXSXX-XW SERIES

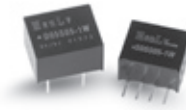
Instruction:

Single inline or Double inline package (SIP or DIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 2\%$ or $\pm 3\%$

Application:

Communication interface converter (RS232/485), cellular phones, semiconductor lasers, operational amplifier power supply, portable instrument, medical instrument, control devices, etc.

Isolation voltage: 1000VDC 0.5mA 1Minute

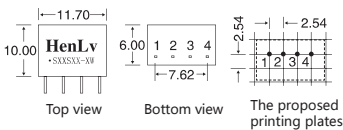


S(D)XXSXX-XW(0.5W, 1W Max)

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ±0.5	Certification
S(D)05S3.3-1W	+5VDC ±5%	3.3VDC	303	≥72%	1.7/2.5	RoHS
S(D)05S05-1W		5VDC	200	≥72%	1.7/2.5	
S(D)05S09-1W		9VDC	110	≥72%	1.7/2.5	
S(D)05S12-1W		12VDC	83	≥75%	1.7/2.5	
S(D)05S15-1W		15VDC	67	≥75%	1.7/2.5	
S(D)05S24-1W	+12VDC ±5%	24VDC	42	≥78%	1.7/2.5	
S(D)12S3.3-1W		3.3VDC	303	≥72%	1.7/2.5	
S(D)12S05-1W		5VDC	200	≥72%	1.7/2.5	
S(D)12S09-1W		9VDC	110	≥72%	1.7/2.5	
S(D)12S12-1W		12VDC	83	≥75%	1.7/2.5	
S(D)12S15-1W	+24VDC ±5%	15VDC	67	≥75%	1.7/2.5	
S(D)12S24-1W		24VDC	42	≥78%	1.7/2.5	
S(D)24S3.3-1W		3.3VDC	303	≥72%	1.7/2.5	
S(D)24S05-1W		5VDC	200	≥72%	1.7/2.5	
S(D)24S09-1W		9VDC	110	≥72%	1.7/2.5	
S(D)24S12-1W		12VDC	83	≥75%	1.7/2.5	
S(D)24S15-1W		15VDC	67	≥75%	1.7/2.5	
S(D)24S24-1W		24VDC	42	≥78%	1.7/2.5	

Appearance size, the proposed printing plates, pin way:

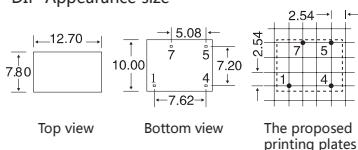
SIP-Appearance size



Power≤1W 11.70*6.00*10.00

Pin	1	2	3	4
Function	GND	Vin	0V	Vo

DIP-Appearance size



Power≤1W 12.70*10.00*7.8

Pin	1	4	5	7
Function	GND	Vin	Vo	0V

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Constant voltage isolation unregulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Wide voltage regulated DC-DC power converter	Wide voltage regulated non-isolation DC-DC power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	AC-DC concurrently DC-DC/ AC and DC Universal power converter	Professional field features of products
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SC(D)XXSXX-XW SERIES

Instruction:

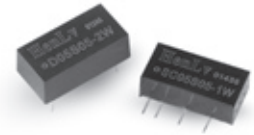
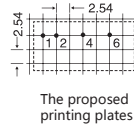
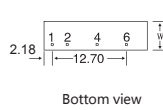
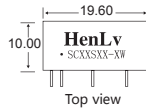
Single inline or Double inline package (SIP or DIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 2\%$ or $\pm 3\%$

Application:

Communication interface converter (RS232/485), cellular phones, semiconductor lasers, operational amplifier power supply, portable instrument, medical instrument, control devices, etc.
Isolation voltage: 1000VDC 0.5mA 1Minute

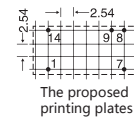
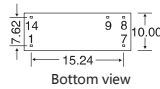
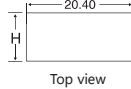
■ Appearance size, the proposed printing plates, pin way:

SIP-Appearance size



Power	$\leq 1W$ (W=6.0mm)	$\leq 2W$ (W=7.0mm)
Pin	1 2 4 6	
Function	Vin GND 0V Vo	

DIP-Appearance size



Power	$\leq 1W$ (H=6.50mm)	$\leq 2W$ (H=8.2mm)
Pin	1 7 8 9 14	
Function	GND NC 0V Vo Vin	

SC(D)XXSXX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
SC05S3.3-1W	+5VDC $\pm 5\%$	3.3VDC	303	$\geq 72\%$	2.5/4.0	RoHS CE
SC05S05-1W		5VDC	200	$\geq 72\%$	2.5/4.0	
SC05S12-1W		12VDC	83	$\geq 75\%$	2.5/4.0	
SC05S15-1W		15VDC	67	$\geq 75\%$	2.5/4.0	
SC05S24-1W		24VDC	42	$\geq 78\%$	2.5/4.0	
SC12S3.3-1W	+12VDC $\pm 5\%$	3.3VDC	303	$\geq 72\%$	2.5/4.0	
SC12S05-1W		5VDC	200	$\geq 72\%$	2.5/4.0	
SC12S12-1W		12VDC	83	$\geq 75\%$	2.5/4.0	
SC12S15-1W	+24VDC $\pm 5\%$	15VDC	67	$\geq 75\%$	2.5/4.0	
SC12S24-1W		24VDC	42	$\geq 78\%$	2.5/4.0	
SC24S3.3-1W		3.3VDC	303	$\geq 72\%$	2.5/4.0	
SC24S05-1W		5VDC	200	$\geq 72\%$	2.5/4.0	
SC24S12-1W	+24VDC $\pm 5\%$	12VDC	83	$\geq 75\%$	2.5/4.0	
SC24S15-1W		15VDC	67	$\geq 75\%$	2.5/4.0	
SC24S24-1W		24VDC	42	$\geq 78\%$	2.5/4.0	

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
S(D)05S3.3-2W	+5VDC $\pm 5\%$	3.3VDC	606	$\geq 75\%$	2.5/4.0	RoHS CE
S(D)05S05-2W		5VDC	400	$\geq 75\%$	2.5/4.0	
S(D)05S12-2W		12VDC	166	$\geq 78\%$	2.5/4.0	
S(D)05S15-2W		15VDC	134	$\geq 78\%$	2.5/4.0	
S(D)05S24-2W		24VDC	84	$\geq 78\%$	2.5/4.0	
S(D)12S3.3-2W	+12VDC $\pm 5\%$	3.3VDC	606	$\geq 75\%$	2.5/4.0	
S(D)12S05-2W		5VDC	400	$\geq 75\%$	2.5/4.0	
S(D)12S12-2W		12VDC	166	$\geq 78\%$	2.5/4.0	
S(D)12S15-2W		15VDC	134	$\geq 78\%$	2.5/4.0	
S(D)12S24-2W	+24VDC $\pm 5\%$	24VDC	84	$\geq 78\%$	2.5/4.0	
S(D)24S3.3-2W		3.3VDC	606	$\geq 75\%$	2.5/4.0	
S(D)24S05-2W		5VDC	400	$\geq 75\%$	2.5/4.0	
S(D)24S12-2W		12VDC	166	$\geq 78\%$	2.5/4.0	
S(D)24S15-2W	+24VDC $\pm 5\%$	15VDC	134	$\geq 78\%$	2.5/4.0	
S(D)24S24-2W		24VDC	84	$\geq 78\%$	2.5/4.0	

S(D)XXDXX-XW SERIES

Instruction:

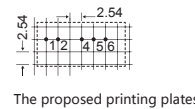
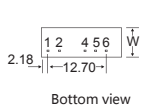
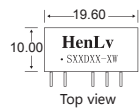
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Application:

Communication interface converter (RS232/485), cellular phones, semiconductor lasers, operational amplifier power supply, portable instrument, medical instrument, control devices, etc.
Isolation voltage: 1000VDC 0.5mA 1Minute

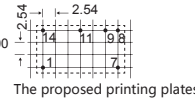
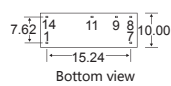
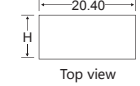
■ Appearance size, the proposed printing plates, pin way:

SIP-Appearance size



Power	$\leq 1W$ (W=6.0mm)	$\leq 2W$ (W=7.0mm)
Pin	1 2 4 5 6	
Function	Vin GND Vo1(-Vo) Com Vo2(+Vo)	

DIP-Appearance size



Power	$\leq 1W$ (H=6.50mm)	$\leq 2W$ (H=8.2mm)
Pin	1 7 8 9 11 14	
Function	GND NC COM Vo1(-Vo) Vo2(+Vo) Vin	

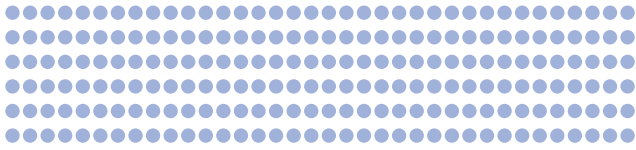
S(D)XXDXX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current(mA)	Efficiency	Weight SIP/DIP (g) $\pm 0.5g$	Certification
S(D)05D3.3-1W	+5VDC $\pm 5\%$	$\pm 3.3VDC$	± 151	$\geq 72\%$	3.3/2.5	RoHS
S(D)05D05-1W		$\pm 5VDC$	± 100	$\geq 72\%$	3.3/2.5	
S(D)05D12-1W		$\pm 12VDC$	± 41	$\geq 75\%$	3.3/2.5	
S(D)05D15-1W		$\pm 15VDC$	± 33	$\geq 75\%$	3.3/2.5	
S(D)05D24-1W		$\pm 24VDC$	± 21	$\geq 78\%$	3.3/2.5	
S(D)12D3.3-1W	+12VDC $\pm 5\%$	$\pm 3.3VDC$	± 151	$\geq 72\%$	3.3/2.5	
S(D)12D05-1W		$\pm 5VDC$	± 100	$\geq 75\%$	3.3/2.5	
S(D)12D12-1W		$\pm 12VDC$	± 41	$\geq 75\%$	3.3/2.5	
S(D)12D15-1W	+24VDC $\pm 5\%$	$\pm 15VDC$	± 33	$\geq 75\%$	3.3/2.5	
S(D)15D24-1W		$\pm 24VDC$	± 21	$\geq 78\%$	3.3/2.5	
S(D)24D3.3-1W		$\pm 3.3VDC$	± 151	$\geq 72\%$	3.3/2.5	
S(D)24D05-1W		$\pm 5VDC$	± 100	$\geq 75\%$	3.3/2.5	
S(D)24D12-1W	+24VDC $\pm 5\%$	$\pm 12VDC$	± 41	$\geq 75\%$	3.3/2.5	
S(D)24D15-1W		$\pm 15VDC$	± 33	$\geq 78\%$	3.3/2.5	
S(D)24D24-1W		$\pm 24VDC$	± 21	$\geq 78\%$	3.3/2.5	

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current(mA)	Efficiency	Weight SIP/DIP (g) $\pm 0.5g$	Certification
S(D)05D3.3-2W	+5VDC $\pm 5\%$	$\pm 3.3VDC$	± 303	$\geq 75\%$	3.3/2.5	RoHS
S(D)05D05-2W		$\pm 5VDC$	± 200	$\geq 75\%$	3.3/2.5	
S(D)05D12-2W		$\pm 12VDC$	± 83	$\geq 78\%$	3.3/2.5	
S(D)05D15-2W		$\pm 15VDC$	± 67	$\geq 78\%$	3.3/2.5	
S(D)05D24-2W		$\pm 24VDC$	± 42	$\geq 80\%$	3.3/2.5	
S(D)12D3.3-2W	+12VDC $\pm 5\%$	$\pm 3.3VDC$	± 303	$\geq 75\%$	3.3/2.5	
S(D)12D05-2W		$\pm 5VDC$	± 200	$\geq 78\%$	3.3/2.5	
S(D)12D12-2W		$\pm 12VDC$	± 83	$\geq 78\%$	3.3/2.5	
S(D)12D15-2W		$\pm 15VDC$	± 67	$\geq 78\%$	3.3/2.5	
S(D)12D24-2W	+24VDC $\pm 5\%$	$\pm 24VDC$	± 41	$\geq 81\%$	3.3/2.5	
S(D)24D3.3-2W		$\pm 3.3VDC$	± 303	$\geq 75\%$	3.3/2.5	
S(D)24D05-2W		$\pm 5VDC$	± 200	$\geq 78\%$	3.3/2.5	
S(D)24D12-2W		$\pm 12VDC$	± 83	$\geq 78\%$	3.3/2.5	
S(D)24D15-2W	+24VDC $\pm 5\%$	$\pm 15VDC$	± 67	$\geq 80\%$	3.3/2.5	
S(D)24D24-2W		$\pm 24VDC$	± 41	$\geq 83\%$	3.3/2.5	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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HenLv DC-DC power converter

S(D)XXTDXX-XW SERIES

Instruction:

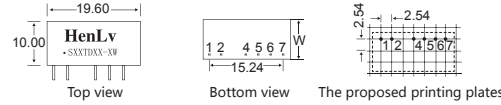
Single inline or Double inline package (SIP or DIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 2\%$ or $\pm 3\%$

Application:

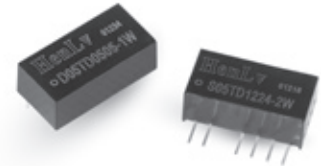
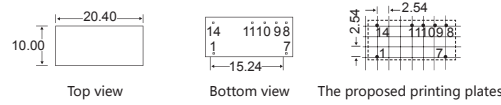
Communication interface converter (RS232/485), cellular phones, semiconductor lasers, operational amplifier power supply, portable instrument, medical instrument, control devices, etc.
Isolation voltage: 1000VDC 0.5mA 1Minute

■Appearance size, the proposed printing plates, pin way:

SIP-Appearance size



DIP-Appearance size



Power \leq 1W(H=6.0mm)	Power \leq 2W(H=7.0mm)
Pin	1 2 4 5 6 7
Function	Vin GND 0V1 Vo1 0V2 Vo2

Power \leq 1W(H=6.5mm)	Power \leq 2W(H=8.2mm)
Pin	1 7 8 9 10 11 14
Function	GND NC Vo2 0V2 Vo1 0V1 Vin

S(D)XXTDXX-XW(0.5W、1W、2W Max)

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	Load current (mA)	Efficiency	Weight SIP/DIP (g) \pm 0.5	Certification
S(D) 05TD0505-1W	+5VDC \pm 5%	Vo1:5VDC	Io1:100	\geq 75%	2.8/3.1	RoHS
		Vo2:5VDC	Io2:100		2.8/3.1	
S(D) 05TD0505-2W		Vo1:5VDC	Io1:200	\geq 72%	2.8/3.1	
		Vo2:5VDC	Io2:200		2.8/3.1	
S(D) 05TD0509-2W		Vo1:5VDC	Io1:200	\geq 75%	2.8/3.1	
		Vo2:9VDC	Io2:110		2.8/3.1	
S(D) 05TD0512-2W		Vo1:5VDC	Io1:200	\geq 75%	2.8/3.1	
		Vo2:12VDC	Io2:83		2.8/3.1	
S(D) 05TD0524-2W		Vo1:5VDC	Io1:200	\geq 78%	2.8/3.1	
		Vo2:24VDC	Io2:41		2.8/3.1	
S(D) 12TD0505-1W	+12VDC \pm 5%	Vo1:5VDC	Io1:100	\geq 75%	2.8/3.1	RoHS
S(D) 12TD0505-2W		Vo2:5VDC	Io2:100		2.8/3.1	
		S(D) 12TD0509-2W	Vo1:5VDC	Io1:200	\geq 72%	
Vo2:5VDC			Io2:200	2.8/3.1		
S(D) 12TD0509-2W		Vo1:5VDC	Io1:200	\geq 75%	2.8/3.1	
		Vo2:9VDC	Io2:110		2.8/3.1	
S(D) 12TD0512-2W		Vo1:5VDC	Io1:200	\geq 75%	2.8/3.1	
		Vo2:12VDC	Io2:83		2.8/3.1	
S(D) 12TD0524-2W		Vo1:5VDC	Io1:200	\geq 78%	2.8/3.1	
		Vo2:24VDC	Io2:41		2.8/3.1	

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	Load current (mA)	Efficiency	Weight SIP/DIP (g) \pm 0.5	Certification
S(D) 24TD0505-1W	+24VDC \pm 5%	Vo1:5VDC	Io1:100	\geq 72%	2.8/3.1	RoHS
		Vo2:5VDC	Io2:100		2.8/3.1	
S(D) 24TD0505-2W		Vo1:5VDC	Io1:200	\geq 72%	2.8/3.1	
		Vo2:5VDC	Io2:200		2.8/3.1	
S(D)24TD0509-2W		Vo1:5VDC	Io1:200	\geq 75%	2.8/3.1	
		Vo2:9VDC	Io2:110		2.8/3.1	
S(D) 24TD0512-2W		Vo1:5VDC	Io1:200	\geq 75%	2.8/3.1	
		Vo2:12VDC	Io2:83		2.8/3.1	
S(D) 24TD0524-2W		Vo1:5VDC	Io1:200	\geq 78%	2.8/3.1	
		Vo2:24VDC	Io2:41		2.8/3.1	

SXXMXXX-XW SERIES

Instruction:

Single inline or Double inline package (SIP or DIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 2\%$ or $\pm 3\%$

Application:

Intelligent control, mechanical and electrical prepayment system, handheld instruments, communication equipment, etc.
Isolation voltage: 1500VDC 0.5mA 1Minute

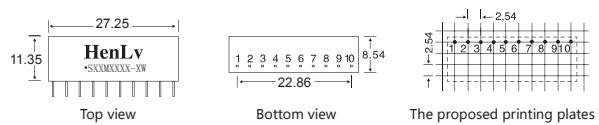


SXXMXXX-XW (0.5W、1W、2W Max)

Model	Input voltage (V) \pm 5%	Output voltage (Vo \pm 2%)	Load current (mA)	Efficiency	Weight SIP (g) \pm 0.5	Certification
S05M05050505-1W	5VDC \pm 5%	Vo1 : 5	50	\geq 75%	5.8	RoHS
		Vo2 : 5	50		5.8	
		Vo3 : 5	50		5.8	
S12M121212-1W	12VDC \pm 5%	Vo1 : 12	25	\geq 75%	5.8	
		Vo2 : 12	25		5.8	
		Vo3 : 12	25		5.8	
S24M15151515-W6	24VDC \pm 5%	Vo1 : 15	10	\geq 78%	5.8	
		Vo2 : 15	10		5.8	
		Vo3 : 15	10		5.8	

■Appearance size, the proposed printing plates, pin way:

SIP-Appearance size



Pin	1 2 3 4 5 6 7 8 9 10
Function	Vin GND Vo1 0V1 Vo2 0V2 Vo3 0V3 Vo4 0V4

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Constant voltage isolation unregulatedDC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Wide voltage regulated DC-DC power converter	Wide voltage regulated non-isolation DC-DC power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	AC-DC concurrently DC-DC/ AC and DC Universal power converter	Professional field features of products
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S(D)XXHSXX - XW SERIES

Instruction:

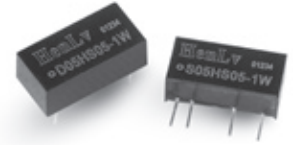
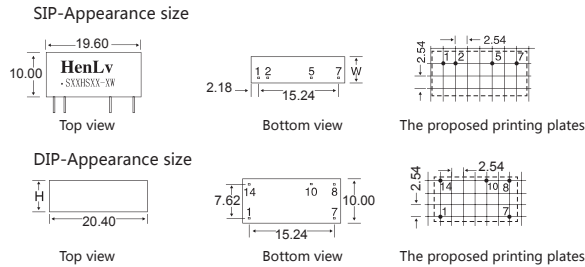
Single inline or Double inline package (SIP or DIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 2\%$ or $\pm 3\%$

Application:

Intelligent control, mechanical and electrical prepayment system, handheld instruments, communication equipment, etc.

Isolation voltage: 3000VDC 0.5mA 1Minute

Appearance size, the proposed printing plates, pin way:



Power \leq 1W(H=6.0mm)	Power \leq 2W(H=7.0mm)
Pin	1 2 5 7
Function	Vin GND 0V Vo

Power \leq 1W(H=6.50mm)	Power \leq 2W(H=8.2mm)
Pin	1 7 8 10 14
Function	GND NC Vo 0V Vin

S(D)XXHSXX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	Load current (mA)	Efficiency	Weight SIP/DIP (g) \pm 0.5	Certification
S(D)05HS3.3-1W	+5VDC \pm 5%	3.3VDC	303	\geq 72%	2.8/3.1	RoHS
S(D)05HS05-1W		5VDC	200	\geq 72%	2.8/3.1	
S(D)05HS12-1W		12VDC	83	\geq 75%	2.8/3.1	
S(D)05HS15-1W		15VDC	66	\geq 75%	2.8/3.1	
S(D)05HS24-1W		24VDC	41.6	\geq 78%	2.8/3.1	
S(D)12HS3.3-1W	+12VDC \pm 5%	3.3VDC	303	\geq 72%	2.8/3.1	
S(D)12HS05-1W		5VDC	200	\geq 75%	2.8/3.1	
S(D)12HS12-1W		12VDC	83	\geq 75%	2.8/3.1	
S(D)12HS15-1W		15VDC	66	\geq 75%	2.8/3.1	
S(D)12HS24-1W	24VDC	41.6	\geq 78%	2.8/3.1		
S(D)24HS3.3-1W	+24VDC \pm 5%	3.3VDC	303	\geq 72%	2.8/3.1	
S(D)24HS05-1W		5VDC	200	\geq 75%	2.8/3.1	
S(D)24HS12-1W		12VDC	83	\geq 75%	2.8/3.1	
S(D)24HS15-1W		15VDC	66	\geq 78%	2.8/3.1	
S(D)24HS24-1W		24VDC	41.6	\geq 78%	2.8/3.1	

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	Load current (mA)	Efficiency	Weight SIP/DIP (g) \pm 0.5	Certification
S(D)05HS3.3-2W	+5VDC \pm 5%	3.3VDC	606	\geq 75%	2.8/3.1	RoHS
S(D)05HS05-2W		5VDC	400	\geq 75%	2.8/3.1	
S(D)05HS12-2W		12VDC	166	\geq 78%	2.8/3.1	
S(D)05HS15-2W		15VDC	133	\geq 78%	2.8/3.1	
S(D)05HS24-2W		24VDC	83	\geq 80%	2.8/3.1	
S(D)12HS3.3-2W	+12VDC \pm 5%	3.3VDC	606	\geq 75%	2.8/3.1	
S(D)12HS05-2W		5VDC	400	\geq 78%	2.8/3.1	
S(D)12HS12-2W		12VDC	166	\geq 78%	2.8/3.1	
S(D)12HS15-2W		15VDC	133	\geq 78%	2.8/3.1	
S(D)12HS24-2W	24VDC	83	\geq 81%	2.8/3.1		
S(D)24HS3.3-2W	+24VDC \pm 5%	3.3VDC	606	\geq 75%	2.8/3.1	
S(D)24HS05-2W		5VDC	400	\geq 78%	2.8/3.1	
S(D)24HS12-2W		12VDC	166	\geq 78%	2.8/3.1	
S(D)24HS15-2W		15VDC	133	\geq 80%	2.8/3.1	
S(D)24HS24-2W		24VDC	83	\geq 83%	2.8/3.1	

S(D)XXHDXX - XW SERIES

Instruction:

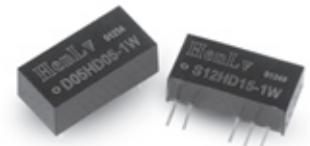
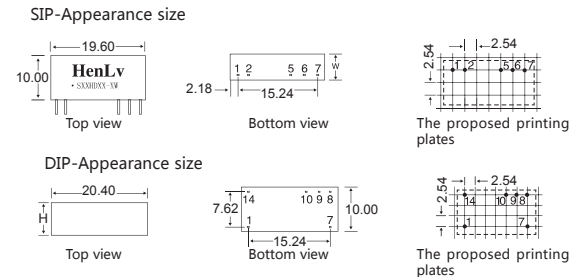
Single inline or Double inline package (SIP or DIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 2\%$ or $\pm 3\%$

Application:

Intelligent control, mechanical and electrical prepayment system, handheld instruments, communication equipment, etc.

Isolation voltage: 3000VDC 0.5mA 1Minute

Appearance size, the proposed printing plates, pin way:



Power \leq 1W(H=6.0mm)	Power \leq 2W(H=7.0mm)
Pin	1 2 5 6 7
Function	Vin GND Vo1(-Vo) Com Vo2(+Vo)

Power \leq 1W(H=6.50mm)	Power \leq 2W(H=8.2mm)
Pin	1 7 8 9 10 14
Function	GND NC Vo2(+Vo) Com Vo1(-Vo) Vin

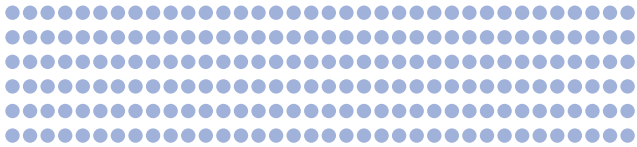
S(D)XXHDXX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	Load current (mA)	Efficiency	Weight SIP/DIP (g) \pm 0.5	Certification
S(D)05HD3.3-1W	+5VDC \pm 5%	\pm 3.3VDC	\pm 151	\geq 72%	2.8/3.1	RoHS
S(D)05HD05-1W		\pm 5VDC	\pm 100	\geq 72%	2.8/3.1	
S(D)05HD12-1W		\pm 12VDC	\pm 41	\geq 75%	2.8/3.1	
S(D)05HD15-1W		\pm 15VDC	\pm 33	\geq 75%	2.8/3.1	
S(D)09HD24-1W		\pm 24VDC	\pm 21	\geq 78%	2.8/3.1	
S(D)12HD3.3-1W	+12VDC \pm 5%	\pm 3.3VDC	\pm 151	\geq 72%	2.8/3.1	
S(D)12HD05-1W		\pm 5VDC	\pm 100	\geq 75%	2.8/3.1	
S(D)12HD12-1W		\pm 12VDC	\pm 41	\geq 75%	2.8/3.1	
S(D)12HD15-1W		\pm 15VDC	\pm 33	\geq 75%	2.8/3.1	
S(D)12HD24-1W	\pm 24VDC	\pm 21	\geq 78%	2.8/3.1		
S(D)24HD3.3-1W	+24VDC \pm 5%	\pm 3.3VDC	\pm 151	\geq 72%	2.8/3.1	
S(D)24HD05-1W		\pm 5VDC	\pm 100	\geq 75%	2.8/3.1	
S(D)24HD12-1W		\pm 12VDC	\pm 41	\geq 75%	2.8/3.1	
S(D)24HD15-1W		\pm 15VDC	\pm 33	\geq 78%	2.8/3.1	
S(D)24HD24-1W		\pm 24VDC	\pm 21	\geq 78%	2.8/3.1	

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	Load current (mA)	Efficiency	Weight SIP/DIP (g) \pm 0.5	Certification
S(D)05HD3.3-2W	+5VDC \pm 5%	\pm 3.3VDC	\pm 303	\geq 75%	2.8/3.1	RoHS
S(D)05HD05-2W		\pm 5VDC	\pm 200	\geq 75%	2.8/3.1	
S(D)05HD12-2W		\pm 12VDC	\pm 83	\geq 78%	2.8/3.1	
S(D)05HD15-2W		\pm 15VDC	\pm 67	\geq 78%	2.8/3.1	
S(D)05HD24-2W		\pm 24VDC	\pm 42	\geq 80%	2.8/3.1	
S(D)12HD3.3-2W	+12VDC \pm 5%	\pm 3.3VDC	\pm 303	\geq 75%	2.8/3.1	
S(D)12HD05-2W		\pm 5VDC	\pm 200	\geq 78%	2.8/3.1	
S(D)12HD12-2W		\pm 12VDC	\pm 83	\geq 78%	2.8/3.1	
S(D)12HD15-2W		\pm 15VDC	\pm 67	\geq 78%	2.8/3.1	
S(D)12HD24-2W	\pm 24VDC	\pm 41	\geq 81%	2.8/3.1		
S(D)24HD3.3-2W	+24VDC \pm 5%	\pm 3.3VDC	\pm 303	\geq 75%	2.8/3.1	
S(D)24HD05-2W		\pm 5VDC	\pm 200	\geq 78%	2.8/3.1	
S(D)24HD12-2W		\pm 12VDC	\pm 83	\geq 78%	2.8/3.1	
S(D)24HD15-2W		\pm 15VDC	\pm 67	\geq 80%	2.8/3.1	
S(D)24HD24-2W		\pm 24VDC	\pm 41	\geq 83%	2.8/3.1	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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Fixed voltage isolation unregulated DC-DC power converter

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Output characteristic:

1. Load efficiency: $\leq \pm 3\%$ 10%-100% load
2. Forbidden of non-load operation for a long time !
3. A short period of time (1s) short-circuit, overload, over-temperature protection circuit, self-resumption
4. Ripple/noise: 5VDC 50mV Max , 9VDC 60mV Max ,12VDC ,15VDC,24VDC 100mV Max
5. Switch frequency:50KHz -800KHz
6. No-load voltage: 5VDC, 9VDC, (+0.8VDC Max),12VDC,15VDC,24VDC(+1.5VDC Max)

General characteristic:

1. Source effects: input voltage from low to high
2. Temperature coefficient: $\leq \pm 0.03\%$ °C
3. Storage temperature: -45°C ~ +125°C
4. Shell: High inflaming retarding plastic (UL94-V0)
5. Cooling method: natural cooling without increasing the radiator
6. Mean Time Between Failures (MTBF): 2000000h
7. Operating temperature:-45°C ~ +85°C
8. Welding pin : $\leq 10S$ 300°C Max
9. Max operating temperature:85°C , relative temperature:10% ~ 90%

ESXXHS(D)XX-XW SERIES

Instruction:

Single inline or Double inline package (SIP or DIP) , any input voltage value transfer the any input voltage value with the accuracy is $\pm 2\%$ or $\pm 3\%$

Application:

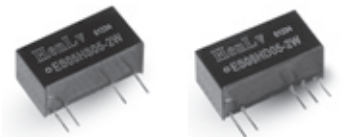
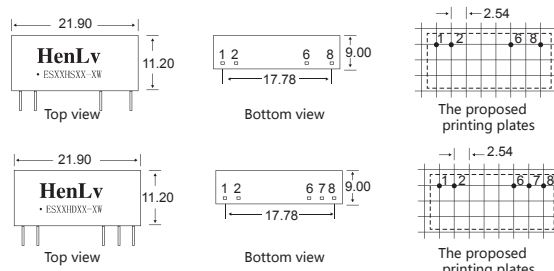
Intelligent control, mechanical and electrical prepayment system, handheld instruments, communication equipment, etc.

Ripple/noise(20MHz with width):50mVp-p Max

Isolation voltage: 4500VDC 0.5mA 1Minute

Appearance size, the proposed printing plates, pin way:

SIP-Appearance size



Size: 21.90*9.00*11.20

Pin	1	2	6	8
Function	+Vin	GND	0V	Vo

Size: 21.90*9.00*11.20

Pin	1	2	6	7	8
Function	Vin	GND	Vo1(-Vo)	Com	Vo2(+Vo)

ESXXHS(D)XX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current(mA)	Efficiency	Weight (g) ±0.5	Certification
ES05HS3.3-1W	+5VDC ±5%	3.3VDC	303	≥75%	4.6	RoHS
ES05HS05-1W		5VDC	200	≥75%	4.6	
ES05HS12-1W		12VDC	83	≥78%	4.6	
ES05HS15-1W		15VDC	66	≥78%	4.6	
ES05HS24-1W		24VDC	41.6	≥80%	4.6	
ES12HS3.3-1W	+12VDC ±5%	3.3VDC	303	≥75%	4.6	
ES12HS05-1W		5VDC	200	≥78%	4.6	
ES12HS12-1W		12VDC	83	≥80%	4.6	
ES12HS15-1W		15VDC	66	≥80%	4.6	
ES12HS24-1W		24VDC	41.6	≥80%	4.6	
ES24HS3.3-1W	+24VDC ±5%	3.3VDC	303	≥75%	4.6	
ES24HS05-1W		5VDC	200	≥80%	4.6	
ES24HS12-1W		12VDC	83	≥82%	4.6	
ES24HS15-1W		15VDC	66	≥82%	4.6	
ES24HS24-1W		24VDC	41.6	≥82%	4.6	
ES05HD3.3-1W	+5VDC ±5%	±3.3VDC	±151	≥75%	4.6	
ES05HD05-1W		±5VDC	±100	≥75%	4.6	
ES05HD12-1W		±12VDC	±41.6	≥78%	4.6	
ES05HD15-1W		±15VDC	±33.3	≥78%	4.6	
ES05HD24-1W		±24VDC	±20.8	≥80%	4.6	
ES12HD3.3-1W	+12VDC ±5%	±3.3VDC	±151	≥75%	4.6	
ES12HD05-1W		±5VDC	±100	≥78%	4.6	
ES12HD12-1W		±12VDC	±41.6	≥80%	4.6	
ES12HD15-1W		±15VDC	±33.3	≥80%	4.6	
ES12HD24-1W		±24VDC	±20.8	≥80%	4.6	
ES24HD3.3-1W	+24VDC ±5%	±3.3VDC	±151	≥75%	4.6	
ES24HD05-1W		±5VDC	±100	≥80%	4.6	
ES24HD12-1W		±12VDC	±41.6	≥82%	4.6	
ES24HD15-1W		±15VDC	±33.3	≥82%	4.6	
ES24HD24-1W		±24VDC	±20.8	≥82%	4.6	

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current(mA)	Efficiency	Weight (g) ±0.5	Certification
ES05HS3.3-2W	+5VDC ±5%	3.3VDC	606	≥75%	4.6	RoHS
ES05HS05-2W		5VDC	400	≥75%	4.6	
ES05HS12-2W		12VDC	166	≥78%	4.6	
ES05HS15-2W		15VDC	133	≥78%	4.6	
ES05HS24-2W		24VDC	83.3	≥80%	4.6	
ES12HS3.3-2W	+12VDC ±5%	3.3VDC	606	≥75%	4.6	
ES12HS05-2W		5VDC	400	≥78%	4.6	
ES12HS12-2W		12VDC	166	≥80%	4.6	
ES12HS15-2W		15VDC	133	≥80%	4.6	
ES12HS24-2W		24VDC	83.3	≥82%	4.6	
ES24HS3.3-2W	+24VDC ±5%	3.3VDC	606	≥75%	4.6	
ES24HS05-2W		5VDC	400	≥80%	4.6	
ES24HS12-2W		12VDC	166	≥82%	4.6	
ES24HS15-2W		15VDC	133	≥82%	4.6	
ES24HS24-2W		24VDC	83.3	≥82%	4.6	
ES05HD3.3-2W	+5VDC ±5%	±3.3VDC	±303	≥75%	4.6	
ES05HD05-2W		±5VDC	±200	≥75%	4.6	
ES05HD12-2W		±12VDC	±83	≥78%	4.6	
ES05HD15-2W		±15VDC	±66	≥78%	4.6	
ES05HD24-2W		±24VDC	±41.6	≥80%	4.6	
ES12HD3.3-2W	+12VDC ±5%	±3.3VDC	±303	≥75%	4.6	
ES12HD05-2W		±5VDC	±200	≥78%	4.6	
ES12HD12-2W		±12VDC	±83	≥80%	4.6	
ES12HD15-2W		±15VDC	±66	≥80%	4.6	
ES12HD24-2W		±24VDC	±41.6	≥82%	4.6	
ES24HD3.3-2W	+24VDC ±5%	±3.3VDC	±303	≥75%	4.6	
ES24HD05-2W		±5VDC	±200	≥80%	4.6	
ES24HD12-2W		±12VDC	±83	≥82%	4.6	
ES24HD15-2W		±15VDC	±66	≥82%	4.6	
ES24HD24-2W		±24VDC	±41.6	≥82%	4.6	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

DXXDXXT-1W SERIES

Instruction:

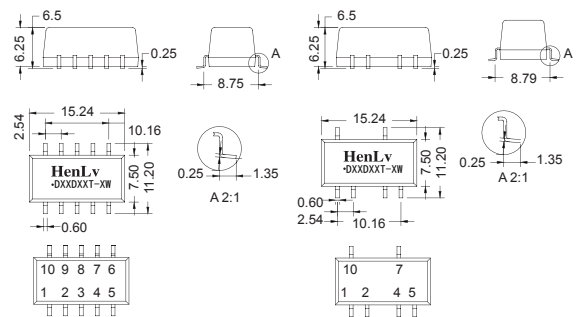
Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

Application:

Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.
Isolation voltage:1000-1500VDC 0.5mA 1Minute
Shell: shell plastic package



Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size) L15.24*W7.5*H6.25mm

Pin	1	2	3	4	5	6	7	8	9	10
Function	GND	Vin	NC	COM	-XXVDC	NC	+XXVDC	NC	NC	NC

Pin	1	2	3	4	5	6	7	8	9	10
Function	GND	Vin	/	COM	-XXVDC	/	+XXVDC	/	/	/

DXXDXXT-1W(0.5W, 1W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current(mA)	Efficiency	WeightSIP/DIP (g) ± 0.5	Certification
D05D3.3T-1W	+5VDC $\pm 5\%$	± 3.3 VDC	± 151	$\geq 72\%$	6	RoHS
D05D05T-1W		± 5 VDC	± 100	$\geq 72\%$	6	
D05D09T-1W		± 9 VDC	± 55	$\geq 72\%$	6	
D05D12T-1W		± 12 VDC	± 41	$\geq 75\%$	6	
D05D15T-1W		± 15 VDC	± 33	$\geq 75\%$	6	
D05D24T-1W	± 24 VDC	± 21	$\geq 78\%$	6		
D12D3.3T-1W	+12VDC $\pm 5\%$	± 3.3 VDC	± 151	$\geq 72\%$	6	
D12D05T-1W		± 5 VDC	± 100	$\geq 72\%$	6	
D12D09T-1W		± 9 VDC	± 55	$\geq 72\%$	6	
D12D12T-1W		± 12 VDC	± 41	$\geq 75\%$	6	
D12D15T-1W		± 15 VDC	± 33	$\geq 75\%$	6	
D15D24T-1W	± 24 VDC	± 21	$\geq 78\%$	6		
D24D3.3T-1W	+24VDC $\pm 5\%$	± 3.3 VDC	± 151	$\geq 72\%$	6	
D24D05T-1W		± 5 VDC	± 100	$\geq 72\%$	6	
D24D09T-1W		± 9 VDC	± 55	$\geq 72\%$	6	
D24D12T-1W		± 12 VDC	± 41	$\geq 75\%$	6	
D24D15T-1W		± 15 VDC	± 33	$\geq 75\%$	6	
D24D24T-1W	± 24 VDC	± 21	$\geq 78\%$	6		

DXXS(D)XXT-2W SERIES

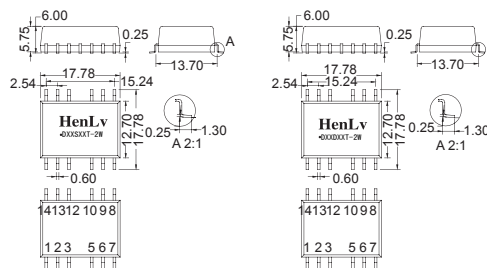
Instruction

Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

Application:

Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.
Isolation voltage:1000VDC 0.5mA 1Minute
Shell: shell plastic package

Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size) L17.78*W12.7*H5.75mm

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Function	GND	Vin	NC	/ NC	OV	+XXVDC	NC	NC	NC	/ NC	NC	NC	NC	NC

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Function	GND	Vin	NC	/ -XXVDC	COM	+XXVDC	NC	NC	-XXVDC	/ NC	NC	NC	NC	NC

DXXS(D)XXT-2W(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
D05S3.3T-2W	+5VDC $\pm 5\%$	3.3VDC	606	$\geq 72\%$	2.5	RoHS
D05S05T-2W		5VDC	400	$\geq 72\%$	2.5	
D05S12T-2W		12VDC	166	$\geq 75\%$	2.5	
D05S15T-2W		15VDC	133	$\geq 75\%$	2.5	
D05S24T-2W		24VDC	83	$\geq 78\%$	2.5	
D12S3.3T-2W	+12VDC $\pm 5\%$	3.3VDC	606	$\geq 72\%$	2.5	
D12S05T-2W		5VDC	400	$\geq 72\%$	2.5	
D12S12T-2W		12VDC	166	$\geq 75\%$	2.5	
D12S15T-2W		15VDC	133	$\geq 75\%$	2.5	
D12S24T-2W		24VDC	83	$\geq 78\%$	2.5	
D24S3.3T-2W	+24VDC $\pm 5\%$	3.3VDC	606	$\geq 72\%$	2.5	
D24S05T-2W		5VDC	400	$\geq 72\%$	2.5	
D24S12T-2W		12VDC	166	$\geq 75\%$	2.5	
D24S15T-2W		15VDC	133	$\geq 75\%$	2.5	
D24S24T-2W		24VDC	83	$\geq 78\%$	2.5	

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
D05D3.3T-2W	+5VDC $\pm 5\%$	± 3.3 VDC	± 303	$\geq 72\%$	2.5	RoHS
D05D05T-2W		± 5 VDC	± 200	$\geq 72\%$	2.5	
D05D12T-2W		± 12 VDC	± 83.3	$\geq 75\%$	2.5	
D05D15T-2W		± 15 VDC	± 66.6	$\geq 75\%$	2.5	
D05D24T-2W		± 24 VDC	± 41.6	$\geq 78\%$	2.5	
D12D3.3T-2W	+12VDC $\pm 5\%$	± 3.3 VDC	± 303	$\geq 72\%$	2.5	
D12D05T-2W		± 5 VDC	± 200	$\geq 72\%$	2.5	
D12D12T-2W		± 12 VDC	± 83.3	$\geq 75\%$	2.5	
D12D15T-2W		± 15 VDC	± 66.6	$\geq 75\%$	2.5	
D12D24T-2W		± 24 VDC	± 41.6	$\geq 78\%$	2.5	
D24D3.3T-2W	+24VDC $\pm 5\%$	± 3.3 VDC	± 303	$\geq 72\%$	2.5	
D24D05T-2W		± 5 VDC	± 200	$\geq 72\%$	2.5	
D24D12T-2W		± 12 VDC	± 83.3	$\geq 75\%$	2.5	
D24D15T-2W		± 15 VDC	± 66.6	$\geq 75\%$	2.5	
D24D24T-2W		± 24 VDC	± 41.6	$\geq 78\%$	2.5	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

DXXSXXT-XW SERIES

Instruction

Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

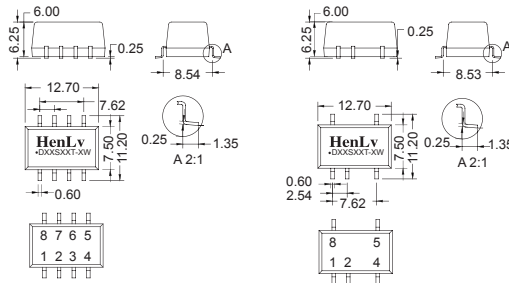
Application:

Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.

Isolation voltage: 1000VDC 0.5mA 1Minute

Shell: shell plastic package

Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size) L12.7*W7.5*H6.0mm

Pin	1	2	3	4	5	6	7	8
Function	GND	Vin	NC	OV	+XXVDC	NC	NC	NC

Pin	1	2	3	4	5	6	7	8
Function	GND	Vin	/	OV	+XXVDC	/	/	NC

DXXSXXT-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
D05S3.3T-1W	+5VDC $\pm 5\%$	3.3VDC	303	$\geq 72\%$	2.5	RoHS
D05S05T-1W		5VDC	200	$\geq 72\%$	2.5	
D05S12T-1W		12VDC	83	$\geq 75\%$	2.5	
D05S15T-1W		15VDC	67	$\geq 75\%$	2.5	
D05S24T-1W		24VDC	42	$\geq 78\%$	2.5	
D12S3.3T-1W	+12VDC $\pm 5\%$	3.3VDC	303	$\geq 72\%$	2.5	
D12S05T-1W		5VDC	200	$\geq 72\%$	2.5	
D12S12T-1W		12VDC	83	$\geq 75\%$	2.5	
D12S15T-1W		15VDC	67	$\geq 75\%$	2.5	
D12S24T-1W		24VDC	42	$\geq 78\%$	2.5	
D24S3.3T-1W	+24VDC $\pm 5\%$	3.3VDC	303	$\geq 72\%$	2.5	
D24S05T-1W		5VDC	200	$\geq 72\%$	2.5	
D24S12T-1W		12VDC	83	$\geq 75\%$	2.5	
D24S15T-1W		15VDC	67	$\geq 75\%$	2.5	
D24S24T-1W		24VDC	42	$\geq 78\%$	2.5	

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
D05S3.3T-2W	+5VDC $\pm 5\%$	3.3VDC	606	$\geq 72\%$	2.5	RoHS
D05S05T-2W		5VDC	400	$\geq 72\%$	2.5	
D05S12T-2W		12VDC	166	$\geq 75\%$	2.5	
D05S15T-2W		15VDC	134	$\geq 75\%$	2.5	
D05S24T-2W		24VDC	83	$\geq 78\%$	2.5	
D12S3.3T-2W	+12VDC $\pm 5\%$	3.3VDC	606	$\geq 72\%$	2.5	
D12S05T-2W		5VDC	400	$\geq 72\%$	2.5	
D12S12T-2W		12VDC	166	$\geq 75\%$	2.5	
D12S15T-2W		15VDC	134	$\geq 75\%$	2.5	
D12S24T-2W		24VDC	83	$\geq 78\%$	2.5	
D24S3.3T-2W	+24VDC $\pm 5\%$	3.3VDC	606	$\geq 72\%$	2.5	
D24S05T-2W		5VDC	400	$\geq 72\%$	2.5	
D24S12T-2W		12VDC	166	$\geq 75\%$	2.5	
D24S15T-2W		15VDC	134	$\geq 75\%$	2.5	
D24S24T-2W		24VDC	83	$\geq 78\%$	2.5	

DXXTDXXT-XW SERIES

Instruction

Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

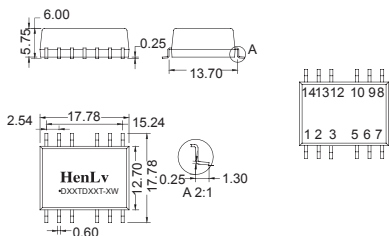
Application:

Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.

Isolation voltage: 1000-1500VDC 0.5mA 1Minute

Shell: shell plastic package

Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size) L17.8*W12.7*H5.75mm

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Function	GND	Vin	NC	/	OV1	+XXVDC1	NC	NC	+XXVDC2	OV2	/	NC	NC	NC



DXXTDXXT-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight/SIP/DIP (g) ± 0.5	Certification	
D05TD0505T-1W	+5VDC $\pm 5\%$	Vo1:5VDC	Io1:100	$\geq 75\%$	3.1	RoHS	
		Vo2:5VDC	Io2:100	$\geq 72\%$	3.1		
		Vo1:5VDC	Io1:200	$\geq 75\%$	3.1		
		Vo2:5VDC	Io2:200	$\geq 72\%$	3.1		
		Vo1:5VDC	Io1:200	$\geq 75\%$	3.1		
Vo2:12VDC		Io2:83	$\geq 75\%$	3.1			
Vo1:5VDC		Io1:200	$\geq 78\%$	3.1			
Vo2:24VDC		Io2:41	$\geq 78\%$	3.1			
D12TD0505T-1W		+12VDC $\pm 5\%$	Vo1:5VDC	Io1:100	$\geq 75\%$		3.1
			Vo2:5VDC	Io2:100	$\geq 72\%$		3.1
	Vo1:5VDC		Io1:200	$\geq 75\%$	3.1		
	Vo2:5VDC		Io2:200	$\geq 72\%$	3.1		
	Vo1:5VDC		Io1:200	$\geq 75\%$	3.1		
Vo2:12VDC	Io2:83		$\geq 75\%$	3.1			
Vo1:5VDC	Io1:200		$\geq 78\%$	3.1			
Vo2:24VDC	Io2:41		$\geq 78\%$	3.1			
D24TD0505T-1W	+24VDC $\pm 5\%$		Vo1:5VDC	Io1:100	$\geq 75\%$	3.1	
			Vo2:5VDC	Io2:100	$\geq 72\%$	3.1	
		Vo1:5VDC	Io1:200	$\geq 75\%$	3.1		
		Vo2:5VDC	Io2:200	$\geq 72\%$	3.1		
		Vo1:5VDC	Io1:200	$\geq 75\%$	3.1		
Vo2:12VDC		Io2:83	$\geq 75\%$	3.1			
Vo1:5VDC		Io1:200	$\geq 78\%$	3.1			
Vo2:24VDC		Io2:41	$\geq 78\%$	3.1			

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Constant voltage isolation unregulated DC-DC power converter

Constant voltage isolation regulated DC-DC power converter

Wide voltage regulated DC-DC power converter

Wide voltage regulated non-isolation DC-DC power converter

Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)

AC-DC concurrently DC-DC/ AC and DC Universal power converter

Professional field features of products

MDXXHSXXT-2W SERIES

Instruction

Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

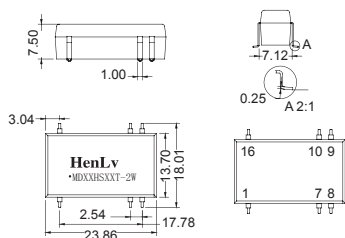
Application:

Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.

Isolation voltage:3000-6000VDC 0.5mA 1Minute

Shell: shell plastic package

■ Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size) L23.86*W13.7*H7.5mm

Pin	1	7	8	9	10	16
Function	GND	NC	NC	+XXVDC	OV	Vin



MDXXHSXXT-2W(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	WeightSIP/DIP (g) ± 0.5	Certification
MD05HS3.3T-2W	+5VDC $\pm 5\%$	3.3VDC	606	$\geq 75\%$	13	RoHS
MD05HS05T-2W		5VDC	400	$\geq 75\%$	13	
MD05HS09T-2W		9VDC	222	$\geq 78\%$	13	
MD05HS12T-2W		12VDC	166	$\geq 78\%$	13	
MD05HS15T-2W		15VDC	133	$\geq 78\%$	13	
MD05HS24T-2W	24VDC	83.3	$\geq 80\%$	13		
MD12HS3.3T-2W	+12VDC $\pm 5\%$	3.3VDC	606	$\geq 75\%$	13	
MD12HS05T-2W		5VDC	400	$\geq 75\%$	13	
MD12HS09T-2W		9VDC	222	$\geq 78\%$	13	
MD12HS12T-2W		12VDC	166	$\geq 78\%$	13	
MD12HS15T-2W		15VDC	133	$\geq 78\%$	13	
MD12HS24T-2W	24VDC	83.3	$\geq 80\%$	13		
MD24HS3.3T-2W	+24VDC $\pm 5\%$	3.3VDC	606	$\geq 75\%$	13	
MD24HS05T-2W		5VDC	400	$\geq 80\%$	13	
MD24HS09T-2W		9VDC	222	$\geq 80\%$	13	
MD24HS12T-2W		12VDC	166	$\geq 82\%$	13	
MD24HS15T-2W		15VDC	133	$\geq 82\%$	13	
MD24HS24T-2W	24VDC	83.3	$\geq 82\%$	13		

DXXHS(D)XXT-1W SERIES

Instruction

Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

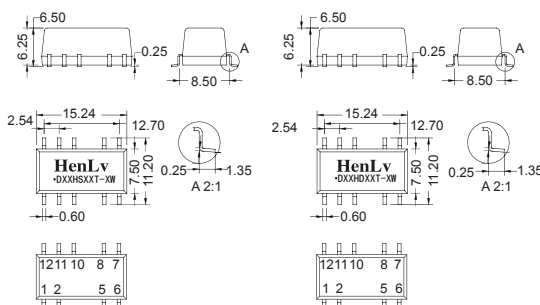
Application:

Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.

Isolation voltage:3000-6000VDC 0.5mA 1Minute

Shell: shell plastic package

■ Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size) L15.24*W7.5*H6.25mm

Pin	1	2	3	4	5	6	7	8	9	10	11	12
Function	GND	Vin	/	/	OV	NC	NC	+XXVDC	/	NC	NC	NC

Pin	1	2	3	4	5	6	7	8	9	10	11	12
Function	GND	Vin	/	/	COM	-XXVDC	NC	+XXVDC	/	NC	NC	NC



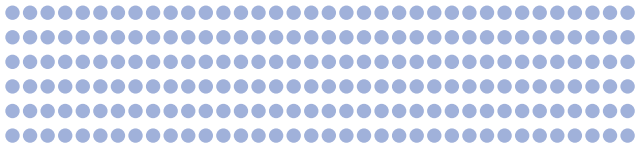
DXXHS(D)XXT-1W(0.5W, 1W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
D05HS3.3T-1W	+5VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	13	RoHS
D05HS05T-1W		5VDC	200	$\geq 75\%$	13	
D05HS12T-1W		12VDC	83	$\geq 78\%$	13	
D05HS15T-1W		15VDC	67	$\geq 78\%$	13	
D05HS24T-1W		24VDC	42	$\geq 80\%$	13	
D12HS3.3T-1W	+12VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	13	
D12HS05T-1W		5VDC	200	$\geq 75\%$	13	
D12HS12T-1W		12VDC	83	$\geq 78\%$	13	
D12HS15T-1W		15VDC	67	$\geq 78\%$	13	
D12HS24T-1W		24VDC	42	$\geq 80\%$	13	
D24HS3.3T-1W	+24VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	13	
D24HS05T-1W		5VDC	200	$\geq 80\%$	13	
D24HS12T-1W		12VDC	83	$\geq 82\%$	13	
D24HS15T-1W		15VDC	67	$\geq 82\%$	13	
D24HS24T-1W		24VDC	42	$\geq 82\%$	13	

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
D05HD3.3T-1W	+5VDC $\pm 5\%$	$\pm 3.3VDC$	± 151	$\geq 75\%$	13	RoHS
D05HD05T-1W		$\pm 5VDC$	± 100	$\geq 75\%$	13	
D05HD12T-1W		$\pm 12VDC$	± 41.6	$\geq 78\%$	13	
D05HD15T-1W		$\pm 15VDC$	± 33.3	$\geq 78\%$	13	
D05HD24T-1W		$\pm 24VDC$	± 20.8	$\geq 80\%$	13	
D12HD3.3T-1W	+12VDC $\pm 5\%$	$\pm 3.3VDC$	± 151	$\geq 75\%$	13	
D12HD05T-1W		$\pm 5VDC$	± 100	$\geq 75\%$	13	
D12HD12T-1W		$\pm 12VDC$	± 41.6	$\geq 78\%$	13	
D12HD15T-1W		$\pm 15VDC$	± 33.3	$\geq 78\%$	13	
D12HD24T-1W		$\pm 24VDC$	± 20.8	$\geq 80\%$	13	
D24HD3.3T-1W	+24VDC $\pm 5\%$	$\pm 3.3VDC$	± 151	$\geq 75\%$	13	
D24HD05T-1W		$\pm 5VDC$	± 100	$\geq 80\%$	13	
D24HD12T-1W		$\pm 12VDC$	± 41.6	$\geq 82\%$	13	
D24HD15T-1W		$\pm 15VDC$	± 33.3	$\geq 82\%$	13	
D24HD24T-1W		$\pm 24VDC$	± 20.8	$\geq 82\%$	13	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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Fixed voltage regulated DC-DC power converter



Output characteristic:

1. Load efficiency: $\leq \pm 2\%$ 0%-100% load
2. With good anti-disturbance performance, the output is short circuit, overload, overheating protection, self-resumption
3. Ripple/noise: 5VDC 50mV Max , 9VDC 60mV Max , 12VDC ,15VDC,24VDC 100mV Max
4. Switch efficiency: 150KHz ~200KHz
5. Non-load voltage: 5VDC, 9VDC, (+0.8VDC Max), 12VDC, 15VDC, 24VDC (+1.5VDC Max)

General characteristic:

1. Source effects: $\leq \pm 1\%$ (input voltage condition)
2. Temperature coefficient: $\leq \pm 0.02\%$ °C
3. Storage temperature : -40°C ~ +125°C
4. Shell: High inflaming retarding plastic(UL94-V0)
5. Cooling method: natural cooling without increasing the radiator
6. Mean Time Between Failures (MTBF): 2000000h
7. Operating temperature: -40°C ~ +85°C
8. Welding pin: $\leq 10S$ 300°C Max
9. Max operating temperature: 85°C , relative temperature: 10% ~ 90%

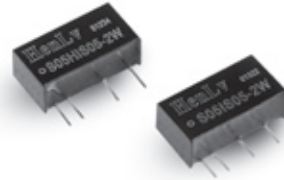
SXXIS(HIS)XX-XW SERIES

Instruction:

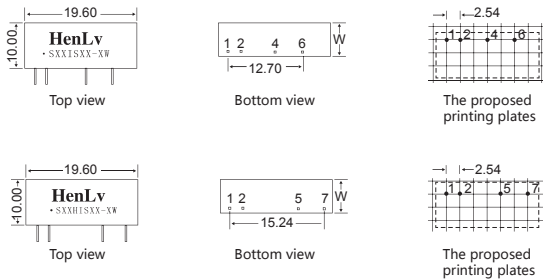
Single inline package (SIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 0.05\%$, $\pm 1\%$ or $\pm 2\%$

Application:

Especially suitable for the stabilized input voltage, and high accuracy and ripple output voltage of DC voltage high requirement converter system.
Isolation voltage: 1000VDC 0.5mA 1Minute(SXXISXX-XW)
3000VDC 0.5mA 1Minute(SXXHISXX-XW)



■ Appearance size, the proposed printing plates, pin way:



Single inline (isolation)

Power $\leq 1W$ (H=6.0) Power $\leq 2W$ (H=7.0)

Pin	1	2	4	6
Function	+Vin	GND	0V	Vo

Single inline (high isolation)

Power $\leq 1W$ (H=6.0) Power $\leq 2W$ (H=7.0)

Pin	1	2	5	7
Function	+Vin	GND	0V	Vo

SXXIS(HIS)XX-XW(0.5W, 1W, 1.5W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
S05(H)IS3.3-1W	+5VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	4.6	RoHS CE
S05(H)IS05-1W		5VDC	200	$\geq 75\%$	4.6	
S05(H)IS09-1W		9VDC	110	$\geq 78\%$	4.6	
S05(H)IS12-1W		12VDC	83	$\geq 78\%$	4.6	
S05(H)IS15-1W		15VDC	67	$\geq 78\%$	4.6	
S05(H)IS24-1W		24VDC	42	$\geq 80\%$	4.6	
S12(H)IS3.3-1W	+12VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	4.6	
S12(H)IS05-1W		5VDC	200	$\geq 75\%$	4.6	
S12(H)IS09-1W		9VDC	110	$\geq 78\%$	4.6	
S12(H)IS12-1W		12VDC	83	$\geq 78\%$	4.6	
S12(H)IS15-1W		15VDC	67	$\geq 78\%$	4.6	
S12(H)IS24-1W		24VDC	42	$\geq 80\%$	4.6	
S24(H)IS3.3-1W	+24VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	4.6	
S24(H)IS05-1W		5VDC	200	$\geq 80\%$	4.6	
S24(H)IS09-1W		9VDC	110	$\geq 80\%$	4.6	
S24(H)IS12-1W		12VDC	83	$\geq 82\%$	4.6	
S24(H)IS15-1W		15VDC	67	$\geq 82\%$	4.6	
S24(H)IS24-1W		24VDC	42	$\geq 82\%$	4.6	

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
S05(H)IS3.3-1.5W	+5VDC $\pm 5\%$	3.3VDC	455	$\geq 75\%$	4.6	RoHS CE
S05(H)IS05-2W		5VDC	400	$\geq 75\%$	4.6	
S05(H)IS09-2W		9VDC	222	$\geq 78\%$	4.6	
S05(H)IS12-2W		12VDC	166	$\geq 78\%$	4.6	
S05(H)IS15-2W		15VDC	133	$\geq 78\%$	4.6	
S05(H)IS24-1.5W		24VDC	62.5	$\geq 80\%$	4.6	
S12(H)IS3.3-1.5W	+12VDC $\pm 5\%$	3.3VDC	455	$\geq 75\%$	4.6	
S12(H)IS05-2W		5VDC	400	$\geq 75\%$	4.6	
S12(H)IS09-2W		9VDC	222	$\geq 78\%$	4.6	
S12(H)IS12-2W		12VDC	166	$\geq 78\%$	4.6	
S12(H)IS15-2W		15VDC	133	$\geq 78\%$	4.6	
S12(H)IS24-1.5W		24VDC	62.5	$\geq 80\%$	4.6	
S24(H)IS3.3-1.5W	+24VDC $\pm 5\%$	3.3VDC	455	$\geq 75\%$	4.6	
S24(H)IS05-2W		5VDC	400	$\geq 80\%$	4.6	
S24(H)IS09-2W		9VDC	222	$\geq 80\%$	4.6	
S24(H)IS12-2W		12VDC	166	$\geq 82\%$	4.6	
S24(H)IS15-2W		15VDC	133	$\geq 82\%$	4.6	
S24(H)IS24-1.5W		24VDC	62.5	$\geq 82\%$	4.6	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

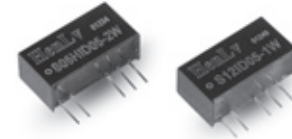
SXXID(HID)XX-XW SERIES

Instruction

Single inline package (SIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 0.05\%$, $\pm 1\%$ or $\pm 2\%$

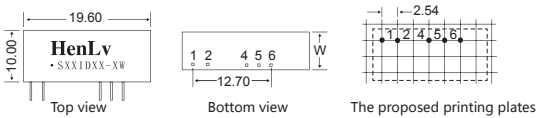
Application

Portable instrument, medical instrumentation, control equipment, anti-theft alarm system, handheld instruments and other digital circuits.
Isolation voltage: 1000VDC-3000VDC 0.5mA 1Minute



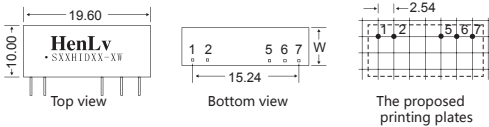
SXXID(HID)XX-XW(0.5W、1W、2W Max)

Appearance size, the proposed printing plates, pin way:



SIP-Appearance size Power \leq 1W(H=6.0) Power \leq 2W(H=7.0)

Pin	1	2	4	5	6
Function	+Vin	GND	Vo1(-Vo)	Com	Vo2(+Vo)



SIP-Appearance size Power \leq 1W(H=6.0) Power \leq 2W(H=7.0)

Pin	1	2	5	6	7
Function	+Vin	GND	Vo1(-Vo)	Com	Vo2(+Vo)

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	满载输出电流(mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
S05(H)ID3.3-1W	+5VDC $\pm 5\%$	± 3.3 VDC	± 151	$\geq 75\%$	4.6	RoHS
S05(H)ID05-1W		± 5 VDC	± 100	$\geq 75\%$	4.6	
S05(H)ID09-1W		± 9 VDC	± 55.5	$\geq 78\%$	4.6	
S05(H)ID12-1W		± 12 VDC	± 41.6	$\geq 78\%$	4.6	
S05(H)ID15-1W		± 15 VDC	± 33.3	$\geq 78\%$	4.6	
S05(H)ID24-1W		± 24 VDC	± 20.8	$\geq 80\%$	4.6	
S05(H)ID05-2W	+12VDC $\pm 5\%$	± 5 VDC	± 200	$\geq 75\%$	4.6	
S12(H)ID3.3-1W		± 3.3 VDC	± 151	$\geq 75\%$	4.6	
S12(H)ID05-1W		± 5 VDC	± 100	$\geq 75\%$	4.6	
S12(H)ID09-1W		± 9 VDC	± 55.5	$\geq 78\%$	4.6	
S12(H)ID12-1W		± 12 VDC	± 41.6	$\geq 78\%$	4.6	
S12(H)ID15-1W		± 15 VDC	± 33.3	$\geq 78\%$	4.6	
S12(H)ID24-1W	+24VDC $\pm 5\%$	± 24 VDC	± 20.8	$\geq 80\%$	4.6	
S12(H)ID05-2W		± 12 VDC	± 200	$\geq 78\%$	4.6	
S24(H)ID3.3-1W		± 3.3 VDC	± 151	$\geq 75\%$	4.6	
S24(H)ID05-1W		± 5 VDC	± 100	$\geq 80\%$	4.6	
S24(H)ID09-1W		± 9 VDC	± 55.5	$\geq 80\%$	4.6	
S24(H)ID12-1W		± 12 VDC	± 41.6	$\geq 82\%$	4.6	
S24(H)ID15-1W	± 15 VDC	± 33.3	$\geq 82\%$	4.6		
S24(H)ID24-1W	± 24 VDC	± 20.8	$\geq 82\%$	4.6		
S24(H)ID05-2W	± 24 VDC	± 200	$\geq 78\%$	4.6		

DXXHISXXT-1W SERIES

Instruction:

Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

Application:

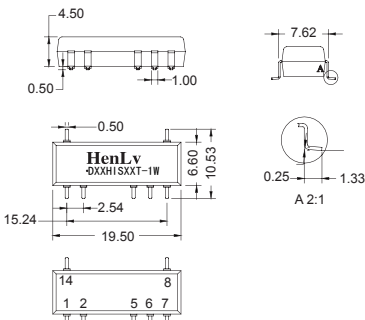
Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.

Isolation voltage:3000-6000VDC 0.5mA 1Minute



DXXHISXXT-1W(0.5W、1W Max)

Appearance size, the proposed printing plates, pin way:



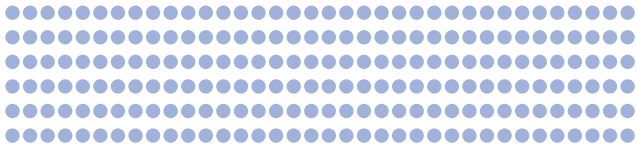
(Double patch- Appearance size) L19.5*W6.6*H4.5mm

Pin	1	2	5	6	7	8	14
Function	Vin	GND	OV	+XXVDC	NC	NC	NC

Model	Input voltage (V)	Output voltage (Vo \pm 2%)	Load current(mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
D05HIS3.3T-1W	+5VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	13	RoHS
D05HIS05T-1W		5VDC	200	$\geq 75\%$	13	
D05HIS09T-1W		9VDC	111	$\geq 78\%$	13	
D05HIS12T-1W		12VDC	83.3	$\geq 78\%$	13	
D05HIS15T-1W		15VDC	66.6	$\geq 78\%$	13	
D05HIS24T-1W		24VDC	41.6	$\geq 80\%$	13	
D12HIS3.3T-1W	+12VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	13	
D12HIS05T-1W		5VDC	200	$\geq 75\%$	13	
D12HIS09T-1W		9VDC	111	$\geq 78\%$	13	
D12HIS12T-1W		12VDC	83.3	$\geq 78\%$	13	
D12HIS15T-1W		15VDC	66.6	$\geq 78\%$	13	
D12HIS24T-1W		24VDC	41.6	$\geq 80\%$	13	
D24HIS3.3T-1W	+24VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	13	
D24HIS05T-1W		5VDC	200	$\geq 80\%$	13	
D24HIS09T-1W		9VDC	111	$\geq 80\%$	13	
D24HIS12T-1W		12VDC	83.3	$\geq 82\%$	13	
D24HIS15T-1W		15VDC	66.6	$\geq 82\%$	13	
D24HIS24T-1W		24VDC	41.6	$\geq 82\%$	13	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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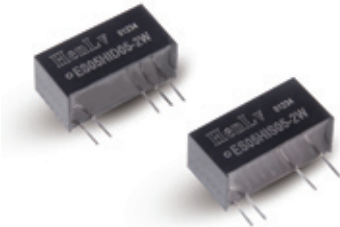


HenLv DC-DC power converter

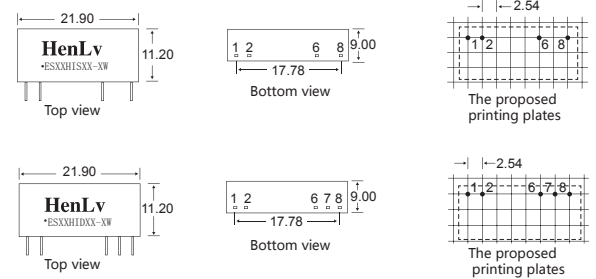
ESXXHIS(D)XX-XW SERIES

Instruction:
Single inline package (SIP), any input voltage value transfer the any input voltage value with the accuracy is $\pm 0.05\%$, $\pm 1\%$ or $\pm 2\%$

Application:
Portable instrument, medical instrumentation, control equipment, anti-theft alarm system, handheld instruments and other digital circuits.
Isolation voltage: 3000VDC-4500VDC 0.5mA 1Minute



■ Appearance size, the proposed printing plates, pin way:



SIP-Appearance size Size : 21.90*9.00*11.20mm				SIP-Appearance size Size : 21.90*9.00*11.20mm						
Pin	1	2	6	8	Pin	1	2	6	7	8
Function	Vin	GND	OV	+XXVDC	Function	Vin	GND	-XXVDC	COM	+XXVDC

ESXXHIS(D)XX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
ES05HIS3.3-1.5W	+5VDC $\pm 5\%$	3.3VDC	454	$\geq 75\%$	4.6	RoHS
ES05HIS05-2W		5VDC	400	$\geq 75\%$	4.6	
ES05HIS09-2W		9VDC	222	$\geq 78\%$	4.6	
ES05HIS12-2W		12VDC	166	$\geq 78\%$	4.6	
ES05HIS15-2W		15VDC	133	$\geq 78\%$	4.6	
ES05HIS24-1.5W	+12VDC $\pm 5\%$	24VDC	62.5	$\geq 80\%$	4.6	
ES12HIS3.3-1.5W		3.3VDC	454	$\geq 75\%$	4.6	
ES12HIS05-2W		5VDC	400	$\geq 75\%$	4.6	
ES12HIS09-2W		9VDC	222	$\geq 78\%$	4.6	
ES12HIS12-2W		12VDC	166	$\geq 78\%$	4.6	
ES12HIS15-2W	15VDC	133	$\geq 78\%$	4.6		
ES12HIS24-1.5W	24VDC	62.5	$\geq 80\%$	4.6		
ES24HIS3.3-1.5W	+24VDC $\pm 5\%$	3.3VDC	454	$\geq 75\%$	4.6	
ES24HIS05-2W		5VDC	400	$\geq 80\%$	4.6	
ES24HIS09-2W		9VDC	222	$\geq 80\%$	4.6	
ES24HIS12-2W		12VDC	166	$\geq 82\%$	4.6	
ES24HIS15-2W		15VDC	133	$\geq 82\%$	4.6	
ES24HIS24-1.5W	24VDC	62.5	$\geq 82\%$	4.6		

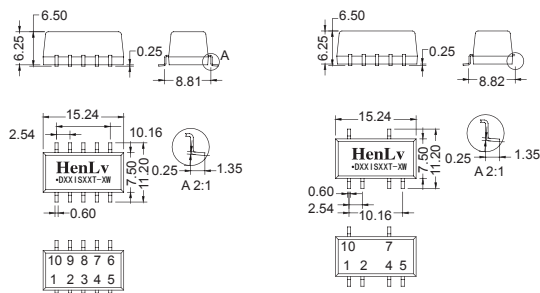
Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
ES05HID05-2W	+5VDC $\pm 5\%$	± 5 VDC	± 200	$\geq 75\%$	4.6	RoHS
ES12HID3.3-1W	+12VDC $\pm 5\%$	± 3.3 VDC	± 151.5	$\geq 75\%$	4.6	
ES12HID05-1W		± 5 VDC	± 100	$\geq 75\%$	4.6	
ES12HID09-1W		± 9 VDC	± 55	$\geq 78\%$	4.6	
ES12HID12-1W		± 12 VDC	± 41.5	$\geq 78\%$	4.6	
ES12HID15-1W		± 15 VDC	± 33	$\geq 78\%$	4.6	
ES12HID24-1W	± 24 VDC	± 20.8	$\geq 80\%$	4.6		
ES12HID05-2W	+24VDC $\pm 5\%$	± 5 VDC	± 200	$\geq 78\%$	4.6	
ES24HID3.3-1W		± 3.3 VDC	± 151.5	$\geq 75\%$	4.6	
ES24HID05-1W		± 5 VDC	± 100	$\geq 80\%$	4.6	
ES24HID09-1W		± 9 VDC	± 55	$\geq 80\%$	4.6	
ES24HID12-1W		± 12 VDC	± 41.5	$\geq 82\%$	4.6	
ES24HID15-1W	± 15 VDC	± 33	$\geq 82\%$	4.6		
ES24HID24-1W	± 24 VDC	± 20.8	$\geq 82\%$	4.6		
ES24HID05-2W	± 5 VDC	± 200	$\geq 78\%$	4.6		

DXXISXXT-1W SERIES

Instruction:
Double patch (SMD) package, an arbitrary value of input voltage converting any voltage output, accuracy is $\pm 2\%$ and $\pm 3\%$, surface mount technology, reflow soldering process.

Application:
Industrial control and remote DC power supply system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.
Isolation voltage: 1000VDC 0.5mA 1Minute
Shell: shell plastic package

■ Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size) L15.24*W7.5*H6.25mm

Pin	1	2	3	4	5	6	7	8	9	10
Function	GND	Vin	NC	COM	NC	NC	+XXVDC	NC	NC	NC

Pin	1	2	3	4	5	6	7	8	9	10
Function	GND	Vin	/	COM	NC	/	+XXVDC	/	/	NC



DXXISXXT-1W(0.5W, 1W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current(mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
D05IS3.3T-1W	+5VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	4.6	RoHS
D05IS05T-1W		5VDC	200	$\geq 75\%$	4.6	
D05IS12T-1W		12VDC	83	$\geq 78\%$	4.6	
D05IS15T-1W		15VDC	66.6	$\geq 78\%$	4.6	
D05IS24T-1W		24VDC	41.6	$\geq 80\%$	4.6	
D12IS3.3T-1W	+12VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	4.6	
D12IS05T-1W		5VDC	200	$\geq 75\%$	4.6	
D12IS12T-1W		12VDC	83	$\geq 78\%$	4.6	
D12IS15T-1W		15VDC	66.6	$\geq 78\%$	4.6	
D12IS24T-1W		24VDC	41.6	$\geq 80\%$	4.6	
D24IS3.3T-1W	+24VDC $\pm 5\%$	3.3VDC	303	$\geq 75\%$	4.6	
D24IS05T-1W		5VDC	200	$\geq 80\%$	4.6	
D24IS12T-1W		12VDC	83	$\geq 82\%$	4.6	
D24IS15T-1W		15VDC	66.6	$\geq 82\%$	4.6	
D24IS24T-1W		24VDC	41.6	$\geq 82\%$	13	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

DC-DC width regulated DC-DC power converter

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Output characteristic:

1. Load efficiency: $\leq \pm 1\%$ 0%-100% load
2. Having the over-circuit, over voltage (according to your requirement) and output short circuits, over load protection, self-resumption
3. Ripple/noise : (20MHz with width): 50mVp-p Max
4. Switch frequency: 150KHz -200KHz MTBF: 200000h

WRMDXXS(D)XXT-XW SERIES

Instruction:

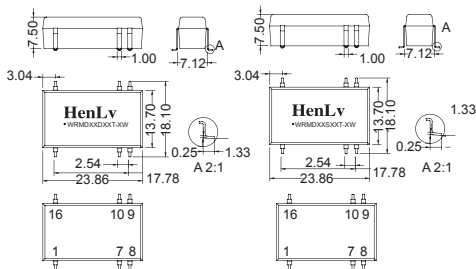
Input voltage 4.5VDC-72VDC, double patch (SMD) package, converted from arbitrary values of voltage output, accuracy is $\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$, surface mount technology, reflow soldering process.

Application:

Industrial control and remote DC power supply system, switching system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.

Shell: shell plastic package

Appearance size, the proposed printing plates, pin way:



(Double patch- Appearance size)

L23.86*W13.7*H7.5mm

Pin	1	7	8	9	10	16	Pin	1	7	8	9	10	16
Function	GND	NC	COM	+XXVDC	-XXVDC	Vin	Function	GND	NC	NC	+XXVDC	OV	Vin

WRMDXXS(D)XXT-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
WRMD05S3.3T-2W	5VDC (4.5-9VDC)	3.3VDC	606	$\geq 72\%$	13	RoHS
WRMD05S05T-2W		5VDC	400	$\geq 72\%$	13	
WRMD05S12T-2W		12VDC	166	$\geq 75\%$	13	
WRMD05S15T-2W		15VDC	133	$\geq 75\%$	13	
WRMD05S24T-2W		24VDC	83.3	$\geq 78\%$	13	
WRMD12S3.3T-2W	12VDC (9-18VDC)	3.3VDC	606	$\geq 72\%$	13	
WRMD12S05T-2W		5VDC	400	$\geq 72\%$	13	
WRMD12S12T-2W		12VDC	166	$\geq 75\%$	13	
WRMD12S15T-2W		15VDC	133	$\geq 75\%$	13	
WRMD12S24T-2W	24VDC	83.3	$\geq 78\%$	13		
WRMD24S3.3T-2W	24VDC (18-36VDC)	3.3VDC	606	$\geq 72\%$	13	
WRMD24S05T-2W		5VDC	400	$\geq 72\%$	13	
WRMD24S12T-2W		12VDC	166	$\geq 75\%$	13	
WRMD24S15T-2W		15VDC	133	$\geq 75\%$	13	
WRMD24S24T-2W		24VDC	83.3	$\geq 78\%$	13	
WRMD48S3.3T-2W	48VDC (36-72VDC)	3.3VDC	606	$\geq 72\%$	13	
WRMD48S05T-2W		5VDC	400	$\geq 72\%$	13	
WRMD48S12T-2W		12VDC	166	$\geq 75\%$	13	
WRMD48S15T-2W		15VDC	133	$\geq 75\%$	13	
WRMD48S24T-2W		24VDC	83.3	$\geq 78\%$	13	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

General characteristic:

1. Source effects: $\leq \pm 1\%$ (input voltage range)
2. Temperature coefficient: $\leq \pm 0.02\%$ °C
3. Operating temperature: -40°C ~ +85°C
Storage temperature: -40°C ~ +125°C
4. Cooling method: natural cooling without increasing the radiator
5. Mean Time Between Failures (MTBF): 200000h
6. Isolation temperature: 1000VDC 0.5mA 1Minute
7. Max operating temperature: 85°C, relative temperature: 10% ~ 90%

WRTDXXSXXT-2W SERIES

Instruction:

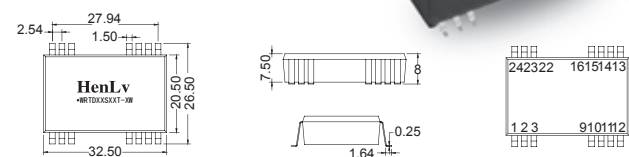
Input voltage 4.5VDC-72VDC, double patch (SMD) package, converted from arbitrary values of voltage output, accuracy is $\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$, surface mount technology, reflow soldering process.

Application:

Industrial control and remote DC power supply system, switching system, A/D and D/A, communication interface converter, monitoring equipment, medical instruments, automatic control device, anti-theft alarm, digital circuit, air conditioning computer controller, etc.

Shell: shell plastic package

Appearance size, the proposed printing plates, pin way:

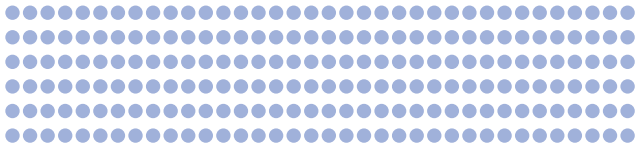


(Double patch- Appearance size) L32.5*W20.5*H7.5mm

Pin	1	2	3	9	10	11	12	13	14	15	16	22	23	24
Function	NC	GND	GND	NC	NC	NC	NC	NC	+XXVDC	NC	OV	Vin	Vin	NC

WRTDXXSXXT-2W(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
WRTD05S3.3T-2W	5VDC (4.5-9VDC)	3.3VDC	606	$\geq 72\%$	18	RoHS
WRTD05S05T-2W		5VDC	400	$\geq 72\%$	18	
WRTD05S12T-2W		12VDC	166	$\geq 75\%$	18	
WRTD05S15T-2W		15VDC	133	$\geq 75\%$	18	
WRTD05S24T-2W		24VDC	83.3	$\geq 78\%$	18	
WRTD12S3.3T-2W	12VDC (9-18VDC)	3.3VDC	606	$\geq 72\%$	18	
WRTD12S05T-2W		5VDC	400	$\geq 72\%$	18	
WRTD12S12T-2W		12VDC	166	$\geq 75\%$	18	
WRTD12S15T-2W		15VDC	133	$\geq 75\%$	18	
WRTD12S24T-2W	24VDC	83.3	$\geq 78\%$	18		
WRTD24S3.3T-2W	24VDC (18-36VDC)	3.3VDC	606	$\geq 72\%$	18	
WRTD24S05T-2W		5VDC	400	$\geq 72\%$	18	
WRTD24S12T-2W		12VDC	166	$\geq 75\%$	18	
WRTD24S15T-2W		15VDC	133	$\geq 75\%$	18	
WRTD24S24T-2W		24VDC	83.3	$\geq 78\%$	18	
WRTD48S3.3T-2W	48VDC (36-72VDC)	3.3VDC	606	$\geq 72\%$	18	
WRTD48S05T-2W		5VDC	400	$\geq 72\%$	18	
WRTD48S12T-2W		12VDC	166	$\geq 75\%$	18	
WRTD48S15T-2W		15VDC	133	$\geq 75\%$	18	
WRTD48S24T-2W		24VDC	83.3	$\geq 78\%$	18	



WRSXXS(D)XX-XW SERIES

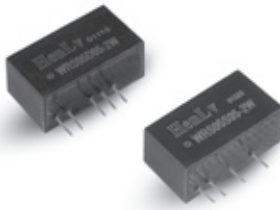
Instruction:

Input voltage 4.5 VDC-72 VDC, transfer the any output voltage value with the accuracy is $\pm 1\%$ or $\pm 2\%$

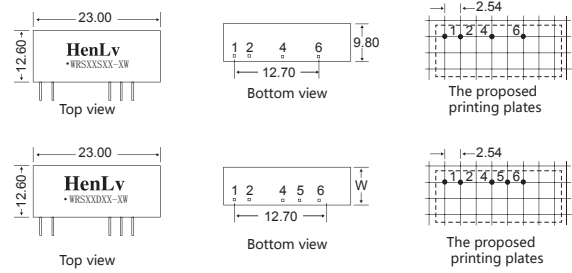
Application:

Communication Remote control system , wireless data terminal distributed power supply system, exchange system etc communication equipment.

Shell: shell plastic package



■ Appearance size, the proposed printing plates, pin way:



SIP (single)-Appearance size

Size : 23.00*9.80*12.60mm

Pin	1	2	4	6
Function	Vin	GND	OV	+XXVDC

SIP (dual)-Appearance size

Size : 23.00*9.80*12.60mm

Pin	1	2	4	5	6
Function	Vin	GND	-XXVDC	COM	+XXVDC

MRSXXS(D)XX-XW SERIES

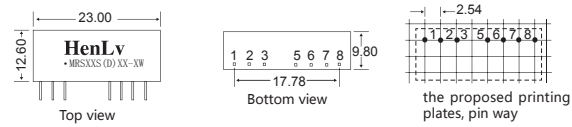
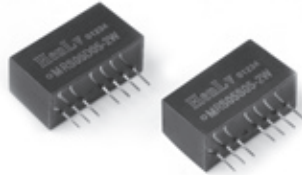
Instruction:

Input voltage 4.5 VDC-72 VDC, transfer the any output voltage value with the accuracy is $\pm 1\%$ or $\pm 2\%$

Application:

Military field

Shell: shell plastic package



SIP (single)-Appearance size Size : 23.00*9.80*12.60mm

Pin	1	2	3	5	6	7	8
Function	GND	Vin	TRM	NC	+XXVDC	OV	NC

SIP (dual)-Appearance size Size : 23.00*9.80*12.60mm

Pin	1	2	3	5	6	7	8
Function	GND	Vin	TRM	NC	+XXVDC	OV	-XXVDC

W(M)RSXXS(D)XX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
W(M)RS05S3.3-2W	5VDC (4.5-9VDC)	3.3VDC	606	$\geq 72\%$	1.7	RoHS
W(M)RS05S05-2W		5VDC	400	$\geq 72\%$	1.7	
W(M)RS05S12-2W		12VDC	166	$\geq 75\%$	1.7	
W(M)RS05S15-2W		15VDC	134	$\geq 75\%$	1.7	
W(M)RS05S24-2W	24VDC	83	$\geq 78\%$	1.7		
W(M)RS12S3.3-2W	12VDC (9-18VDC)	3.3VDC	606	$\geq 72\%$	1.7	
W(M)RS12S05-2W		5VDC	400	$\geq 72\%$	1.7	
W(M)RS12S12-2W		12VDC	166	$\geq 75\%$	1.7	
W(M)RS12S15-2W		15VDC	134	$\geq 75\%$	1.7	
W(M)RS12S24-2W	24VDC	83	$\geq 78\%$	1.7		
W(M)RS24S3.3-2W	24VDC (18-36VDC)	3.3VDC	606	$\geq 72\%$	1.7	
W(M)RS24S05-2W		5VDC	400	$\geq 72\%$	1.7	
W(M)RS24S12-2W		12VDC	166	$\geq 75\%$	1.7	
W(M)RS24S15-2W		15VDC	134	$\geq 75\%$	1.7	
W(M)RS24S24-2W	24VDC	83	$\geq 78\%$	1.7		
W(M)RS48S3.3-2W	48VDC (36-72VDC)	3.3VDC	606	$\geq 72\%$	1.7	
W(M)RS48S05-2W		5VDC	400	$\geq 72\%$	1.7	
W(M)RS48S12-2W		12VDC	166	$\geq 75\%$	1.7	
W(M)RS48S15-2W		15VDC	134	$\geq 75\%$	1.7	
W(M)RS48S24-2W	24VDC	83	$\geq 78\%$	1.7		

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
W(M)RS05D3.3-2W	5VDC (4.5-9VDC)	$\pm 3.3VDC$	± 303	$\geq 72\%$	1.7	RoHS
W(M)RS05D05-2W		$\pm 5VDC$	± 200	$\geq 72\%$	1.7	
W(M)RS05D12-2W		$\pm 12VDC$	± 83	$\geq 75\%$	1.7	
W(M)RS05D15-2W		$\pm 15VDC$	± 67	$\geq 75\%$	1.7	
W(M)RS05D24-2W	$\pm 24VDC$	± 42	$\geq 78\%$	1.7		
W(M)RS12D3.3-2W	12VDC (9-18VDC)	$\pm 3.3VDC$	± 303	$\geq 72\%$	1.7	
W(M)RS12D05-2W		$\pm 5VDC$	± 200	$\geq 72\%$	1.7	
W(M)RS12D12-2W		$\pm 12VDC$	± 83	$\geq 75\%$	1.7	
W(M)RS12D15-2W		$\pm 15VDC$	± 67	$\geq 75\%$	1.7	
W(M)RS12D24-2W	$\pm 24VDC$	± 42	$\geq 78\%$	1.7		
W(M)RS24D3.3-2W	24VDC (18-36VDC)	$\pm 3.3VDC$	± 303	$\geq 72\%$	1.7	
W(M)RS24D05-2W		$\pm 5VDC$	± 200	$\geq 72\%$	1.7	
W(M)RS24D12-2W		$\pm 12VDC$	± 83	$\geq 75\%$	1.7	
W(M)RS24D15-2W		$\pm 15VDC$	± 67	$\geq 75\%$	1.7	
W(M)RS24D24-2W	$\pm 24VDC$	± 42	$\geq 78\%$	1.7		
W(M)RS48D3.3-2W	48VDC (36-72VDC)	$\pm 3.3VDC$	± 303	$\geq 72\%$	1.7	
W(M)RS48D05-2W		$\pm 5VDC$	± 200	$\geq 72\%$	1.7	
W(M)RS48D12-2W		$\pm 12VDC$	± 83	$\geq 75\%$	1.7	
W(M)RS48D15-2W		$\pm 15VDC$	± 67	$\geq 75\%$	1.7	
W(M)RS48D24-2W	$\pm 24VDC$	± 42	$\geq 78\%$	1.7		

Above models for our standard products, according to customer requirements can be designed any parameter values actually

WRSXXTDXX-XW SERIES

Output characteristic:

1. Load efficiency: $\leq \pm 1\%$ 0%-100% load
2. Having the over-circuit, over voltage (according to your requirement) and output short circuits, over load protection, self-resumption
3. Ripple/noise : (20MHz with width): 50mVp-p Max
4. Switch frequency: 150KHz -200KHz MTBF: 200000h

Instruction:

Input voltage 4.5 VDC-72 VDC, transfer the any output voltage value with the accuracy is $\pm 1\%$ or $\pm 2\%$

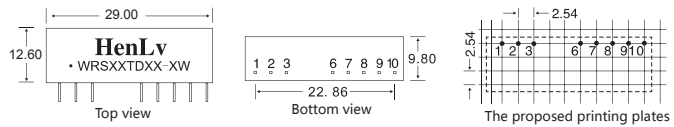
Application:

Communication Remote control system , wireless data terminal distributed power supply system, exchange system etc communication equipment. Shell: shell plastic package

General characteristic:

1. Source effects: $\leq \pm 1\%$ (input voltage range)
2. Temperature coefficient: $\leq \pm 0.02\%$ °C
3. Operating temperature: -40°C ~ +85°C Storage temperature: -40°C ~ +125°C
4. Cooling method: natural cooling without increasing the radiator
5. Mean Time Between Failures (MTBF): 200000h
6. Isolation temperature: 1000VDC 0.5mA 1Minute
7. Max operating temperature: 85°C , relative temperature: 10% ~ 90%

■ Appearance size, the proposed printing plates, pin way:



SIP (dual)-Appearance size Size: 29.00*9.80*12.60

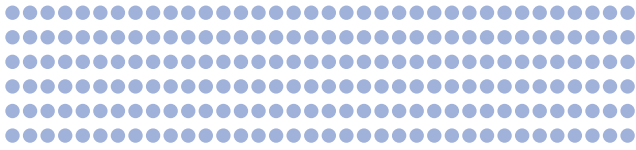
Pin	1	2	3	6	7	8	9	10
Function	GND	Vin	TRM	+XXVDC1	OV1	NC	OV2	+XXVDC2

WRSXXTDXX-XW(0.5W, 1W, 2W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)		Load current1 (mA)	Load current2 (mA)	Efficiency	Weight (g) ± 0.5	Certification	Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)		Load current1 (mA)	Load current2 (mA)	Efficiency	Weight (g) ± 0.5	Certification
		Vo1	Vo2								Vo1	Vo2					
WRS05TD053.3-1W	5VDC (4.5-9VDC)	5VDC	3.3VDC	100	151	$\geq 72\%$	1.7	RoHS	WRS05TD053.3-2W	5VDC (4.5-9VDC)	5VDC	3.3VDC	200	303	$\geq 76\%$	1.7	RoHS
WRS05TD0505-1W		5VDC	5VDC	100	100	$\geq 72\%$	1.7		WRS05TD0505-2W		5VDC	5VDC	200	200	$\geq 76\%$	1.7	
WRS05TD0509-1W		5VDC	9VDC	100	55	$\geq 72\%$	1.7		WRS05TD0509-2W		5VDC	9VDC	200	111	$\geq 76\%$	1.7	
WRS05TD0512-1W		5VDC	12VDC	100	41.6	$\geq 75\%$	1.7		WRS05TD0512-2W		5VDC	12VDC	200	83.3	$\geq 78\%$	1.7	
WRS05TD0515-1W		5VDC	15VDC	100	33	$\geq 75\%$	1.7		WRS05TD0515-2W		5VDC	15VDC	200	67	$\geq 78\%$	1.7	
WRS05TD093.3-1W		9VDC	3.3VDC	55	151	$\geq 78\%$	1.7		WRS05TD093.3-2W		9VDC	3.3VDC	111	303	$\geq 78\%$	1.7	
WRS12TD053.3-1W	12VDC (9-18VDC)	5VDC	3.3VDC	100	151	$\geq 72\%$	1.7		WRS12TD053.3-2W	12VDC (9-18VDC)	5VDC	3.3VDC	200	303	$\geq 76\%$	1.7	
WRS12TD0505-1W		5VDC	5VDC	100	100	$\geq 72\%$	1.7		WRS12TD0505-2W		5VDC	5VDC	200	200	$\geq 76\%$	1.7	
WRS12TD0509-1W		5VDC	9VDC	100	55	$\geq 72\%$	1.7		WRS12TD0509-2W		5VDC	9VDC	200	111	$\geq 76\%$	1.7	
WRS12TD0512-1W		5VDC	12VDC	100	41.6	$\geq 75\%$	1.7		WRS12TD0512-2W		5VDC	12VDC	200	83.3	$\geq 78\%$	1.7	
WRS12TD0515-1W		5VDC	15VDC	100	33	$\geq 75\%$	1.7		WRS12TD0515-2W		5VDC	15VDC	200	67	$\geq 78\%$	1.7	
WRS12TD093.3-1W		9VDC	3.3VDC	55	151	$\geq 78\%$	1.7		WRS12TD093.3-2W		9VDC	3.3VDC	111	303	$\geq 78\%$	1.7	
WRS24TD053.3-1W	24VDC (18-36VDC)	5VDC	3.3VDC	100	151	$\geq 72\%$	1.7		WRS24TD053.3-2W	24VDC (18-36VDC)	5VDC	3.3VDC	200	303	$\geq 76\%$	1.7	
WRS24TD0505-1W		5VDC	5VDC	100	100	$\geq 72\%$	1.7		WRS24TD0505-2W		5VDC	5VDC	200	200	$\geq 76\%$	1.7	
WRS24TD0509-1W		5VDC	9VDC	100	55	$\geq 72\%$	1.7		WRS24TD0509-2W		5VDC	9VDC	200	111	$\geq 76\%$	1.7	
WRS24TD0512-1W		5VDC	12VDC	100	41.6	$\geq 75\%$	1.7		WRS24TD0512-2W		5VDC	12VDC	200	83.3	$\geq 78\%$	1.7	
WRS24TD0515-1W		5VDC	15VDC	100	33	$\geq 75\%$	1.7		WRS24TD0515-2W		5VDC	15VDC	200	67	$\geq 78\%$	1.7	
WRS24TD093.3-1W		9VDC	3.3VDC	55	151	$\geq 78\%$	1.7		WRS24TD093.3-2W		9VDC	3.3VDC	111	303	$\geq 78\%$	1.7	
WRS48TD053.3-1W	48VDC (36-72VDC)	5VDC	3.3VDC	100	151	$\geq 72\%$	1.7	WRS48TD053.3-1W	48VDC (36-72VDC)	5VDC	3.3VDC	200	303	$\geq 76\%$	1.7		
WRS48TD0505-1W		5VDC	5VDC	100	100	$\geq 72\%$	1.7	WRS48TD0505-1W		5VDC	5VDC	200	200	$\geq 76\%$	1.7		
WRS48TD0509-1W		5VDC	9VDC	100	55	$\geq 72\%$	1.7	WRS48TD0509-1W		5VDC	9VDC	200	111	$\geq 76\%$	1.7		
WRS48TD0512-1W		5VDC	12VDC	100	41.6	$\geq 75\%$	1.7	WRS48TD0512-1W		5VDC	12VDC	200	83.3	$\geq 78\%$	1.7		
WRS48TD0515-1W		5VDC	15VDC	100	33	$\geq 75\%$	1.7	WRS48TD0515-1W		5VDC	15VDC	200	67	$\geq 78\%$	1.7		
WRS48TD093.3-1W		9VDC	3.3VDC	55	151	$\geq 78\%$	1.7	WRS48TD093.3-1W		9VDC	3.3VDC	111	303	$\geq 78\%$	1.7		

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated (non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	Wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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MRTDXXS(D)XX-XW(2:1) SERIES

Instruction:

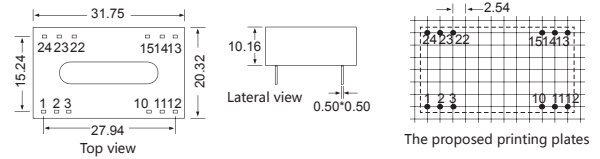
Double 24 pin (DIP) package of the 4.5VDC-150VDC input voltage transfer the any output voltage value with the accuracy $\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$

Application:

A/D and D/A, self-Control equipment, anti-theft alarm system, switching system etc network communication equipment
Shell: High inflaming retarding plastic or Metal copper shell package



Appearance size, the proposed printing plates, pin way:



Single Output Size : 31.75*20.32*10.16mm

Pin	1	2	3	10	11	12	13	14	15	22	23	24
Function	Vin	NC	NC	OV	+XXVDC	GND	GND	+XXVDC	OV	NC	NC	Vin

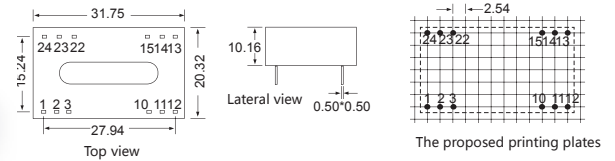
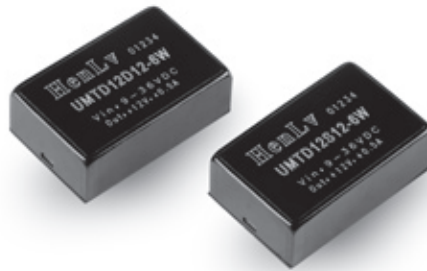
UMTDXXS(D)XX-XW(4:1) SERIES

Instruction:

Double 24 pin (DIP) package of the 4.5VDC-72VDC input voltage transfer the any output voltage value with the accuracy $\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$

Application:

A/D and D/A, self-Control equipment, anti-theft alarm system, switching system etc network communication equipment
Shell: High inflaming retarding plastic or Metal copper shell package



Dual output Size : 31.75*20.32*10.16mm

Pin	1	2	3	10	11	12	13	14	15	22	23	24
Function	Vin	-XXVDC	OV	OV	+XXVDC	GND	GND	+XXVDC	OV	OV	-XXVDC	Vin

MRTDXXS(D)XX-XW(3W, 5W, 6W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	WeightSIP/DIP (g) ± 0.5	Certification
MRTD05S3.3-5W	5VDC (4.5-9VDC)	3.3	1515	>73%	12	RoHS
MRTD05S05-5W		5	1000	>80%	12	
MRTD05S12-5W		12	417	>85%	12	
MRTD05S15-5W		15	333	>85%	12	
MRTD05S24-5W	12VDC (9-18VDC)	3.3	1515	>73%	12	
MRTD12S05-5W		5	1000	>80%	12	
MRTD12S12-5W		12	417	>85%	12	
MRTD12S15-5W		15	333	>85%	12	
MRTD12S24-5W	24VDC (18-36VDC)	3.3	1515	>73%	12	
MRTD24S05-5W		5	1000	>80%	12	
MRTD24S12-5W		12	417	>85%	12	
MRTD24S15-5W		15	333	>85%	12	
MRTD24S24-5W	48VDC (36-72VDC)	3.3	1515	>73%	12	
MRTD48S05-5W		5	1000	>80%	12	
MRTD48S12-5W		12	417	>85%	12	
MRTD48S15-5W		15	333	>85%	12	
MRTD48S24-5W	110VDC (70-150VDC)	3.3	1515	>73%	12	
MRTD110S05-5W		5	1000	>80%	12	
MRTD110S12-5W		12	417	>85%	12	
MRTD110S24-5W		24	208	>85%	12	

UMTDXXS(D)XX-XW(3W, 5W, 6W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
UMTD12S3.3-5W	12VDC (9-36VDC)	3.3	1515	>73%	12	RoHS
UMTD12S05-5W		5	1000	>80%	12	
UMTD12S12-5W		12	417	>85%	12	
UMTD12S15-5W		15	333	>85%	12	
UMTD12S24-5W	24VDC (18-72VDC)	3.3	1515	>73%	12	
UMTD24S05-5W		5	1000	>80%	12	
UMTD24S12-5W		12	417	>85%	12	
UMTD24S15-5W		15	333	>85%	12	
UMTD24S24-5W	12VDC (9-36VDC)	3.3	1515	>73%	12	
UMTD12D05-5W		5	1000	>80%	12	
UMTD12D12-5W		12	417	>85%	12	
UMTD12D15-5W		15	333	>85%	12	
UMTD12D24-5W	24VDC (18-72VDC)	3.3	1515	>73%	12	
UMTD24D05-5W		5	1000	>80%	12	
UMTD24D12-5W		12	417	>85%	12	
UMTD24D15-5W		15	333	>85%	12	
UMTD24D24-5W		24	208	>85%	12	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Left (2:1) and right (4:1) dual models are the same. You only need to change URD to WRD ,This reference

Constant voltage isolation unregulated DC-DC power converter

Constant voltage isolation regulated DC-DC power converter

Wide voltage regulated DC-DC power converter

Wide voltage regulated non-isolation DC-DC power converter

Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)

AC-DC concurrently DC-DC/ AC and DC Universal power converter

Professional field features of products

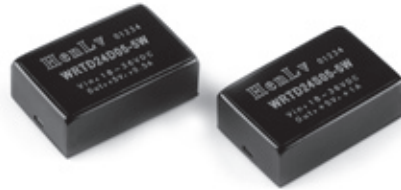
WRTDXXS(D)XX-XW(2:1) SERIES

Instruction:

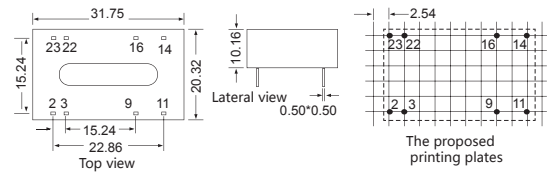
Double 24 pin (DIP) package of the 4.5VDC-150VDC input voltage transfer the any output voltage value with the accuracy $\pm 1\%$ 、 $\pm 2\%$

Application:

Railway communication, petrochemical and other voltage fluctuation is bigger, environment is bad has special requirements for the occasion, exchange system communication equipment.
Shell: High inflaming retarding plastic or Metal copper shell package



Appearance size, the proposed printing plates, pin way:



Single OutputSize : 31.75*20.32*10.16mm

Pin	2	3	9	11	14	16	22	23
Function	GND	GND	NC	NC	+XXVDC	-OV	Vin	Vin

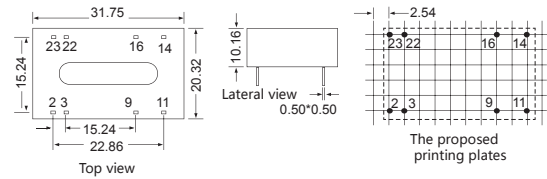
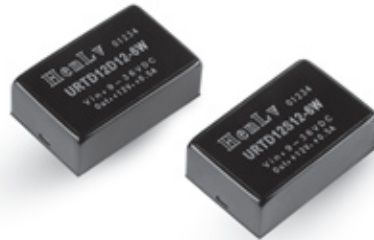
URTDXXS(D)XX-XW(4:1) SERIES

Instruction:

Double 24 pin (DIP) package of the 4.5VDC-72VDC input voltage transfer the any output voltage value with the accuracy $\pm 1\%$ 、 $\pm 2\%$

Application:

Railway communication, petrochemical and other voltage fluctuation is bigger, environment is bad has special requirements for the occasion, exchange system communication equipment.
Shell: High inflaming retarding plastic or Metal copper shell package



Dual output Size : 31.75*20.32*10.16mm

Pin	2	3	9	11	14	16	22	23
Function	GND	GND	NC	-XXVDC	+XXVDC	COM	Vin	Vin

WRTDXXS(D)XX-XW(3W、5W、6W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
WRTD05S3.3-5W	5VDC (4.5-9VDC)	3.3	1515	>73%	12	RoHS
WRTD05S05-5W		5	1000	>80%	12	
WRTD05S12-5W		12	417	>85%	12	
WRTD05S15-5W		15	333	>85%	12	
WRTD05S24-5W	12VDC (9-18VDC)	24	208	>85%	12	
WRTD12S3.3-5W		3.3	1515	>73%	12	
WRTD12S05-5W		5	1000	>80%	12	
WRTD12S12-5W		12	417	>85%	12	
WRTD12S15-5W	24VDC (18-36VDC)	15	333	>85%	12	
WRTD12S24-5W		24	208	>85%	12	
WRTD24S3.3-5W		3.3	1515	>73%	12	
WRTD24S05-5W		5	1000	>80%	12	
WRTD24S12-5W	48VDC (36-72VDC)	12	417	>85%	12	
WRTD24S15-5W		15	333	>85%	12	
WRTD24S24-5W		24	208	>85%	12	
WRTD48S3.3-5W		3.3	1515	>73%	12	
WRTD48S05-5W	110VDC (70-150VDC)	5	1000	>80%	12	
WRTD48S12-5W		12	417	>85%	12	
WRTD48S15-5W		15	333	>85%	12	
WRTD48S24-5W		24	208	>85%	12	
WRTD110S05-5W	110VDC (70-150VDC)	5	1000	>80%	12	
WRTD110S12-5W		12	417	>85%	12	
WRTD110S24-5W		24	208	>85%	12	

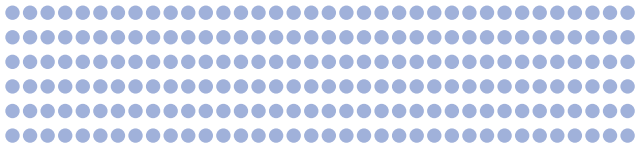
URTDXXS(D)XX-XW(3W、5W、6W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
URTD12S3.3-5W	12VDC (9-36VDC)	3.3	1515	>73%	12	RoHS
URTD12S05-5W		5	1000	>80%	12	
URTD12S12-5W		12	417	>85%	12	
URTD12S15-5W		15	333	>85%	12	
URTD12S24-5W	24VDC (18-72VDC)	24	208	>85%	12	
URTD24S3.3-5W		3.3	1515	>73%	12	
URTD24S05-5W		5	1000	>80%	12	
URTD24S12-5W		12	417	>85%	12	
URTD24S15-5W	12VDC (9-36VDC)	15	333	>85%	12	
URTD24S24-5W		24	208	>85%	12	
URTD12D3.3-5W		± 3.3	± 757	>73%	12	
URTD12D05-5W		± 5	± 500	>80%	12	
URTD12D12-5W	24VDC (18-72VDC)	± 12	± 208	>85%	12	
URTD12D15-5W		± 15	± 166	>85%	12	
URTD12D24-5W		± 24	± 104	>85%	12	
URTD24D3.3-5W		± 3.3	± 757	>73%	12	
URTD24D05-5W	12VDC (9-36VDC)	± 5	± 500	>80%	12	
URTD24D12-5W		± 12	± 208	>85%	12	
URTD24D15-5W		± 15	± 166	>85%	12	
URTD24D24-5W		± 24	± 104	>85%	12	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Left (2:1) and right (4:1) dual models are the same, You only need to change URD to WRD ,This reference

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulatedDC-DC power converter
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WRFDXXS(D)XX-XW(2:1) SERIES

Instruction:

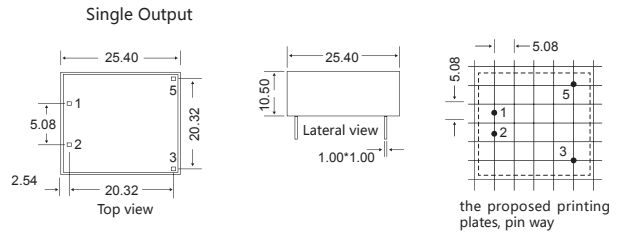
Double 5 pin (DIP) package of the 4.5VDC-150VDC input voltage transfer the any output voltage value with the accuracy ±0.5%, ±1%, ±2%

Application:

A/D and D/A, Railway, the petroleum chemical industry, exchange system communication equipment etc
Shell: Metal copper shell package



■ Appearance size, the proposed printing plates, pin way:



Power ≤5W Size: L*W*H 25.40*25.40*10.50

Pin	1	2	3	5
Function	GND	Vin	Vo	0V

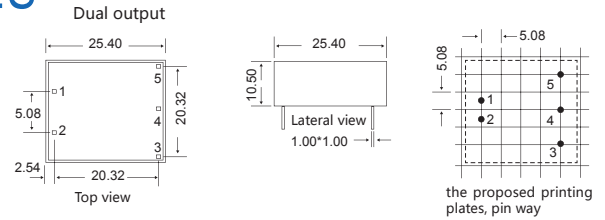
URFDXXS(D)XX-XW(4:1) SERIES

Instruction:

Double 5 pin (DIP) sealed package of the 4.5VDC-72VDC input voltage transfer the any output voltage value with the accuracy ±0.5%, ±1%, ±2%

Application:

Industrial control and remote DC power supply system, exchange system communication equipment etc
Shell: Metal copper shell package



Power ≤5W Size: L*W*H 25.40*25.40*10.50

Pin	1	2	3	4	5
Function	GND	Vin	Vo2(+Vo)	Com	Vo1(-Vo)

WRFDXXS(D)XX-XW(6W Max)

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current (mA)	Efficiency	WeightSIP/DIP (g) ±0.5	Certification
WRFD05S3.3-5W	5VDC (4.5-9VDC)	3.3	1515	>73%	12	RoHS CE
WRFD05S05-5W		5	1000	>80%	12	
WRFD05S12-5W		12	417	>85%	12	
WRFD05S15-5W		15	333	>85%	12	
WRFD05S24-5W	24	208	>85%	12		
WRFD12S3.3-5W	12VDC (9-18VDC)	3.3	1515	>73%	12	
WRFD12S05-5W		5	1000	>80%	12	
WRFD12S12-5W		12	417	>85%	12	
WRFD12S15-5W		15	333	>85%	12	
WRFD12S24-5W	24	208	>85%	12		
WRFD24S3.3-5W	24VDC (18-36VDC)	3.3	1515	>73%	12	
WRFD24S05-5W		5	1000	>80%	12	
WRFD24S12-5W		12	417	>85%	12	
WRFD24S15-5W		15	333	>85%	12	
WRFD24S24-5W	24	208	>85%	12		
WRFD48S3.3-5W	48VDC (36-72VDC)	3.3	1515	>73%	12	
WRFD48S05-5W		5	1000	>80%	12	
WRFD48S12-5W		12	417	>85%	12	
WRFD48S15-5W		15	333	>85%	12	
WRFD48S24-5W	24	208	>85%	12		
WRFD110S05-5W	110VDC (70-150VDC)	5	1000	>80%	12	
WRFD110S12-5W		12	417	>85%	12	
WRFD110S24-5W		24	208	>85%	12	

URFDXXS(D)XX-XW(6W Max)

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current (mA)	Efficiency	Weight (g) ±0.5	Certification
URFD12S3.3-5W	12VDC (9-36VDC)	3.3	1515	>73%	12	RoHS CE
URFD12S05-5W		5	1000	>80%	12	
URFD12S12-5W		12	417	>85%	12	
URFD12S15-5W		15	333	>85%	12	
URFD12S24-5W	24	208	>85%	12		
URFD24S3.3-5W	24VDC (18-72VDC)	3.3	1515	>73%	12	
URFD24S05-5W		5	1000	>80%	12	
URFD24S12-5W		12	417	>85%	12	
URFD24S15-5W		15	333	>85%	12	
URFD24S24-5W	24	208	>85%	12		
URFD12D3.3-5W	12VDC (9-36VDC)	±3.3	±757	>73%	12	
URFD12D05-5W		±5	±500	>80%	12	
URFD12D12-5W		±12	±208	>85%	12	
URFD12D15-5W		±15	±166	>85%	12	
URFD12D24-5W	±24	±104	>85%	12		
URFD24D3.3-5W	24VDC (18-72VDC)	±3.3	±757	>73%	12	
URFD24D05-5W		±5	±500	>80%	12	
URFD24D12-5W		±12	±208	>85%	12	
URFD24D15-5W		±15	±166	>85%	12	
URFD24D24-5W	±24	±104	>85%	12		

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Left (2:1) and right (4:1) dual models are the same. You only need to change URD to WRD. This reference

Constant voltage isolation unregulated DC-DC power converter

Constant voltage isolation regulated DC-DC power converter

Wide voltage regulated DC-DC power converter

Wide voltage regulated non-isolation DC-DC power converter

Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)

AC-DC concurrently DC-DC/ AC and DC Universal power converter

Professional field features of products

WRDXXS(D)XX-10W(2:1) SERIES

Instruction:

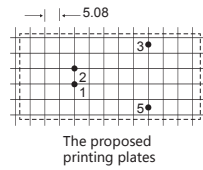
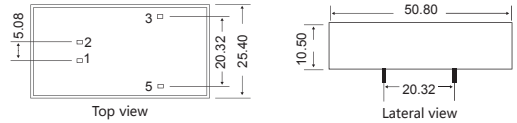
Double 5 pin (DIP) package of the 9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC, 70VDC-150VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$.

Application:

A/D and D/A, Railway, the petroleum chemical industry, exchange system communication equipment etc
Shell: Metal copper shell package



■ Appearance size, the proposed printing plates, pin way:



Dual output Size : 50.80*25.40*10.50mm

Pin	1	2	3	5
Function	Vin	GND	OV	+XXVDC

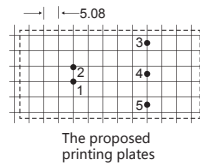
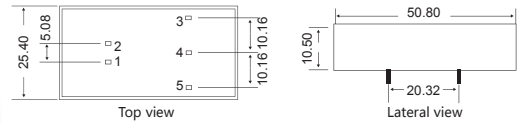
URDXXS(D)XX-10W(4:1) SERIES

Instruction:

Double 5 pin (DIP) package of the 9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$.

Application:

A/D and D/A, Railway, the petroleum chemical industry, exchange system communication equipment etc
Shell: Metal copper shell package



Dual output Size : 50.80*25.40*10.50mm

Pin	1	2	3	4	5
Function	Vin	GND	-XXVDC	COM	+XXVDC

WRDXXS(D)XX-10W(10W, 15W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight SIP/DIP (g) ± 0.5	Certification
WRD05S3.3-10W	5VDC (4.5-9VDC)	3.3	3030	>73%	12	RoHS
WRD05S05-10W		5	2000	>80%	12	
WRD05S12-10W		12	830	>85%	12	
WRD05S15-10W		15	660	>85%	12	
WRD05S24-10W		24	410	>85%	12	
WRD12S3.3-10W	12VDC (9-18VDC)	3.3	3030	>73%	12	
WRD12S05-10W		5	2000	>80%	12	
WRD12S12-10W		12	830	>85%	12	
WRD12S15-10W		15	660	>85%	12	
WRD12S24-10W		24	410	>85%	12	
WRD24S3.3-10W	24VDC (18-36VDC)	3.3	3030	>73%	12	
WRD24S05-10W		5	2000	>80%	12	
WRD24S12-10W		12	830	>85%	12	
WRD24S15-10W		15	660	>85%	12	
WRD24S24-10W		24	410	>85%	12	
WRD48S3.3-10W	48VDC (36-72VDC)	3.3	3030	>73%	12	
WRD48S05-10W		5	2000	>80%	12	
WRD48S12-10W		12	830	>85%	12	
WRD48S15-10W		15	660	>85%	12	
WRD48S24-10W		24	410	>85%	12	
WRD110S05-10W	110VDC (70-150VDC)	5	2000	>80%	12	
WRD110S12-10W		12	830	>85%	12	
WRD110S24-10W		24	410	>85%	12	

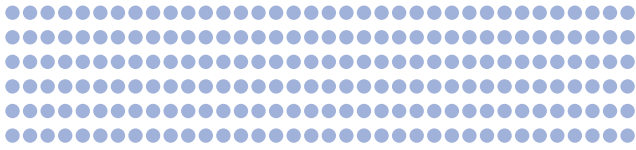
URDXXS(D)XX-10W(10W, 15W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
URD12S3.3-10W	12VDC (9-36VDC)	3.3	3030	>73%	12	RoHS
URD12S05-10W		5	2000	>80%	12	
URD12S12-10W		12	830	>85%	12	
URD12S15-10W		15	660	>85%	12	
URD12S24-10W		24	410	>85%	12	
URD24S3.3-10W	24VDC (18-72VDC)	3.3	3030	>73%	12	
URD24S05-10W		5	2000	>80%	12	
URD24S12-10W		12	830	>85%	12	
URD24S15-10W		15	660	>85%	12	
URD24S24-10W		24	410	>85%	12	
URD12D3.3-10W	12VDC (9-36VDC)	± 3.3	± 1515	>73%	12	
URD12D05-10W		± 5	± 1000	>80%	12	
URD12D12-10W		± 12	± 415	>85%	12	
URD12D15-10W		± 15	± 330	>85%	12	
URD12D24-10W		± 24	± 205	>85%	12	
URD24D3.3-10W	24VDC (18-72VDC)	± 3.3	± 1515	>73%	12	
URD24D05-10W		± 5	± 1000	>80%	12	
URD24D12-10W		± 12	± 415	>85%	12	
URD24D15-10W		± 15	± 330	>85%	12	
URD24D24-10W		± 24	± 205	>85%	12	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Left (2:1) and right (4:1) dual models are the same, You only need to change URD to WRD, This reference

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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WRDXXMXX-XW(2:1) SERIES

Instruction:

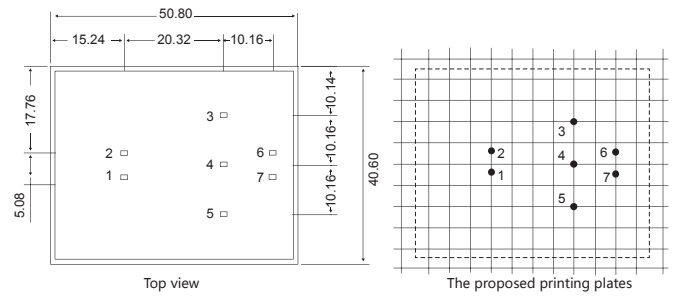
9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$

Application:

A/D and D/A, Railway, monitoring equipment, , the petroleum chemical industry, industrial control and remote DC power supply system ,exchange system communication equipment etc.
Shell: Metal copper shell package



■ Appearance size, the proposed printing plates, pin way:



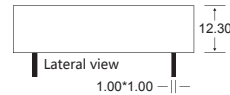
URDXXMXX-XW(4:1) SERIES

Instruction:

9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$

Application:

A/D and D/A, Railway, monitoring equipment, , the petroleum chemical industry, industrial control and remote DC power supply system ,exchange system communication equipment etc.
Shell: Metal copper shell package



Size : 50.80*40.60*12.30mm

Pin	1	2	3	4	5	6	7
Function	Vin	GND	-V03	COM	+V02	0V1	+V01

WRDXXMXX-XW(5W、10W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)			Load current (mA)			Efficiency	Certification
		V01	V02	V03	I01	I02	I03		
WRD12M051212-10W	12VDC (9-18VDC)	05	+12	-12	400	333	333	>75%	RoHS
WRD12M091212-10W		09	+12	-12	222	333	333	>78%	
WRD12M241212-10W		24	+12	-12	83	333	333	>78%	
WRD24M051212-10W	24VDC (18-36VDC)	05	+12	-12	400	333	333	>75%	
WRD24M091212-10W		09	+12	-12	222	333	333	>78%	
WRD24M241212-10W	24	+12	-12	83	333	333	>78%		
WRD48M051212-10W	48VDC (36-72VDC)	05	+12	-12	400	333	333	>75%	
WRD48M091212-10W		09	+12	-12	222	333	333	>78%	
WRD48M241212-10W		24	+12	-12	83	333	333	>78%	

URDXXMXX-XW(5W、10W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)			Load current (mA)			Efficiency	Certification
		V01	V02	V03	I01	I02	I03		
URD12M051212-10W	12VDC (9-36VDC)	05	+12	-12	400	333	333	>75%	RoHS
URD12M091212-10W		09	+12	-12	222	333	333	>78%	
URD12M241212-10W		24	+12	-12	83	333	333	>78%	
URD24M051212-10W	24VDC (18-72VDC)	05	+12	-12	400	333	333	>75%	
URD24M091212-10W		09	+12	-12	222	333	333	>78%	
URD24M241212-10W		24	+12	-12	83	333	333	>78%	
URD24M051515-10W		05	+15	-15	400	267	267	>75%	
URD24M091515-10W		09	+15	-15	222	267	267	>78%	
URD24M241515-10W		24	+15	-15	83	267	267	>78%	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

WRDXXS(D)XX-20W(2:1) SERIES

Instruction:

9VDC-150VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC, 70VDC-150VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

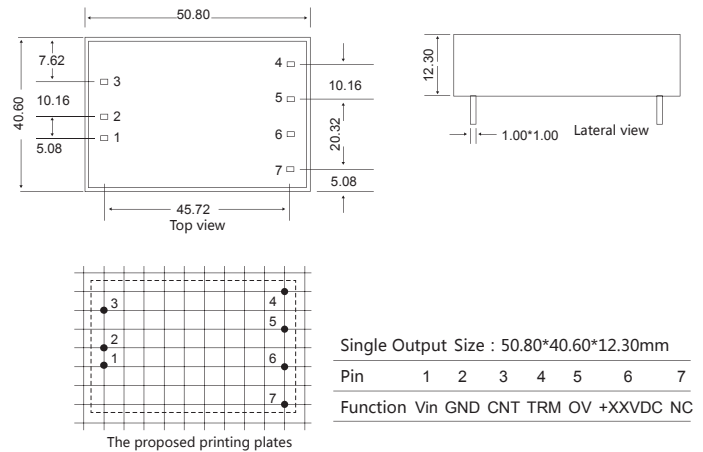
Application:

A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance DC power supply system, exchange system communication equipment.

Shell: Metal copper shell package



■Appearance size, the proposed printing plates, pin way:



URDXXS(D)XX-20W(4:1) SERIES

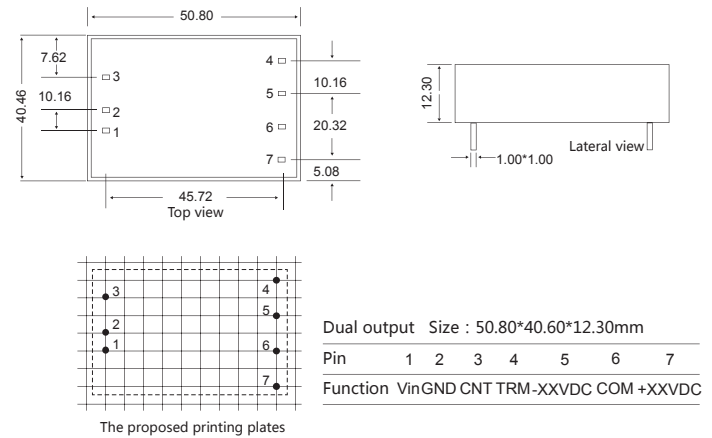
Instruction:

9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

Application:

A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance DC power supply system, exchange system communication equipment.

Shell: Metal copper shell package



WRDXXS(D)XX-20W(20W Max)

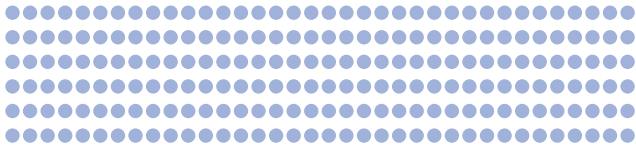
Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
WRD05S3.3-20W	5VDC (4.5-9VDC)	3.3	6060	>75%	25	RoHS
WRD05S05-20W		5	4000	>78%	25	
WRD05S12-20W		12	1660	>81%	25	
WRD05S15-20W		15	1330	>82%	25	
WRD05S24-20W	12VDC (9-18VDC)	24	830	>84%	25	
WRD12S3.3-20W		3.3	6060	>82%	25	
WRD12S05-20W		5	4000	>83%	25	
WRD12S12-20W		12	1660	>86%	25	
WRD12S15-20W	24VDC (18-36VDC)	15	1330	>88%	25	
WRD12S24-20W		24	830	>83%	25	
WRD24S3.3-20W		3.3	6060	>80%	25	
WRD24S05-20W		5	4000	>81%	25	
WRD24S12-20W	48VDC (36-72VDC)	12	1660	>84%	25	
WRD24S15-20W		15	1330	>75%	25	
WRD24S24-20W		24	830	>81%	25	
WRD48S3.3-20W		3.3	6060	>82%	25	
WRD48S05-20W	110VDC (70-150VDC)	5	4000	>84%	25	
WRD48S12-20W		12	1660	>78%	25	
WRD48S15-20W		15	1330	>80%	25	
WRD48S24-20W		24	830	>81%	25	
WRD110S05-20W	110VDC (70-150VDC)	5	4000	>84%	25	
WRD110S12-20W		12	1660	>78%	25	
WRD110S24-20W		24	833	>81%	25	

URDXXS(D)XX-20W(20W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification	
URD12S3.3-20W	12VDC (9-36VDC)	3.3	6060	>82%	25	RoHS	
URD12S05-20W		5	4000	>83%	25		
URD12S12-20W		12	1660	>86%	25		
URD12S15-20W		15	1330	>88%	25		
URD12S24-20W	24VDC (18-72VDC)	24	830	>83%	25		
URD24S3.3-20W		3.3	6060	>80%	25		
URD24S05-20W		5	4000	>81%	25		
URD24S12-20W		12	1660	>84%	25		
URD24S15-20W	12VDC (9-36VDC)	15	1330	>75%	25		
URD24S24-20W		24	830	>81%	25		
URD12D3.3-20W		24VDC (18-72VDC)	± 3.3	± 3030	>82%		25
URD12D05-20W			± 5	± 2000	>83%		25
URD12D12-20W	± 12		± 830	>86%	25		
URD12D15-20W	± 15		± 660	>88%	25		
URD12D24-20W	24VDC (18-72VDC)	± 24	± 416	>83%	25		
URD24D3.3-20W		± 3.3	± 3030	>80%	25		
URD24D05-20W		± 5	± 2000	>81%	25		
URD24D12-20W		± 12	± 830	>84%	25		
URD24D15-20W	24VDC (18-72VDC)	± 15	± 660	>75%	25		
URD24D24-20W		± 24	± 416	>81%	25		

Above models for our standard products, according to customer requirements can be designed any parameter values actually Left (2:1) and right (4:1) dual models are the same, You only need to change URD to WRD , This reference

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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WRDXXS(D)XX-30W(2:1) SERIES

Instruction:

9VDC-150VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC,70VDC-150VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

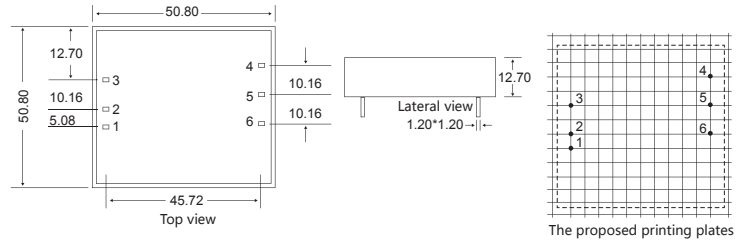
Application:

A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance dc power supply system,

shell: Metal copper shell package



■ Appearance size, the proposed printing plates, pin way:



Single Output Size : 50.80*50.80*12.70mm

Pin	1	2	3	4	5	6
Function	Vin	GND	CNT	TRM	OV	+XXVDC

URDXXS(D)XX-30W(4:1) SERIES

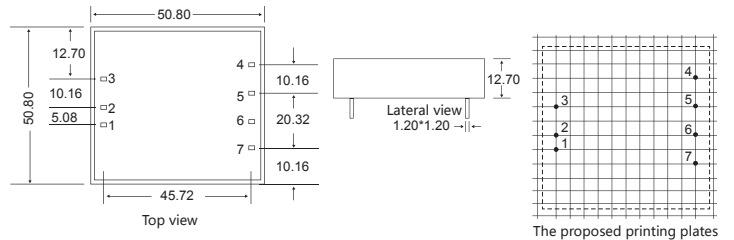
Instruction:

9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

Application:

A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance dc power supply system,

shell: Metal copper shell package



Dual output Size : 50.80*50.80*12.70mm

Pin	1	2	3	4	5	6	7
Function	Vin	GND	CNT	TRM	-XXVDC	COM	+XXVDC

WRDXXS(D)XX-30W(30W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
WRD12S3.3-30W	12VDC (9-18VDC)	3.3	9090	>82%	25	RoHS
WRD12S05-30W		5	6000	>83%	25	
WRD12S09-30W		9	3330	>86%	25	
WRD12S12-30W		12	2500	>86%	25	
WRD12S15-30W		15	2000	>88%	25	
WRD12S24-30W	24	1250	>83%	25		
WRD24S3.3-30W	24VDC (18-36VDC)	3.3	9090	>88%	25	
WRD24S05-30W		5	6000	>81%	25	
WRD24S09-30W		9	3330	>82%	25	
WRD24S12-30W		12	2500	>84%	25	
WRD24S15-30W		15	2000	>75%	25	
WRD24S24-30W	24	1250	>78%	25		
WRD48S3.3-30W	48VDC (36-72VDC)	3.3	9090	>82%	25	
WRD48S05-30W		5	6000	>84%	25	
WRD48S09-30W		9	3330	>75%	25	
WRD48S12-30W		12	2500	>78%	25	
WRD48S15-30W		15	2000	>80%	25	
WRD48S24-30W	24	1250	>81%	25		
WRD110S05-30W	110VDC (70-150VDC)	5	6000	>84%	25	
WRD110S12-30W		12	2500	>78%	25	
WRD110S24-30W		24	1250	>81%	25	

URDXXS(D)XX-30W(30W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
URD12S05-30W	12VDC (9-36VDC)	5	6000	>83%	25	RoHS
URD12S12-30W		12	2500	>86%	25	
URD12S15-30W		15	2000	>88%	25	
URD12S24-30W		24	1250	>83%	25	
URD24S05-30W		24VDC (18-72VDC)	5	6000	>83%	
URD24S12-30W	12		2500	>86%	25	
URD24S15-30W	15		2000	>88%	25	
URD24S24-30W	24		1250	>83%	25	
URD12D3.3-30W	12VDC (9-36VDC)		± 3.3	± 4550	>82%	
URD12D05-30W		± 5	± 3000	>83%	25	
URD12D12-30W		± 12	± 1250	>86%	25	
URD12D15-30W		± 15	± 1000	>88%	25	
URD12D24-30W		± 24	± 625	>83%	25	
URD24D3.3-30W	24VDC (18-72VDC)	± 3.3	± 4550	>88%	25	
URD24D05-30W		± 5	± 3000	>81%	25	
URD24D12-30W		± 12	± 1250	>84%	25	
URD24D15-30W		± 15	± 1000	>75%	25	
URD24D24-30W		± 24	± 625	>78%	25	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Left (2:1) and right (4:1) dual models are the same. You only need to change URD to WRD ,This reference

Constant voltage isolation unregulated DC-DC power converter

Constant voltage isolation regulated DC-DC power converter

Wide voltage regulated DC-DC power converter

Wide voltage regulated non-isolation DC-DC power converter

Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)

AC-DC concurrently DC-DC/ AC and DC Universal power converter

Professional field features of products

WRDXXS(D)XX-50 W(2:1) SERIES

Instruction:

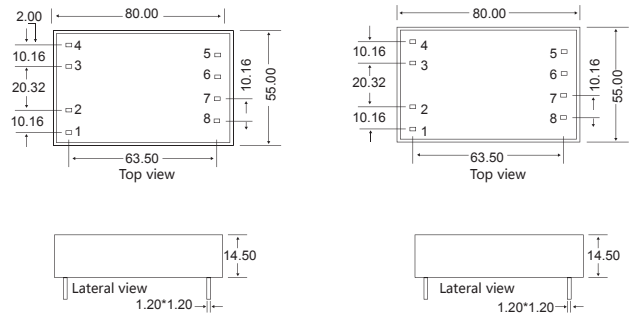
9VDC-150VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC,70VDC-150VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

Application:

A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance dc power supply system, shell: Metal copper shell package



■Appearance size, the proposed printing plates, pin way:



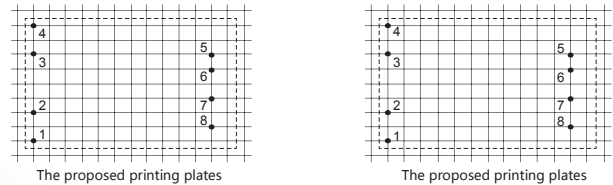
URDXXS(D)XX-50 W(4:1) SERIES

Instruction:

9VDC-150VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC,70VDC-150VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

Application:

A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance dc power supply system, shell: Metal copper shell package



Single Output Size : 80.00*55.00*14.50mm

Pin	1	2	3	4	5	6	7	8
Function	GND	Vin	CNT	FG	TRM	+XXVDC	OV	NC

Dual output Size : 80.00*55.00*14.50mm

Pin	1	2	3	4	5	6	7	8
Function	GND	Vin	CNT	FG	TRM	+XXVDC	COM	-XXVDC

WRDXXS(D)XX-50W(40W, 50W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
WRD12S05-40W	12VDC (9-18VDC)	+5	+8000	>84%	60	RoHS
WRD12S12-40W		+12	+3330	>78%	60	
WRD12S15-40W		+15	+2660	>80%	60	
WRD12S24-40W		+24	+1660	>81%	60	
WRD12D05-40W		± 5	± 4000	>84%	60	
WRD12D12-40W		± 12	± 1660	>78%	60	
WRD12D15-40W	± 15	± 1330	>80%	60		
WRD12D24-40W	± 24	± 830	>81%	60		
WRD24S05-40W	24VDC (18-36VDC)	+5	+8000	>84%	60	
WRD24S12-40W		+12	+3330	>78%	60	
WRD24S15-40W		+15	+2660	>80%	60	
WRD24S24-40W		+24	+1660	>81%	60	
WRD24D05-40W		± 5	± 4000	>84%	60	
WRD24D12-40W		± 12	± 1660	>78%	60	
WRD24D15-40W	± 15	± 1330	>80%	60		
WRD24D24-40W	± 24	± 830	>81%	60		
WRD48S05-40W	48VDC (36-72VDC)	+5	+8000	>84%	60	
WRD48S12-40W		+12	+3330	>78%	60	
WRD48S15-40W		+15	+2660	>80%	60	
WRD48S24-40W		+24	+1660	>81%	60	
WRD48D05-40W		± 5	± 4000	>84%	60	
WRD48D12-40W		± 12	± 1660	>78%	60	
WRD48D15-40W	± 15	± 1330	>80%	60		
WRD48D24-40W	± 24	± 830	>81%	60		
WRD110S05-50W	110VDC (70-150VDC)	± 5	± 4000	>84%	60	
WRD110S12-50W		± 12	± 1660	>78%	60	
WRD110S24-50W		± 24	± 830	>81%	60	

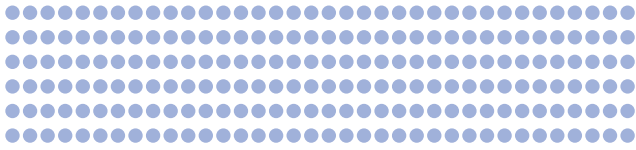
URDXXS(D)XX-50W(40W, 50W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
URD12S05-40W	12VDC (9-36VDC)	+5	+8000	>84%	60	RoHS
URD12S12-40W		+12	+3330	>78%	60	
URD12S15-40W		+15	+2660	>80%	60	
URD12S24-40W		+24	+1660	>81%	60	
URD24S05-40W	24VDC (18-72VDC)	+5	+8000	>84%	60	
URD24S12-40W		+12	+3330	>78%	60	
URD24S15-40W		+15	+2660	>80%	60	
URD24S24-40W		+24	+1660	>81%	60	
URD12S12-50W	12VDC (9-36VDC)	+12	+4160	>78%	60	
URD12S15-50W		+15	+3330	>80%	60	
URD12S24-50W		+24	+2080	>81%	60	
URD12D05-50W		± 5	± 5000	>84%	60	
URD12D12-50W		± 12	± 2080	>78%	60	
URD12D15-50W		± 15	± 1660	>80%	60	
URD12D24-50W	± 24	± 1040	>81%	60		
URD24S05-50W	24VDC (18-72VDC)	+5	+10000	>84%	60	
URD24S12-50W		+12	+4160	>78%	60	
URD24S15-50W		+15	+3330	>80%	60	
URD24S24-50W		+24	+2080	>81%	60	
URD24D05-50W		± 5	± 5000	>84%	60	
URD24D12-50W		± 12	± 2080	>78%	60	
URD24D15-50W	± 15	± 1660	>80%	60		
URD24D24-50W	± 24	± 1040	>81%	60		

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Left (2:1) and right (4:1) dual models are the same, You only need to change URD to WRD, This reference

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	Wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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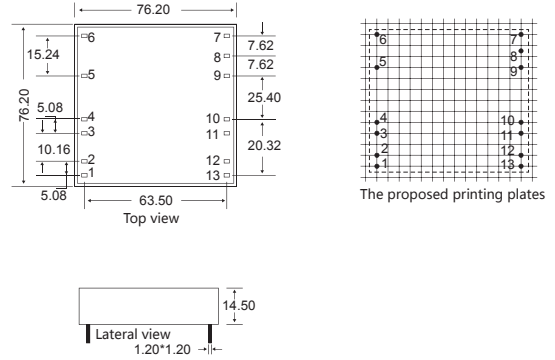
WRDXXSXX - 150W(2:1) SERIES

Instruction:
9VDC-150VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC,70VDC-150VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

Application:
A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance dc power supply system,
shell: Metal copper shell package



■Appearance size, the proposed printing plates, pin way:



Single Output Size : 76.20*76.20*14.50mm

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Function	Vin	Vin	GND	GND	FG	CNT	-S	TRM	+S	OV	OV	+XXVDC	+XXVDC

URDXXSXX - 150W(4:1) SERIES

Instruction:
9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

Application:
A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance dc power supply system,
shell: Metal copper shell package



WRDXXSXX-150W(60W、80W、100W、120W、150W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification
WRD12S12-80W	12VDC (9-18VDC)	12	6666	>86%	60	RoHS
WRD12S15-80W		15	5333	>87%	60	
WRD12S24-80W		24	3333	>88%	60	
WRD24S12-80W	24VDC (18-36VDC)	12	6666	>86%	60	
WRD24S15-80W		15	5333	>87%	60	
WRD24S24-80W		24	3333	>88%	60	
WRD48S12-80W	48VDC (36-72VDC)	12	6666	>86%	60	
WRD48S15-80W		15	5333	>87%	60	
WRD48S24-80W		24	3333	>88%	60	
WRD12S12-120W	12VDC (9-18VDC)	12	10000	>86%	60	
WRD12S15-120W		15	8000	>87%	60	
WRD12S24-120W		24	5000	>88%	60	
WRD24S12-120W	24VDC (18-36VDC)	12	10000	>86%	60	
WRD24S15-120W		15	8000	>87%	60	
WRD24S24-150W		24	6250	>88%	60	
WRD48S12-150W	48VDC (36-72VDC)	12	12500	>86%	60	
WRD48S15-150W		15	10000	>87%	60	
WRD48S24-150W		24	6250	>88%	60	
WRD110S12-150W	110VDC (70-150VDC)	12	12500	>86%	60	
WRD110S15-150W		15	10000	>87%	60	
WRD110S24-150W		24	6250	>88%	60	

URDXXSXX-150W(60W、80W、100W、120W、150W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification	
URD12S05-60W	12VDC (9-36VDC)	5	12000	>84%	60	RoHS	
URD12S09-60W		9	6667	>85%	60		
URD12S12-60W		12	5000	>86%	60		
URD12S15-60W		15	4000	>87%	60		
URD12S24-60W	24VDC (18-72VDC)	24	2500	>88%	60		
URD24S05-60W		5	12000	>84%	60		
URD24S09-60W		9	6667	>85%	60		
URD24S12-60W		12	5000	>86%	60		
URD24S15-60W	24VDC (18-72VDC)	15	4000	>87%	60		
URD24S24-60W		24	2500	>88%	60		
URD12S09-100W		12VDC (9-36VDC)	9	11111	>85%		60
URD12S12-100W			12	8333	>86%		60
URD12S15-100W	15		6666	>87%	60		
URD12S24-100W	24		4166	>88%	60		
URD24S09-100W	24VDC (18-72VDC)	9	11111	>85%	60		
URD24S12-100W		12	8333	>86%	60		
URD24S15-100W		15	6666	>87%	60		
URD24S24-100W		24	4166	>88%	60		

Above models for our standard products, according to customer requirements can be designed any parameter values actually Left (2:1) and right (4:1) dual models are the same. You only need to change URD to WRD ,This reference

WRDXXSXX-(50-200)W SERIES

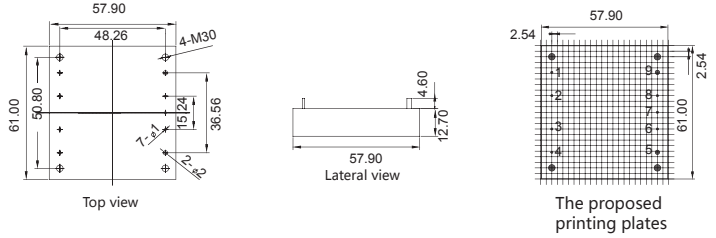
Instruction:

9VDC-72VDC(9VDC-18VDC,18VDC-36VDC,36VDC-72VDC) input voltage transfer the any output voltage value with the accuracy $\pm 1\%$, $\pm 2\%$.

Application:

A/D and D/A, Railway communication, display screen, monitoring equipment, petroleum chemical industry etc, industry control and distance dc power supply system, shell: shell plastic package

■Appearance size, the proposed printing plates, pin way:



Single Output Size : 61.00*57.90*12.70mm

Pin	1	2	3	4	5	6	7	8	9
Function	-Vin	FG	CNT	+Vin	+XXVDC	+S	TRIM	-S	-XXVDC



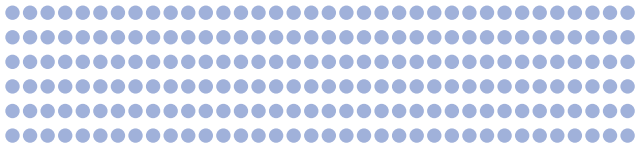
WRDXXSXX-(50-200)W(50W, 75W, 100W, 150W, 200W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification	
WRD12S05-50W	12VDC (9-18VDC)	5	5000	>84%	60	RoHS	
WRD12S12-50W		12	4166	>86%	60		
WRD12S24-50W		24	2080	>88%	60		
WRD24S05-50W	24VDC (18-36VDC)	5	5000	>84%	60		
WRD24S12-50W		12	4166	>86%	60		
WRD24S24-50W		24	2080	>88%	60		
WRD48S05-50W	48VDC (36-72VDC)	5	5000	>84%	60		
WRD48S12-50W		12	4166	>86%	60		
WRD48S24-50W		24	2080	>88%	60		
WRD12S05-75W	12VDC (9-18VDC)	5	15000	>84%	60		RoHS
WRD12S12-75W		12	6250	>86%	60		
WRD12S24-75W		24	3125	>88%	60		
WRD24S05-75W	24VDC (18-36VDC)	5	5000	>84%	60		
WRD24S12-75W		12	4166	>86%	60		
WRD24S24-75W		24	2080	>88%	60		
WRD48S05-75W	48VDC (36-72VDC)	5	5000	>84%	60		
WRD48S12-75W		12	4166	>86%	60		
WRD48S24-75W		24	2080	>88%	60		

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current (mA)	Efficiency	Weight (g) ± 0.5	Certification	
WRD12S05-100W	12VDC (9-18VDC)	5	20000	>84%	60	RoHS	
WRD12S12-100W		12	8330	>86%	60		
WRD12S24-100W		24	4160	>88%	60		
WRD24S05-100W	24VDC (18-36VDC)	5	20000	>84%	60		
WRD24S12-100W		12	8330	>86%	60		
WRD24S24-100W		24	4160	>88%	60		
WRD48S05-100W	48VDC (36-72VDC)	5	20000	>84%	60		
WRD48S12-100W		12	8330	>86%	60		
WRD48S24-100W		24	4160	>88%	60		
WRD24S05-150W	24VDC (18-36VDC)	5	30000	>84%	60		RoHS
WRD24S12-150W		12	12500	>86%	60		
WRD24S24-150W		24	6250	>88%	60		
WRD48S05-150W	48VDC (36-72VDC)	5	30000	>84%	60		
WRD48S12-150W		12	12500	>86%	60		
WRD48S24-150W		24	6250	>88%	60		
WRD24S05-200W	24VDC (18-36VDC)	5	40000	>84%	60		
WRD24S12-200W		12	16666	>86%	60		
WRD24S24-200W		24	8330	>88%	60		
WRD48S05-200W	48VDC (36-72VDC)	5	40000	>84%	60		
WRD48S12-200W		12	16666	>86%	60		
WRD48S24-200W		24	8330	>88%	60		

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated (non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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Width regulated(non - isolation) single output(current 500mA、 1000mA Max)

>>>

Output characteristic:

Output voltage accuracy:100% load efficiency, input voltage range $\pm 2\% \sim \pm 3\%$
 Linearity control :input voltage $\pm 0.2\% \sim \pm 0.4\%$
 Load regulation: from 10% to 100% , $\pm 0.4\% \sim \pm 0.6\%$
 Ripple/noise : (20MHz with width): 20MHz 25-35mVp-p
 Short circuit: Sustainable, self resumption
 Over hot:150°C
 Switch frequency : 100% load efficiency, input range 280KHz 330KHz 450KHz
 Output current limit:2000mA
 Quiescent current: positive input 5 mA ~ 8 mA
 Temperature parameter:-40°C ~ +85°C 0.02°C
 Capacitive loading:1000UF
 Ripple and noise test adopts parallel method

General characteristic:

Operating temperature:-40 ~ +85°C
 Shell operating temperature:100°C
 Storage temperature:-40°C ~ +125°C
 Welding Pin temperature resistance: welding shot shell edge 1.5mm, 10s 300°C
 Cooling method: natural cooling
 Shell material: Flame retardant heat resistant plastic (UL94-V0)
 Storage humidity:95%
 MTBF: 200000 h

H78SXX-0.5(1.0) SERIES

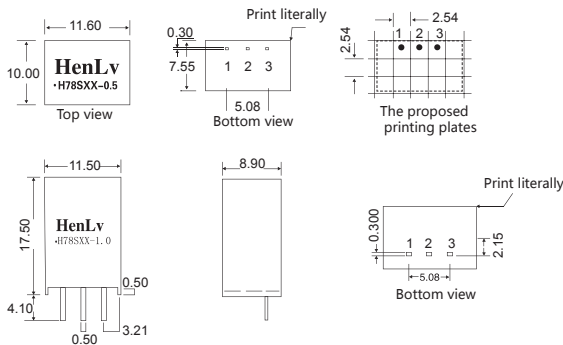
Instruction:

Width input voltage 4.75VDC-32VDC transfer the non isolation stabilized output voltage value with the accuracy $\pm 0.5\%$ 、 $\pm 1\%$ or $\pm 2\%$.

Application:

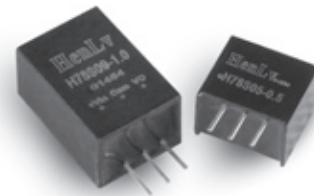
The battery needs long time standby, the battery stand-by power supply handheld devices, portable equipment, automotive equipment, shipping equipment.
 width input voltage non isolation stabilized single output current: 500mA、 1000mA、 1500mA、 2000mA Max
 Shell: shell plastic package

Appearance size, the proposed printing plates, pin way:



500mA' Size:L*H*W 11.60*10.00*7.55			
Pin	1	2	3
Function	Vin	GND&0V	Out

1000mA' Size:L*H*W 11.50*8.90*17.50			
Pin	1	2	3
Function	Vin	GND&0V	Out



H78SXX-0.5(1.0)(0.5A、 1A Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current(mA)	Efficiency	Weight (g) ± 0.5	Certification
H78 S3.3-0.5	4.75~28	3.3	500	$\geq 78\%$	14	RoHS
H78 S3.3-1.0			1000	$\geq 80\%$	14	
H78S05-0.5	6.5-32	5.0	500	$\geq 80\%$	14	
H78S05-1.0			1000	$\geq 82\%$	14	
H78 S6.5-0.5	9.0-32	6.5	500	$\geq 81\%$	14	
H78 S6.5-1.0			1000	$\geq 83\%$	14	
H78 S09-0.5	12-32	9	500	$\geq 84\%$	14	
H78 S09-1.0			1000	$\geq 86\%$	14	
H78 S12-0.5	16-32	12	500	$\geq 80\%$	14	
H78 S12-1.0			1000	$\geq 87\%$	14	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

DC-DC width regulated(non-isolation) DC-DC power converter

>>>

Output characteristic:

Load efficiency: $\leq \pm 0.4\%$ 0%~100%load, With the current limit protection, overheating protection, low voltage out-of-step protection, short circuit protection and soft start function, low temperature, self-resumption.
Ripple/noise: (20MHz with width): 50m Vp-p Max
Switch frequency: 200KHz

General characteristic:

Source effects: $\leq \pm 1\%$
MTBF: 2000000h
Temperature coefficient: $\leq \pm 0.02\%$ °C
Operating temperature: -40°C ~ +85°C
Storage temperature: -40°C ~ +125°C
Max operating temperature: 85°C, relative temperature: 10% ~ 90%
Cooling method: natural cooling without increasing the radiator

(B)KR(F)DXXSXX-XW SERIES KRDXXSXX-XW SERIES

Instruction:

Width input voltage 1VDC-40VDC transfer the non isolation stabilized any output voltage value with the accuracy $\pm 0.5\%$, $\pm 1\%$

Application:

The battery needs long time standby, the battery stand-by power supply handheld devices, portable equipment, automotive equipment, shipping equipment(eg: train, Liquid crystal display screens etc)
Shell: Metal copper shell package

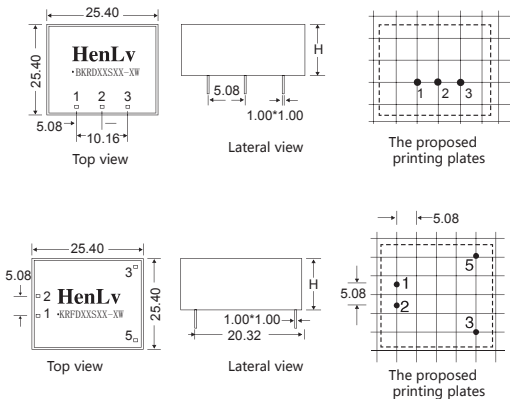
Instruction:

Width input voltage 1VDC-40VDC, transfer the non isolation stabilized any output voltage value with the accuracy $\pm 0.5\%$, $\pm 1\%$

Application:

The battery needs long time standby, the battery stand-by power supply handheld devices, portable equipment, automotive equipment, shipping equipment(eg: train, Liquid crystal display screens etc)
Shell: Copper metal shell package

Appearance size, the proposed printing plates, pin way:



BKR SERIES

输出电流 < 2A (H=10.50mm)
输出电流 $\geq 2A$ (H=17.00mm)

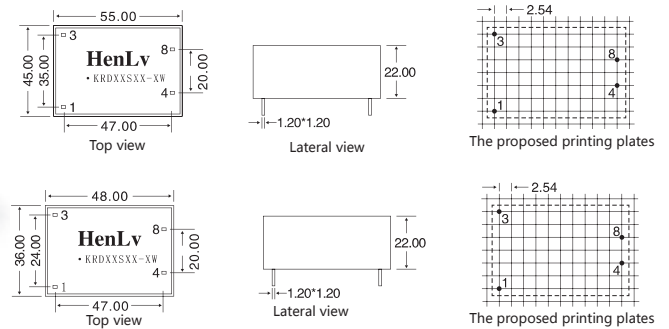
Pin	1	2	3
Function	V0	GND&0V	Vin

KRFD SERIES

输出电流 < 2A (H=10.50mm)
输出电流 $\geq 2A$ (H=17.00mm)

Pin	1	2	3	5
Function	GND	Vin	V0	0V

Appearance size, the proposed printing plates, pin way:



Size: 55.00*45.00*22.00mm

Pin	1	3	4	8
Function	Vin	GND	Vo	0V

Size: 48.00*36.00*22.00mm

Pin	1	3	4	8
Function	Vin	GND	Vo	0V

(B)KR(F)DXXSXX-XW(5W, 10W, 15W, 20W, 25W, 30W Max)

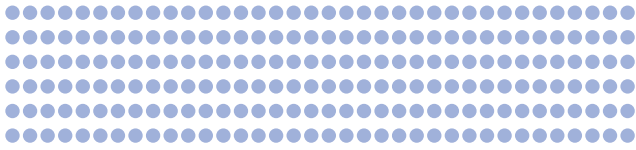
Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current(mA)	Efficiency	Weight (g) ± 0.5	Certification
(B)KR(F)D 12S3.3-XW	5~36	3.3VDC	1000	$\geq 78\%$	14	RoHS
(B)KR(F)D 24S3.3-XW			2000-3000	$\geq 80\%$	14	
(B)KR(F)D 12S05-XW	7~36	5VDC	1000	$\geq 80\%$	14	
(B)KR(F)D 24S05-XW			2000-3000	$\geq 82\%$	14	
(B)KR(F)D 12S06-XW	8~36	6VDC	1000	$\geq 81\%$	14	
(B)KR(F)D 24S06-XW			2000-3000	$\geq 83\%$	14	
(B)KR(F)D 12S09-XW	11~36	9VDC	1000	$\geq 84\%$	14	
(B)KR(F)D 24S09-XW			2000-3000	$\geq 86\%$	14	
(B)KR(F)D 12S12-XW	14~36	12VDC	1000	$\geq 80\%$	14	
(B)KR(F)D 24S12-XW			2000-3000	$\geq 89\%$	14	
(B)KR(F)D 12S15-XW	17~36	15VDC	1000	$\geq 87\%$	14	
(B)KR(F)D 24S15-XW			2000-3000	$\geq 92\%$	14	
(B)KR(F)D 12S24-XW	26~36	24VDC	1000	$\geq 91\%$	14	
(B)KR(F)D 24S24-XW			2000-3000	$\geq 96\%$	14	

KRDXXSXX-XW(5W, 10W, 15W, 20W, 30W, 40W, 45W Max)

Model	Input voltage (V)	Output voltage (Vo $\pm 2\%$)	Load current(mA)	Efficiency	Weight (g) ± 0.5	Certification
KRD05S09- XW	4.5~9	9VDC	1000	$\geq 83\%$	14	RoHS
	5.5~9		2000-3000	$\geq 86\%$	14	
KRD09S12- XW	6~12	12VDC	1000	$\geq 86\%$	14	
	6.5~12		2000-3000	$\geq 89\%$	14	
KRD12S15- XW	7~15	15VDC	1000	$\geq 89\%$	14	
	7.5~15		2000-3000	$\geq 92\%$	14	
KRD12S24- XW	9~24	24VDC	1000	$\geq 93\%$	14	
	9.~24		2000-3000	$\geq 96\%$	14	
KRD24S48- XW	18~48	48VDC	1000	$\geq 98\%$	14	
	20~48		2000-3000	$\geq 98\%$	14	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated (non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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AC-DC concurrently DC-DC/ AC and DC Universal power converter

>>>

Output characteristics:

The built-in EMI filtering unit, has an over-current, overvoltage (according to your requirements) and output short circuit. Overload, overheating, protection circuit (eliminating short circuit, overload, overload automatically eliminate)
 Ripple / noise (20MHZ): 50mVp-p max., 40KHZ-150KHZ switching frequency

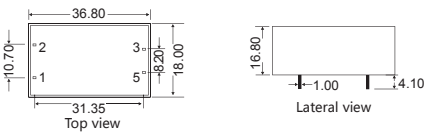
General characteristic:

Source effect: the input voltage from the low to high, the insulation resistance of 10000000000 Ω
 Mean time between failure (MTBF) 2000000h
 Temperature coefficient is $\leq \pm 0.03\%$ °C, hold time: 20ms (full load of typical value)
 Isolation voltage: 2000VAC 5mA, 1min.
 Operating temperature: industrial grade: -25 ~ +55 °C, military grade-40~+85°C,
 Storage temperature: -40°C ~ +125 °C
 Response time: load change for every 30%, the rate of change of 1A/us, response time is 1ms
 Shell: high flame retardant, metal aluminum shell / purple copper package
 Max shell temperature : 85 °C, relative temperature; 10%~90%

36.8 size product type and pin diagram

AC220SXXDC-XW product type ,Can achieve power: 3W Max
 (Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



36.80×18.00×16.80 size converter power pin diagram

Pin	1	2	3	5
Function	L(+)	N(-)	-XXVDC	+XXVDC

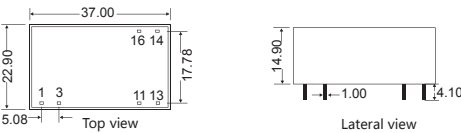


Model	Input voltage (V)	Output voltage ($V_{o\pm 2\%}$)	Load current(mA)	Efficiency	Weight (g) ± 0.5	Certification
AC220S3.3DC-3W	85-265VAC (90-360VDC)	3.3	909	$\geq 77\%$	22	RoHS
AC220S05DC-3W		5	600	$\geq 77\%$	22	
AC220S09DC-3W		9	333	$\geq 78\%$	22	
AC220S12DC-3W		12	250	$\geq 79\%$	22	
AC220S15DC-3W		15	200	$\geq 81\%$	22	
AC220S24DC-3W		24	125	$\geq 84\%$	22	
AC220S48DC-3W		48	63	$\geq 84\%$	22	

37size product type and pin diagram

AC220SXXDC-XW product type ,Can achieve power: 3W Max
 (Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



37.00*22.90*14.90 size converter power pin diagram

Pin	1	3	11	13	14	16
Function	L(+)	N(-)	NC	NC	+XXVDC	0V



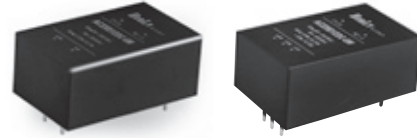
Model	Input voltage (V)	Output voltage ($V_{o\pm 2\%}$)	Load current(mA)	Efficiency	Weight (g) ± 0.5	Certification
AC220S3.3DC-3W	85-265VAC (90-360VDC)	3.3	909	$\geq 77\%$	22	RoHS CE
AC220S05DC-3W		5	600	$\geq 77\%$	22	
AC220S09DC-3W		9	333	$\geq 78\%$	22	
AC220S12DC-3W		12	250	$\geq 79\%$	22	
AC220S15DC-3W		15	200	$\geq 81\%$	22	
AC220S24DC-3W		24	125	$\geq 80\%$	22	
AC220S48DC-3W		48	63	$\geq 80\%$	22	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

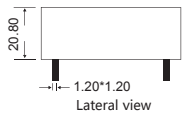
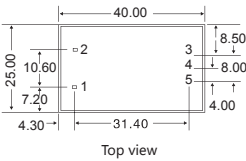
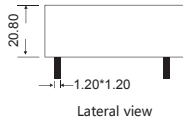
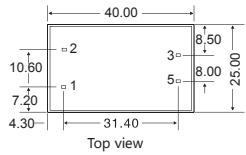
40size product type and pin diagram

Single / Dual Common output type

AC220S (D) XXDC-XW product type ,Can achieve power: 3W 、 6WMax
(Customers can request custom tailor-made products for different pins and related parameters)



Appearance size and pin definition



Single Output
40.00*25.00*20.80size converter power
pin diagram

Pin	1	2	3	5
Function	L(+)	N(-)	OV	+XXVDC

Dual output
40.00*25.00*20.80size converter power
pin diagram

Pin	1	2	3	4	5
Function	L(+)	N(-)	-XXVDC	COM	+XXVDC

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current (mA)	Efficiency	Weight (g) ±0.5	Certification
AC220S3.3DC-3W	85-265VAC (90-360VDC)	3.3	909	≥77%	37	RoHS CE
AC220S05DC-3W		5	600	≥77%	37	
AC220S09DC-3W		9	333	≥78%	37	
AC220S12DC-3W		12	250	≥79%	37	
AC220S15DC-3W		15	200	≥81%	37	
AC220S24DC-3W		24	125	≥80%	37	
AC220S3.3DC-6W		3.3	1818	≥77%	37	
AC220S05DC-6W		5	1200	≥77%	37	
AC220S09DC-6W		9	667	≥78%	37	
AC220S12DC-6W		12	500	≥79%	37	
AC220S15DC-6W		15	400	≥81%	37	
AC220S24DC-6W		24	250	≥80%	37	
AC220S48DC-6W	48	125	≥80%	37		
AC220D3.3DC-3W	85-265VAC (90-360VDC)	±3.3	±455	≥77%	37	RoHS
AC220D05DC-3W		±5	±300	≥77%	37	
AC220D09DC-3W		±9	±167	≥78%	37	
AC220D12DC-3W		±12	±125	≥79%	37	
AC220D15DC-3W		±15	±100	≥81%	37	
AC220D24DC-3W		±24	±62.5	≥80%	37	
AC220D3.3DC-6W		±3.3	±909	≥77%	37	
AC220D05DC-6W		±5	±600	≥77%	37	
AC220D09DC-6W		±9	±333	≥78%	37	
AC220D12DC-6W		±12	±250	≥79%	37	
AC220D15DC-6W		±15	±200	≥81%	37	
AC220D24DC-6W		±24	±125	≥80%	37	

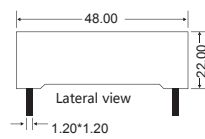
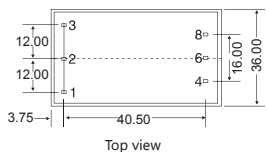
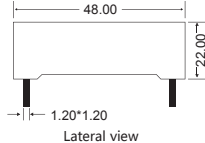
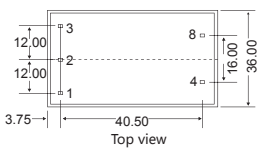
48size product type and pin diagram

Single / Dual Common output type

AC220S(D)XXDC-XW product type ,Can achieve power: 3W 、 6WMax
(Customers can request custom tailor-made products for different pins and related parameters)



Appearance size and pin definition



Single Output
48.00*36.00*22.00 size converter power
pin diagram

Pin	1	2	3	4	8
Function	L(+)	N(-)	FG	+XXVDC	OV

Dual output
48.00*36.00*22.00size converter power
pin diagram

Pin	1	2	3	4	6	8
Function	L(+)	N(-)	FG	+XXVDC	+COM	-XXVDC

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current (mA)	Efficiency	Weight (g) ±0.5	Certification
AC220S3.3DC-3W	85-265VAC (90-360VDC)	3.3	909	≥77%	37	RoHS
AC220S05DC-3W		5	600	≥77%	37	
AC220S12DC-3W		12	250	≥79%	37	
AC220S15DC-3W		15	200	≥81%	37	
AC220S24DC-3W		24	125	≥80%	37	
AC220S3.3DC-6W		3.3	1818	≥77%	37	
AC220S05DC-6W		5	1200	≥77%	37	
AC220S12DC-6W		12	500	≥79%	37	
AC220S15DC-6W		15	400	≥81%	37	
AC220S24DC-6W		24	250	≥80%	37	
AC220S48DC-6W		48	125	≥80%	37	
AC220D3.3DC-3W		85-265VAC (90-360VDC)	±3.3	±455	≥77%	
AC220D05DC-3W	±5		±300	≥77%	37	
AC220D12DC-3W	±12		±125	≥79%	37	
AC220D15DC-3W	±15		±100	≥81%	37	
AC220D24DC-3W	±24		±62.5	≥80%	37	
AC220D3.3DC-6W	±3.3		±909	≥77%	37	
AC220D05DC-6W	±5		±600	≥77%	37	
AC220D12DC-6W	±12		±250	≥79%	37	
AC220D15DC-6W	±15		±200	≥81%	37	
AC220D24DC-6W	±24		±125	≥80%	37	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulated DC-DC power converter
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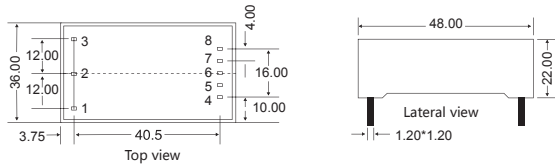
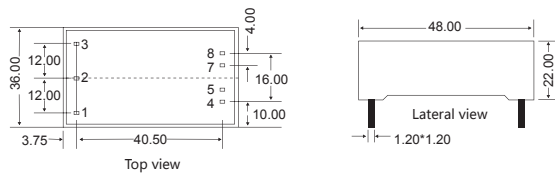
48size product type and pin diagram

Dual uncoen-ground output type

AC220TDXXDC-XW product type ,Can achieve power: 3W 、 6WMax

(Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



48.00*36.00*22.00size converter power pin diagram

Pin	1	2	3	4	5	7	8
Function	L(+)	N(-)	FG	+XXVDC2	+OV2	+XXVDC1	OV1



Model	Input voltage (V)	Output voltage (Vo±2%)	Load current(mA)	Efficiency	Weight (g) ±0.5	Certification
AC220TD0505DC-6W	85-265VAC (90-360VDC)	5 05	900 300	≥72%	37	RoHS
AC220TD0512DC-6W		5 12	600 250	≥72%	37	
AC220TD0512DC-6W		5 12	400 330	≥72%	37	
AC220TD0512DC-6W		5 12	300 300	≥72%	37	
AC220TD0524DC-6W		5 24	500 150	≥72%	37	
AC220TD0524DC-6W		5 24	600 100	≥72%	37	
AC220TD1205DC-6W		12 05	250 600	≥76%	37	
AC220TD1212DC-6W		12 12	300 100	≥72%	37	
AC220TD2405DC-6W		24 05	130 600	≥76%	37	
AC220TD2412DC-6W		24 12	130 250	≥76%	37	
AC220TD2424DC-6W		24 24	130 130	≥76%	37	

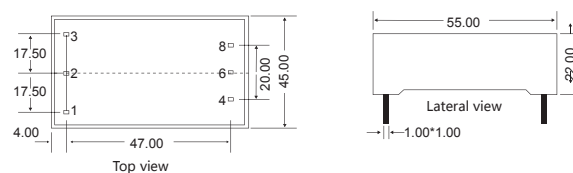
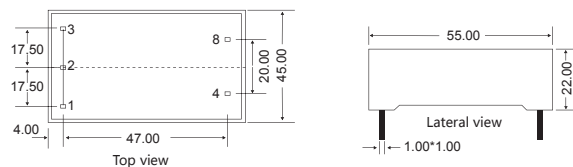
55size product type and pin diagram

Single / Dual Common output type

AC220S (D) XXDC-XW product type ,Can achieve power:10W Max

(Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



Single Output 55.00*45.00*22.00 size converter power pin diagram

Pin	1	2	3	4	8
Function	L(+)	N(-)	FG	+XXVDC	OV

Dual output 55.00*45.00*22.00 size converter power pin diagram

Pin	1	2	3	4	6	8
Function	L(+)	N(-)	FG	+XXVDC	COM	-XXVDC



Model	Input voltage (V)	Output voltage (Vo±2%)	Load current(mA)	Efficiency	Weight (g) ±0.5	Certification
AC220S3.3DC-10W	85-265VAC (90-360VDC)	3.3	3030	≥77%	37	RoHS CE
AC220S05DC-10W		5	2000	≥77%	37	
AC220S09DC-10W		9	1111	≥78%	37	
AC220S12DC-10W		12	833	≥79%	37	
AC220S15DC-10W		15	667	≥81%	37	
AC220S24DC-10W		24	417	≥80%	37	
AC220S48DC-10W		48	285	≥80%	37	RoHS
AC220D3.3DC-10W	85-265VAC (90-360VDC)	±3.3	±1515	≥77%	37	
AC220D05DC-10W		±5	±1000	≥77%	37	
AC220D09DC-10W		±9	±556	≥78%	37	
AC220D12DC-10W		±12	±417	≥79%	37	
AC220D15DC-10W		±15	±333	≥81%	37	
AC220D24DC-10W		±24	±208	≥80%	37	

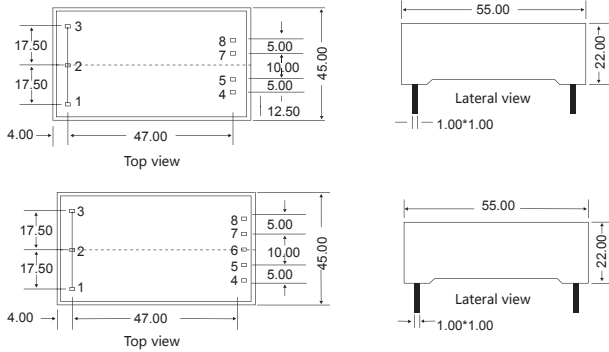
Above models for our standard products, according to customer requirements can be designed any parameter values actually

55size product type and pin diagram

Dual uncoen-ground output and three output type

AC220TD (M) XXDC-XW product type ,Can achieve power: 3W 、 6WMax
(Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



55.00*45.00*22.00size converter power pin diagram

Pin	1	2	3	4	5	7	8
Function	L(+)	N(-)	FG	+XXVDC	OV2	+XXVDC1	OV1

Pin	1	2	3	4	5	6	7	8
Function	L(+)	N(-)	FG	+XXVDC3	COM	-XXVDC2	+XXVDC1	OV1



Model	Input voltage (V)	Output voltage (Vo±2%)			Load current(mA)		Efficiency	Weight (g) ±0.5	Certification
AC220TD0505DC-10W	85-265VAC (90-360VDC)	5	5	1600	400	≥76%	37	RoHS	
AC220TD0512DC-10W		5	12	1000	416	≥74%	37		
AC220TD0524DC-10W		5	24	100	200	≥76%	37		
AC220TD1205DC-10W		12	5	750	200	≥76%	37		
AC220TD1212DC-10W		12	12	600	200	≥76%	37		
AC220TD1224DC-10W		12	24	580	125	≥76%	37		
AC220TD2405DC-10W		24	5	354	300	≥76%	37		
AC220TD2412DC-10W		24	12	300	250	≥76%	37		
AC220TD2424DC-10W		24	24	210	210	≥76%	37		

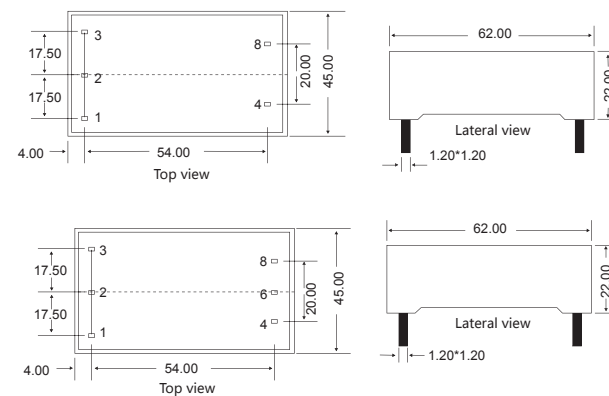
Model	Input voltage (V)	Output voltage (Vo±2%)			Load current(mA)			Efficiency	Weight (g) ±0.5	Certification
		V01	V02	V03	I01	I02	I03			
AC220M050505DC-10W	85-265VAC (90-360VDC)	5	5	5	1000	-500	+500	≥76%	37	RoHS
AC220M051212DC-10W		5	12	12	1000	-200	+200	≥74%	37	
AC220M051515DC-10W		5	15	15	400	-250	+250	≥76%	37	
AC220M120505DC-10W		12	05	05	600	-100	+100	≥76%	37	
AC220M120505DC-10W		12	05	05	400	-240	+240	≥76%	37	
AC220M240505DC-10W		24	05	05	350	-100	+200	≥76%	37	

62size product type and pin diagram

Single / Dual Common output type

AC220S (D) XXDC-XW product type ,Can achieve power: 20W Max
(Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



Single Output 62.00*45.00*22.00 size converter power pin diagram

Pin	1	2	3	4	8
Function	L(+)	N(-)	FG	+XXVDC	OV

Dual output 62.00*45.00*22.00 size converter power pin diagram

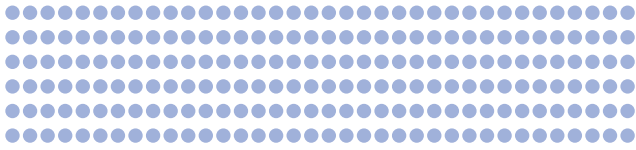
Pin	1	2	3	4	6	8
Function	L(+)	N(-)	FG	+XXVDC	COM	-XXVDC



Model	Input voltage (V)	Output voltage (Vo±2%)	Load current(mA)	Efficiency	Weight (g) ±0.5	Certification	
AC220S3.3DC-20W	85-265VAC (90-360VDC)	3.3	6061	≥77%	37	RoHS CE	
AC220S05DC-20W		5	4000	≥77%	37		
AC220S09DC-20W		9	2222	≥78%	37		
AC220S12DC-20W		12	1667	≥79%	37		
AC220S15DC-20W		15	1333	≥81%	37		
AC220S24DC-20W		24	833	≥80%	37		
AC220S48DC-20W		48	417	≥80%	37		
AC220D05DC-20W		±5	±2000	≥77%	37		RoHS
AC220D09DC-20W		±9	±1111	≥78%	37		
AC220D12DC-20W	±12	±833	≥79%	37			
AC220D15DC-20W	±15	±667	≥81%	37			
AC220D24DC-20W	±24	±417	≥80%	37			

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Professional field features of products	AC-DC concurrently DC-DC/AC and DC Universal power converter	Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)	Wide voltage regulated non-isolation DC-DC power converter	wide voltage regulated DC-DC power converter	Constant voltage isolation regulated DC-DC power converter	Constant voltage isolation unregulatedDC-DC power converter
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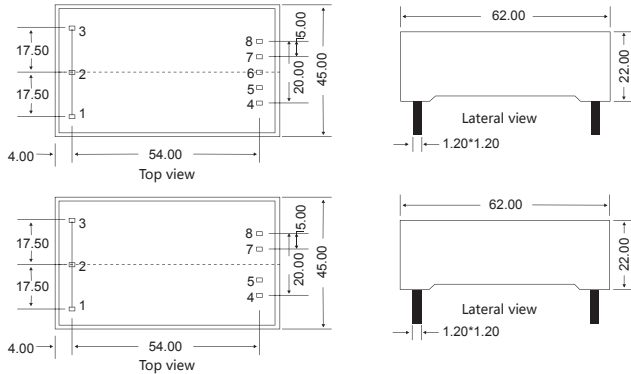


62size product type and pin diagram

Dual uncoen-ground output and three output type
 AC220TD (M) XXDC-XW product type ,Can achieve power: 20W Max
 (Customers can request custom tailor-made products for different pins and related parameters)



Appearance size and pin definition



62.00*45.00*22.00size converter power pin diagram

Pin	1	2	3	4	5	6	7	8
Function	L(+)	N(-)	FG	+XXVDC3	COM	-XXVDC2	+XXVDC1	OV1

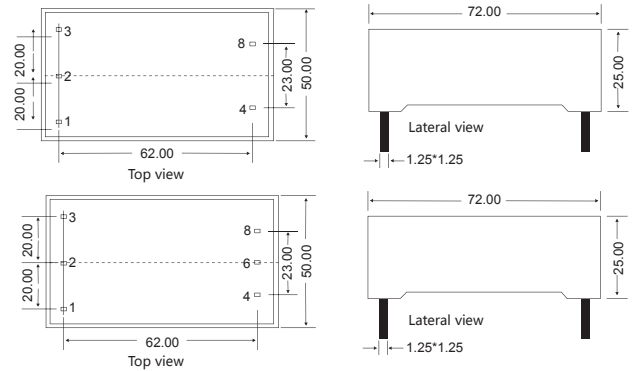
Pin	1	2	3	4	5	7	8
Function	L(+)	N(-)	FG	+XXVDC2	OV2	+XXVDC1	OV1

72size product type and pin diagram

Single / Dual Common output type
 AC220S (D) XXDC-XW product type ,Can achieve power: 30W, 40W Max
 (Customers can request custom tailor-made products for different pins and related parameters)



Appearance size and pin definition



Single Output 72.00*50.00*25.00size converter power pin diagram

Pin	1	2	3	4	8
Function	L(+)	N(-)	FG	+XXVDC	OV

Dual output 72.00*50.00*25.00size converter power pin diagram

Pin	1	2	3	4	6	8
Function	L(+)	N(-)	FG	+XXVDC	COM	-XXVDC

Model	Input voltage (V)	Output voltage (Vo±2%)			Load current(mA)			Efficiency	Certification
		V01	V02	V03	I01	I02	I03		
AC220TD0505DC-15W	85-265VAC (90-360VDC)	5	5		2600	400		≥76%	RoHS
AC220TD0512DC-15W		5	12		2000	400		≥76%	
AC220TD0524DC-15W		5	24		2000	200		≥72%	
AC220TD2405DC-15W		5	24	416	1000			≥76%	
AC220TD0505DC-20W		5	5	2000	2000			≥78%	
AC220TD0512DC-20W		5	12	1000	1000			≥80%	
AC220TD0512DC-20W		5	12	2000	400			≥78%	
AC220TD0512DC-20 W		5	12	2000	830			≥75%	

Model	Input voltage (V)	Output voltage (Vo±2%)			Load current(mA)			Efficiency	Certification
		V01	V02	V03	I01	I02	I03		
AC220M051212DC-15W	85-265VAC (90-360VDC)	5	12	12	1000	-416	+416	≥78%	RoHS
AC220M051212DC-15W		5	12	12	2000	-208	+208	≥76%	
AC220M051515DC-15W		5	15	15	1800	-200	+200	≥78%	
AC220M051515DC-15W		5	15	15	1000	-333	+333	≥78%	
AC220M051212DC-20W		5	12	12	1000	-630	+630	≥78%	
AC220M051212DC-20W		5	12	12	2000	-400	+400	≥76%	
AC220M051515DC-20W		5	15	15	1000	-500	+500	≥78%	

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current (mA)	Efficiency	Weight (g) ±0.5	Certification
AC220S09DC-30W	9	3333	≥78%	37		
AC220S12DC-30W	12	2500	≥79%	37		
AC220S15DC-30W	15	2000	≥81%	37		
AC220S24DC-30W	24	1250	≥80%	37		
AC220S09DC-40W	9	4444	≥78%	37		
AC220S12DC-40W	12	3333	≥79%	37		
AC220S15DC-40W	15	2667	≥81%	37		
AC220S24DC-40W	24	1667	≥80%	37		
AC220S48DC-40W	48	833	≥80%	37		
AC220D05DC-30W	±5	±3000	≥77%	37	RoHS	
AC220D09DC-30W	±9	±1667	≥78%	37		
AC220D12DC-30W	±12	±1250	≥79%	37		
AC220D15DC-30W	±15	±1000	≥81%	37		
AC220D24DC-30W	±24	±625	≥80%	37		
AC220D05DC-40W	±5	±4000	≥77%	37		
AC220D09DC-40W	±9	±2222	≥78%	37		
AC220D12DC-40W	±12	±1667	≥79%	37		
AC220D15DC-40W	±15	±1333	≥81%	37		
AC220D24DC-40W	±24	±833	≥80%	37		

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Constant voltage isolation unregulated DC-DC power converter

Constant voltage isolation regulated DC-DC power converter

Wide voltage regulated DC-DC power converter

Wide voltage regulated non-isolation DC-DC power converter

Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)

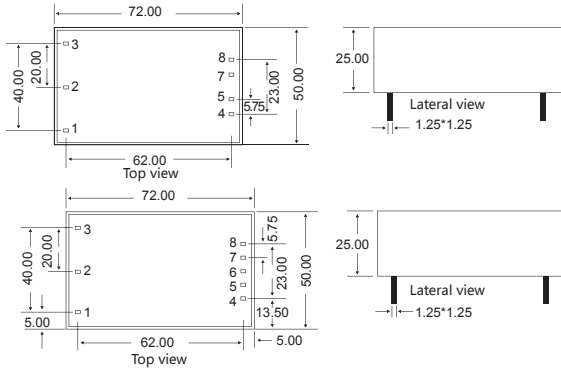
AC-DC concurrently DC-DC/ AC and DC Universal power converter

Professional field features of products

72size product type and pin diagram

Dual uncoen-ground output and three output type
AC220TD(M)XXDC-XW product type ,Can achieve power: 30W、40W Max
(Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



72.00*50.00*25.00size converter power pin diagram

Pin	1	2	3	4	5	7	8	
Function	L(+)	N(-)	FG	+XXVDC2	OV2	+XXVDC1	OV1	
Pin	1	2	3	4	5	6	7	8
Function	L(+)	N(-)	FG	+XXVDC3	COM	-XXVDC1	+XXVDC1	OV1

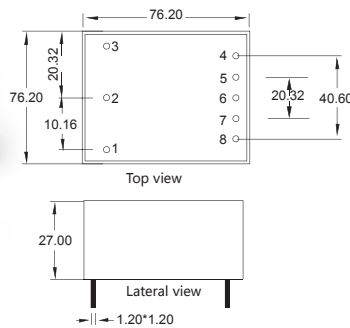
Model	Input voltage (V)	Output voltage (Vo±2%)			Load current(mA)			Efficiency	Certification
		V01	V02	V03	I01	I02	I03		
AC220M051515DC-25W	85-265VAC (90-360VDC)	5	15	15	2200	-310	+300	≥80%	RoHS
AC220M051515DC-25W		5	15	15	2000	-500	+500	≥80%	
AC220M051212DC-30W		5	12	12	3000	-630	+630	≥80%	
AC220M051212DC-30W		5	12	12	2000	-800	+800	≥80%	
AC220M051212DC-30W		5	12	12	1000	-1000	+1000	≥82%	
AC220M051515DC-30W		5	15	15	2000	-660	+660	≥78%	
AC220M241215DC-30W		24	12	15	500	700	100	≥76%	

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current (mA)	Efficiency	Certification
AC220TD0505DC-25W	85-265VAC (90-360VDC)	5 5	1000 4000	≥80%	RoHS
AC220TD0512DC-25W		5 12	3000 830	≥78%	
AC220TD0524DC-25W		5 24	1000 830	≥80%	
AC220TD0505DC-30W		5 5	3000 3000	≥80%	
AC220TD0512DC-30W		5 12	2000 1050	≥80%	
AC220TD0512DC-30W		5 12	3000 1250	≥82%	
AC220TD0524DC-30W		5 24	3000 630	≥80%	
AC220TD1205DC-30W		12 5	2000 1000	≥80%	
AC220TD1212DC-30W		12 12	1250 1250	≥80%	
AC220TD1224DC-30W		12 24	1250 630	≥80%	
AC220TD2405DC-30W		24 5	1000 400	≥87%	
AC220TD2412DC-30W		24 12	630 300	≥80%	
AC220TD2424DC-30W		24 24	630 630	≥80%	
AC220TD0505DC-40W		5 5	4000 4000	≥77%	
AC220TD0512DC-40W		5 12	3000 2000	≥84%	
AC220TD0524DC-40W		5 24	2000 1250	≥78%	

76.2size product type and pin diagram

AC220SXXDC-XWproduct type ,Can achieve power: 60W Max
(Customers can request custom tailor-made products for different pins and related parameters)

Appearance size and pin definition



Single Output 76.20*76.20*27.00 size converter power pin diagram

Pin	1	2	3	4	5	6	7	8
Function	L(+)	N(-)	FG	TRM	+XXVDC	OV	NC	NC

Model	Input voltage (V)	Output voltage (Vo±2%)	Load current(mA)	Efficiency	Weight (g) ±0.5	Certification
AC220S05DC-60W	85-265VAC (90-360VDC)	5	12000	≥77	37	RoHS
AC220S09DC-60W		9	6667	≥78%	37	
AC220S12DC-60W		12	5000	≥79%	37	
AC220S15DC-60W		15	4000	≥81%	37	
AC220S24DC-60W		24	2500	≥80%	37	
AC220S36DC-60W		36	1666	≥83	37	
AC220S48DC-60W		48	1250	≥85	37	

Above models for our standard products, according to customer requirements can be designed any parameter values actually

AC-DC products summary:

Instruction:85VAC~265VAC (90VDC~360VDC) wide voltage input, conversion Single or dual arbitrary values of voltage output, accuracy is ± 0.5%,± 1%,± 2%, 5%

Brief: Isolation type high efficient switch power supply converter, 85VAC~265VAC wide voltage input, with small size type, good electromagnetic compatibility, small output ripple noise, the precision of output voltage is high, transient response should be fast. The built-in EMI filtering unit, over-current over-voltage (according to your requirements) and output short circuit overload. Overheat protection circuit.

Application: military areas, highway, railway, aviation, ship, audio, LED driver, liquid crystal display, intelligent instrument, automatic control equipment, electronic equipment, medical equipment, chargers, portable computer, electronic watt-hour meter, IC card read / write device, electrical and other fields

Output characteristics:

The built-in EMI filtering unit, has an over-current, overvoltage (according to your requirements) and output short circuit.

Overload, overheating, protection circuit (eliminating short circuit, overload, overload automatically eliminate)

Ripple / noise (20MHZ): 50mVp-p max., 40KHZ-150KHZ switching frequency

General Characteristic:

Source effect: the input voltage from the low to high, the insulation resistance of 1000000000Ω

Mean time between failure (MTBF) 2000000h

Temperature coefficient is ≤ ± 0.03% °C, hold time: 20ms (full load of typical value)

Isolation voltage: 2000VAC 5mA, 1min.

Operating temperature: industrial grade: -25 ~ +55 °C, military grade-40~+85°C, storage temperature: -40°C ~ +125 °C

Response time: load change for every 30%, the rate of change of 1A/us, response time is 1ms

Shell: high flame retardant, metal aluminum shell / purple copper package

Max shell temperature : 85 °C, relative temperature; 10%~90%

Cooling : natural cooling, need not add radiator

Safety: with GB4943, UL1950, IEC380 and other relevant provisions, EMC and safety to meet international standards IEC6100, UL60590 and IEC60590 standards

Precautions for use:

1、 AC input can not be short-circuited

2、 The output pin as required

Overload protection:

120%~150% realize overload, overheat protection, self-resumption.

Output requirements:

0%~100% load rate, no special requirements on load.

LED Driver



Functional Description

- Remote human induction
- Adjustable output current: output current can be freely set between 200-700mA, can be programmed to end in the factory or by the customer, Different light engine can optimize the drive current to meet Energy Star standards;
- Accuracy: 25 bit (max)
- Adjustable: 100% to 1% flicker-free adjustable gamma correction curve;
- High efficiency: $\geq 85\%$ (typical)
- Communication interface: LED Code
- Thermostat: By connecting 51Ω NTC thermistor temperature feedback to ensure normal LED operating temperature;
- Programming (internal) (custom):
 - (A) Temperature
 - (B) real-time (day time)
 - (C) output current
 - (D) LED bridging
 - 30% of current compensation (e) LED aging

Electrical function

Input voltage	85-264VAC
Operating frequency	47-63HZ
Power factor (typical value)	0.95 at 220VAC(typical value)
Inrush current	15A max (25°C , 220VAC, cold start)
Input current	0.24A max at 220VAC
efficiency	Typical value of 88% of the max load
Max output power	32W
Line regulation	$\pm 1\%$
Load regulation	$\pm 5\%$
Leakage current	0.3Ma
Protection function	Overvoltage protection, over current protection, short circuit protection (Troubleshooting, auto-reply)
Environmental Specifications	
Operating temperature	-25°C~+55°C
Storage temperature	-40°C~+85°C
Max shell temperature	80°C
Temperature	20%~85%RH
Cooling method	Natural convection
Isolated voltage	Input/ Output 4000VAC,10mA,1 Minute
MTBF	300.000h full-load .25°Cambient temperature
Working life	100.000h 25°Cambient temperature
Appearance Size (L*W*H) (Prevail in kind)	150*40*28 (mm)
Safety & EMC	
CQC	GB19510.1 , GB19510.14
CE	EN 61347-1 , EN61347-2-13
Conduct	EN55015 Class B
Radiation	EN55015 Class B
Harmonic currents	EN6 100-3-2
Voltage Flicker	EN6 100-3-3
Electrostatic-like discharge	EN6 100-4-2
Frequency Magnetic Field Immunity	EN6 100-4-3
Induced fast transient pulsating test	EN6 100-4-4
Surge Immunity	EN6 100-4-5
RF magnetic field conduction harassment antijamming	EN6 100-4-6
Power Frequency Magnetic Field Immunity	EN6 100-4-8
Voltage drop	EN6 100-4-11
Electromagnetic Immunity	EN6 1001547

Constant current Model

Model	Output Current	Output voltage	Current precision	Efficiency(typical value)
				220VAC
AC/DC-LED-350-28W	350mA	20-80V DC	$\pm 5\%$	85%
AC/DC-LED-550-28W	550mA	20-52V DC	$\pm 5\%$	85%
AC/DC-LED-700-28W	700mA	20-40V DC	$\pm 5\%$	85%
AC/DC-LED-1050-28W	1050mA	2.8-26V DC	$\pm 5\%$	85%
AC/DC-LED-1200-28W	1200mA	2.8-23V DC	$\pm 5\%$	85%

Above models for our standard products, according to customer requirements can be designed any parameter values actually

Constant voltage isolation unregulated DC-DC power converter

Constant voltage isolation regulated DC-DC power converter

Wide voltage regulated DC-DC power converter

Wide voltage regulated non-isolation DC-DC power converter

Wide voltage regulated(non-isolation) single output (current : 500mA, 1000mA Max)

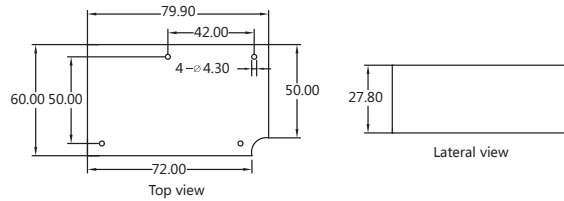
AC-DC concurrently DC-DC/ AC and DC Universal power converter

Professional field features of products

Professional field features of products

Products features

- Wide input voltage area
- 80% efficiency typical value more than 80%
- -10°C ~ +55°C usage temperature range: -10°C ~ +55°C
- Isolated voltage 2000VAC
- Pass ROHS Complaint
- Cooling method : natural cooling
- With the excellence shield anti-jamming performance and electromagnetic compatibility, prevent by lightning, output flow, short circuit protection, overheating protection, restoration etc function



Pin	1	2	3	4	5	6
Function	L(+)	N(-)	+XXVDC	OV1	OV2	+XXVDC2



1.3 Application

Sound

Aluminum radiator shell structure with wide voltage input isolation voltage or adjustable single / dual / three road and multiple output switching power supply converter (Power: 500W Max)

Features:

This product the appearance of beautiful, with its heat dissipation function, input control switch, external mounting insurance tube and converter is working indicating lamp.

Instruction: 4.5VDC-9VDC/9VDC-18VDC/18VDC-36VDC/36VDC-72VDC/90VDC-360VDC/90VDC-260VDC/200VDC-360VDC wide voltage input, conversion from single, dual arbitrary values of voltage output, accuracy: ± 0.5%, ± 1%, ± 2%.

Application: This product is now widely used in the National Petroleum transport, railway transport and marine transport and other large vehicles and ships and other fields, and a number of military scientific research units used.

Output characteristics

Load effect: ≤ ± 1% 0%-100% Load

With over-current, over-voltage (according to your requirements) and output short circuit, overload protection circuit.

Ripple/noise: (20MHz bandwidth): 50mVp-p Max

Switching frequency: 150KHz-220KHz

General Characteristic:

Source effect: ≤ ± 1% (input voltage range.)

Mean time between failures (MTBF): 2000000h

Temperature coefficient is ≤ ± 0.02% degree

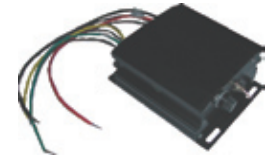
Celsius Isolation voltage: 500VDC 0.5mA 1Minute

Operating temperature: -25/-40~+85 °C, storage temperature: -40~+125 °C

Shell: metal aluminum package

Max working temperature: 85 °C, relative to the shell temperature: 10%~90%.

Cooling method:natural cooling without increasing the radiator



Output load requirements:

0%-100% load rate, no special requirements on load.

Welding adapter plate

Wide input voltage isolation voltage or adjustable single / dual / three road and multiple output switching power supply converter Adapter board size: 100.00*100.00*20.00mm

Features: This product is for those customers who are not install the converter in PCB, special in a converter is arranged below the upper connecting plate, the screws securing a converter in the corresponding position.

Instruction: isolation type high efficient switch power supply converter, wide voltage input any value, has small volume, good electromagnetic compatibility, small output ripple noise, the precision of output voltage is high, the transient response error quickly, easy to install, cost-effective, can realizes multiple functions, multiple voltage output and each has an independent control and movement.

Application: This product is now widely used in the National Petroleum transport, railway transport and marine transport and other large vehicles and ships and other fields, and exported to overseas.

Output characteristics

Load effect: ≤ ± 1% 0%-100% Load

With over-current, over-voltage (according to your requirements) and output short circuit, overload protection circuit.

Ripple/noise: (20MHz bandwidth): 50mVp-p Max

Switching frequency: 150KHz-220KHz

General Characteristic:

Source effect: ≤ ± 1% (input voltage range.)

Mean time between failures (MTBF): 2000000h

Temperature coefficient is ≤ ± 0.02% degree

Celsius Isolation voltage: 500VDC/1500VAC 0.5mA/5mA 1Minute

Operating temperature: -25/-40~+85 °C, storage temperature: -40~+125 °C

Shell: metal aluminum package

Max working temperature: 85 °C, relative to the shell temperature: 10%~90%.

Cooling method : natural cooling without increasing the radiator



Output load requirements:

0%-100% load rate, no special requirements on load.

Henlv Power | Production workshop

DC-DC power supply instruction manual

1. Inside the converter power does not contain a fuse, it should be in the power converter input of access speed blow fuse (fuse time $\leq 10S$) so that the protection for power and equipment to meet the requirements of the international safety norms.

2. If the internal resistance of a long supply line or power supply, it is recommended that the high-frequency input of the converter parallel resistance, this can reduce the high-frequency radiation caused by the line to ensure the stable operation of the power supply converter, the recommended capacity for 100uF/1A inputs.

3. If the supply line or power supply there may exist a short high-voltage spikes, it is recommended that the busbar into the inductor L, and should be noted that L is unsaturated at the maximum input current.

4. All power in the work, there will be some power consumption, so may have a fever, and converter operating temperature converter lifetime of great. Converter temperature (above 55 °C every rise 10 °C, the average failure of the converter, the half time) it should be possible to reduce the working temperature of the converter, such as the use of the enclosure or heat sink can be cooling, or the converter vertically (below 10mm more space or ventilation holes, the front of the converter space above 20mm, 30mm more space or ventilation holes in the converter above) than the converter flat (converter ventilation holes in the print edition) will lower the temperature 5-10 °C.

Note: the converter work, the work should not exceed the shell temperature of the product specification of the highest value, otherwise it may result in permanent damage to the converter.

5. Converter of lead, copper foil should widen as much as possible, reduce line loss. In addition, the converter is the largest place under radiation interference, suggested in the converter layout the largest area of copper foil, let the converter FG (shell) is connected, this can greatly reduce the radiation converter. If the actual use of the side is not isolated, recommended in the converter under direct short circuit of primary and secondary side, and the copper foil is as large as possible, rather than through the long line outside the closed primary and secondary side interference.

6. The converter is not recommended for use in series or parallel, short-circuit protection, but do not support the long-term flow work.

7. Multiple converters simultaneously, separately in each converter input string into the isolating diode, incorporated into the storage capacitor, so when a converter of the load change substantially, causing the input bus Hu voltage fluctuation on other converters effect, also can avoid the frequency difference of each converter and the beat frequency and interference.

8. The converter of the remote control on / off operation is controlled through the CNT end. Generally by the TTL-level control logic reference for GND.

CNT and GND (ground reference) connected to remote shutdown, the converter does not work, the requirements VCNT to less than 0.4V; of CNT floating or connected to + Vin, converter to require VCNT greater than 1V.

If the control input isolation optocoupler as the transmission control signal. Shown in Figure one.

9. The output voltage is regulated (only applicable for adjustable output voltage products): you can pass in the TRM end external resistor, so that the output voltage at rated about $\pm 10\%$ range adjustment. External resistance value generally in the thousands to choose between to two milliohms Europe. Converter power should be restricted to a max-rated output power. If the output voltage is higher than its nominal value, should reduce the output current, so as to meet the max- output power restriction.

If only a single direction adjustable high (or low) voltage can only in the TRM end of the output negative (or outputs) is added to the end of resistance. If it's no trimming can be TRM end hanging high.

10. Converter power supply output can not connected capacitor capacitance, but as the power supply decoupling and interference means, is widely used. The company considered this factor converters, can be incorporated into the 47uF/A output output. Each amp output up to a maximum of 1000u F (Vo=5V), namely the maximum capacitive load does not exceed 12.5mj/ amp output, and attention should be paid to capacitance resistance should not be small, otherwise may cause power instability.

11. External recommended circuit:

To further reduce the input and output ripple and noise interference, the external capacitor capacitance value increasing; choice of equivalent impedance value of capacitance; or can increase the external filter inductance. The general recommendation of capacitance and inductance value:

Cin: 5VDC or 12VDC 100uF	Vout:5VDC Cout: 330uF
24VDC or 48VDC 10uF/22uF	Vout:12VDC Cout: 100uF
Lin: 1uH~120uH	Vout:24VDC Cout: 22uF
Cout: About 100uH	Vout:9VDC Cout: 220uF
	Vout:15VDC Cout: 47uF

12 . All isolated DC-DC products, products with min load power must be greater than 10%, if the min load can reach 10%, to the DC-DC output and 5-10% dummy load, ensure stable and reliable products work.

13 . The input polarity: input polarity refers to the need for DC / DC series DC input power converter, received their primary power source has positive and negative points, such as the input supply voltage of +12V or -12V, but both positive and negative, when connected to a high potential terminal +Vin, GND to low potential, input polarity is absolutely can not take the wrong, otherwise it will cause permanent damage or deterioration of the product.

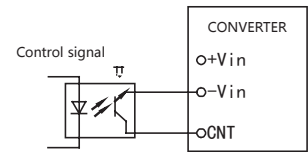
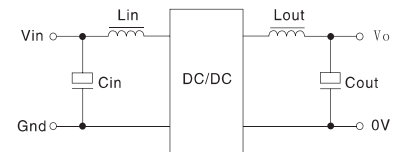


Figure one
Optical coupling control



Output voltage wiring method
is shown in Figure two



AC-DC power supply instruction manual

Safety

Please use as instruction to ensure the products function well and safety.

Accreditation and quality assurance

We are strictly management and manufacture as ISO9001:2000 standard

Warranty

For the material and manufacturing of our products, from the date of purchase, if nay quality problem appeared within two years can be replaced

Warranty service

If the products needs warranty service or maintenance, should back to the company designated repair unit. If back to our company for warranty service, the customer should pay single freight fee in advance and we will responsible for the freight fee shipping to customer. If the products ship to our manufactory to repair from other countries, all the freight fee, custom duties and all the other tax should be paid by customer.

Guaranteed limit

All the guarantee not suit for the damaged caused by the following case:

1. The customer not correct or improper repair products
- 2) Unauthorized modification or misuse
- 3) Operating outside of the designated environment, or assy and repair in the improper location
- 4) Damaged caused by customer install the circuit himself or customer use their own products caused defects.

I. Points for attention

1).Points for attention before use

Before use please careful read the top printing marks to distinguish between input and output , if reverse can cause product direct damage

Input

L,N 220V input
G Connect ground

Output

0V Output ground
V0 Output high voltage
0V1,0V2 Stand for this two output ends are not sharing the common ground
**VDC **Stand for output is the positive voltage
-**VDC -**Stand for output is the negative voltage

ACXX S (T,D,M) XXDC -XXW
ACXX Stand for input voltage
AC220 stand for input 165v-265v and 85V-265V
S(T,D,M) Output voltage form
S Single output
D Dual and same ground ouput
TD Dual independent ground
M Multi ouput
XXDC Magnitude of voltage
-XXW Output of the power

Points for attention when use

1) Input polarity

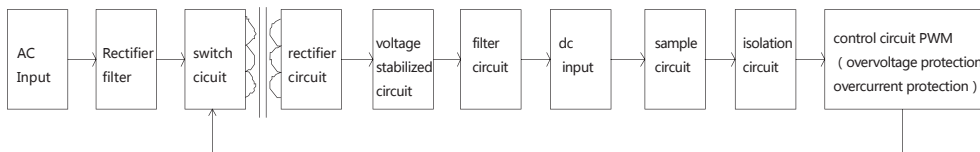
Connect the converter is AC, no positive and negative pole, but there is null line and power line, user should let the fuse and switch connect the power line in series, or will not function well in protection. When the fuse connect the null line, converter will damaged and at the same time the switch is always charged, easily hurt person. Hope user can be carefull about that..

2) Input Output cable

Power converter is welding directly and the length and width is related with voltage drop, so user should consider this when install prototype. When AC transfer into DC, first,please avoiding the AC line is too long and the interference problem. Sencond, please avoiding input cable is too long caused voltage drop too large, which will lead the converter or the power device can't work.

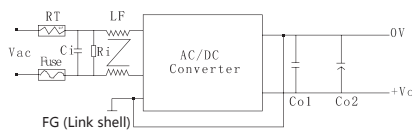
II. Power supply instruction

1. Power supply basic schematic

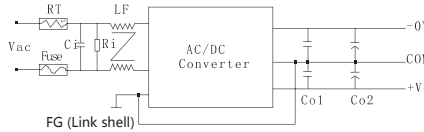


2. Use of typical graph

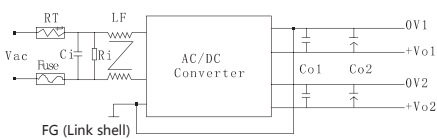
graph 2.2.1 is single output converter typical circuit



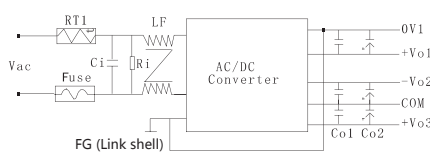
graph2 is dual output common ground converter typical circuit connect



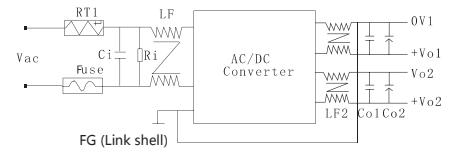
graph 3 is dual ouput non- common ground converter typical circuit connect



graph 4 is multi ouput converter typical circuit connect



graph 5 is anti-interference converter typical circuit connect



Note: for the power converter own existence interference, in order to decrease the disturbance of power converter to other products, there alternative methods to choose as follows:

- 1) Increase the inductance of LF1
- 2) Ground plane well
- 3) Use metal case
- 4) Add the magnet ring at the end of output loop circuit (that is common-mode inductance LF2 in graph 2.2.5, the connection is same as common-mode LF1)

Primary part components:

- 1) RT is thermistor, avoiding surge current
- 2) Fuse is fuse wire, is protection converter
- 3) Ci is 0.1UF/275V safety capacitance, the function is filter.
- 4) Ri is 560K 1/4W precise resistance, the function is discharge circuit for Ci
- 5) Ci, Ri, LF form EMI circuit, the function is preventing interference

Second part components:
(Table 1 input components recommended)

Vin(Vac)	RT	Fuse(A)	Ci(uF)	Ri(KΩ)	LF(mH)
165-265	8D-7	1.2~1.5	0.1/275	560	8~10
85-265	8D-7	1.2~1.5	0.1/2.75	560	8~10

1)Co1 is 104M 50V porcelain capacitor, which is used for reducing the high noise. The withstand voltage should be greater than output voltage
2)Co2 usually uses ESR lower capacitance(low loss aluminum electrolytic capacitor) for reducing ripple
Please note that the main circuit of the output and the load ground should connect the ground, that would not hurt man even if products have some problem. For the auxiliary circuit should be isolated doesn't need to connect the ground.

Table 2 input components recommended

V0(VDC)	Co1	Co2
2~5	104 M 50V	2200uF/10V
5~15	104 M 50V	1000uF/16V
15~24	104 M 50V	470uF/25V
24~48	104 M 50V	220uF/63V

1)Co1 is 104M 50V porcelain capacitor, which is used for reducing the high noise. The withstand voltage should be greater than output voltage
2)Co2 usually uses ESR lower capacitance(low loss aluminum electrolytic capacitor) for reducing ripple
Please note that the main circuit of the output and the load ground should connect the ground, that would not hurt man even if products have some problem. For the auxiliary circuit should be isolated doesn't need to connect the ground.

III.Points for attention for power supply when test

1.Please connect as the supply typical circuit graph when test

1 Please connect as the supply typical circuit graph when test.

Please as the products top printing to test when there is no any load added on the second part components, the magnitude of voltage of test should within the range that printing on the top of the products.(please note the error,usually the error should be testing voltage's ±5%)

Please note the whether the connect of voltmeter is correct or not, for the multi output circuit. If the connection is wrong, the test voltage also wrong.

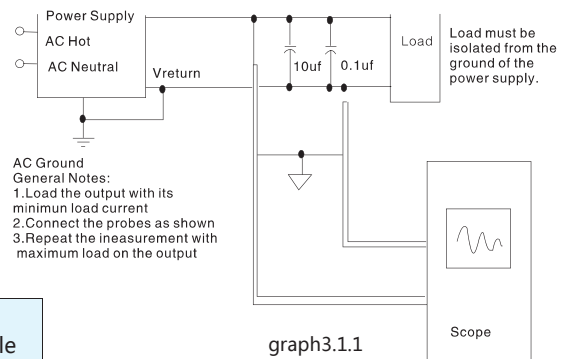
When testing added the load. Should added them based on the corresponding current. And the tested voltage should within the indicated rage. Added load should not add one, that would be cause other voltage unusual.

2. Ripple wave test of powr supply as graph3.1.1

IV.Parameters of power supply

Following is the data and graph of 12v ouput ,40w AC-DC power converter.

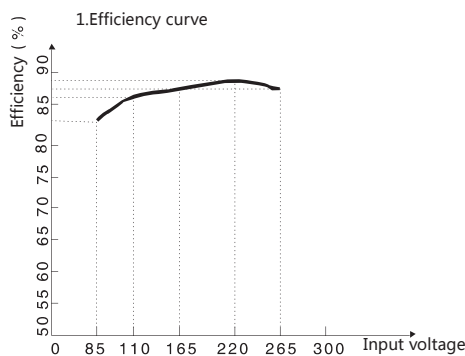
Model	Input voltage	Output voltage	output current	Efficiency	Ripple
AC220S12DC-40W	220VAC (85 ~ 265VAC) (90 ~ 360VDC)	12VDC±1%	1666mA	≥85%	≤50mV



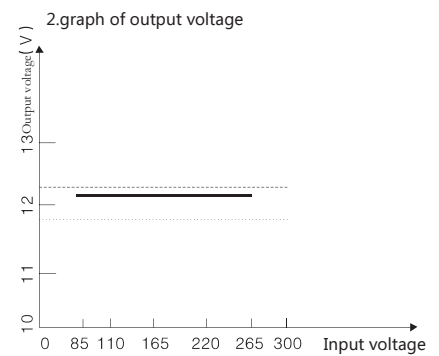
graph3.1.1

Scope

graph 3 Product test parameters and data



graph4.1.1.Efficiency curve



graph4.2.1 of output voltage

V.Safety

1.Over-voltage protection

there is two type of Over-voltage protection: reversible and irreversible

reversible is when over-voltage the converter should no output,after over-voltage termination, all output become normal

irreversible is when over-voltage there is part components of themodule damaged for reach its limit. After over-voltage termination, the module can't work. So that can protect the converter.

2.lightning prevention

User always care about lightning prevention. But if the instrument is damaged by lightning. And the voltage and last time can record when lightning. So if user's instrument may suffer lightning. Hope you can buy a transient suppression or ghtning protection device manufactured by . professional factory.

VI.Points for attention when compression test

1. When compression test. Please setting the compression tester's voltage to 1500vac.5mA, and then survey the input end(LN cutting-out) and ouput(output end pinout should connect), test time should be3±1s

2.Finished the fist step. Then setting the compression tester's voltage to 500vac.5mA. test points: shell and ouput end.(output end pinout should connect) test time is 3±1s

3 Note: when compression test. Plese don't occur flashover. Glitter, electro-discharge and other adverse circumstances because of poor contact.

.DC - DC products model instruction and test

1. Confirm the power specification

First, refer to the "DC - DC Power Supply Converter Selection Manual Guide" to confirm the power supply models, and then to a series of products to confirm the design specifications, and screened to determine the use of standard converters or need custom converter.

Basic requirement

A: Confirm the input power model style

Make sure the power converter is AC or DC, if AC, then choose the AC/DC power converters, if DC, then choose to use DC/DC converter.

B: input voltage accuracy requirement

1) Fixed voltage products: The former stage input power type and the voltage of the precision directly determines the type of converter; Example: switching power supply, linear regulator, Regulator diodes and a regulate output power supply (general nominal is $\pm 1\%$ - plus or minus $\pm 2\%$, can choose fixed voltage products series (fixed voltage products requirements input voltage $\leq \pm 5\%$), general common input voltage 5V, 12V, 24V. fixed voltage series products have two types isolation unregulated voltage series and isolation regulated voltage regulator series.

2) Fixed voltage isolation unregulated series is applicable to power output for 1-2 w, no higher request on the output voltage, short current isolation and DC - DC voltage transformation occasion. Such as high power IGBT drive, pure digital circuit, general low frequency simulation circuit, RS232 and RS485 etc isolation communication system. This products is not adapted to the input voltage is difference greater than the plus or minus 5% occasions

3) Fixed voltage isolation stabilize series is applicable to power output for 1-2 w, with good characteristics of electromagnetic compatibility, the output ripple and the noise is very small. Suitable for output voltage and ripple highly demanding situations. Such as A/D, D/A conversion circuit, the signal collection circuit, etc. This products is not adapted to the input voltage is greater than the plus or minus 5% occasions.

4) Width voltage products: For industrial control system power supply, communication system voltage, 220V transformer rectifier output and all kinds of battery, battery, dry battery, remote transmission control and remote dc power supply system input power changes greatly occasions, should choose width voltage input series converter, input voltage have 2:1 or 4:1 two kinds, should be according to the practical situation to chose the right converter, in order to improve the products price ratio. (4:1 conversion efficiency is lower than 2:1, the price is high, but the input range is wide, such as 9-36 V, 18-72 V). General input nominal voltage : 5 V (4.5 -9 V), 12 V (9-18 V), 24 V (18-36 V), 48 V (36-72 V). For above 3 w output power, in order to improve the efficiency, suggesting select high voltage as input voltage, and select of width voltage products series.

C: Output products

1) Output voltage depend on the load circuit type, such as high power drive, pure digital circuit, general low frequency simulation circuit, RS232 and RS485 isolation communication system etc has no higher power supply accuracy requirements, can choose uncontrolled series; Circuit sensor, A/D, D/A conversion circuit, signal acquisition circuit etc are sensitive on the power supply accuracy and ripple device choose low ripple low noise products;

2) With the cost and efficiency compatibility, considering unregulated converter and linear regulator combined using; when the load have positive and negative voltage or a variety of voltage power supply requirement, should consider the positive and negative output or with double road and multiplexed output. Then reduce output points as far as possible, as the mainly output with the higher output power and high accuracy requirement, to determine the vice edge precision, to make the converter design more reliable to meet the requirements.

3) General voltage is 3.3V, 5V, 9V, 12V, 15V, 18V 24V and 36V etc

4) If with higher input accuracy and the higher ripple requirement, shall increase the converter cost a lot and promote the design cost

D: output current

The load has been chosen, the output current also be decided, the load current value is the key to determine the power, meanwhile to directly effect of the converter price.

For little or no-load circuit Output power, such as to light coupling, relay power supply for RS232/485, CAN bus, do voltage reference usage, suggesting that add appropriate dummy load to improve the reliability of power supply converter USES, dummy load size is generally more than 10% of the rated load power; In the load situation can't be more than 100% load, to avoid a light and overload damage power. power converter should be derating for using under the high temperature circumstance, can choose more than 30-40% of the power margin for long-term work in 70 °C above occasions, please explain to the customer service center to select suitable power supply military converter for high temperature environment. In a word, the output current choice is to design the key to success, too big or too small output load current shall lead to products reliability and the high cost promotion.

E: isolation voltage characteristics

Isolation characteristic, refers to the degree of insulation withstand voltage for the input and output converters. During the military line system, take the safe isolation when harsh environment (lightning, arc interference), also play a role to eliminate ground loops; during the mixed circuits, actual sensitive analog circuits and digital circuits, hybrid circuits, noise isolated; achieve voltage convert in the multi-voltage supply electrical system. fixed isolation voltage is 1000-6000VDC, width isolation withstand voltage is 500-1500VDC. As for the isolation withstand order products (eg AC1500V isolation withstand products), leads to products reliable and the higher cost increase.

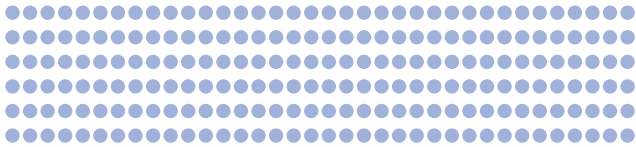
F: Products sealed and size

In order to meet the production process requirement, reflow soldering design should choose SMD series products, wave soldering should choose SIP series products. Power converter products size need to meet its own cooling requirements, if the temperature characteristics is high, select the big power products while remove, but cost will be improved. So you need to pay attention to volume, cost, performance, comprehensive consideration. Radiation class about EMC consider design, please choose our metal shell design, this series of products have good shielding anti-interference ability and the EMC performance.

G: Multiple products selection

For A/D, D/A conversion circuit, the signal collection circuit, industrial control micro processor MCU and control output circuit multiplexed output voltage of the power supply converter, while the designing, output main circuit design and auxiliary circuit design for 50% of the output power for appropriate. General speaking, main circuit design and auxiliary circuit design load difference not more than 20% would be fine, namely main load design min is 30%, then the auxiliary design load design Max was 70%, on the contrast, was established.

In a word, select the standard power converter as possible to satisfy the design cost be to lower, technical mature, decrease the research resistance, save the expand time purpose, promote the products design rate. for the special isolation withstand, two way or two way above output voltage products, high temperature and high pressure severe environment, EMC, CE, UL, GS, ROHS authentication products please contact our customer service center.



Products test instructions.

1、 Test method: Standard open's four terminal testing method, figure 1

Test instructions:

- 1) Test condition: room temperature=25°C, < 75% of the nominal input and rated load
- 2) Test instrument requirement:
 - 2-1 DC regulated power supply, the input voltage 0-72 v; At least meet the test input voltage range;
 - 2-2 Scope: bandwidth requirement: oscilloscope bandwidth ≥20 MHz; Probe requirements: please choose to take ground ring probe;
 - 2-3 Load resistor: please use non-inductive rheostat, power demand at least for rated power more than twice, resistance value according to the test shows. Suggesting that don't use the electronic load when the rated voltage products or ≤2W, high power products testing please use the electronic load machine (constant resistance mode).
 - 2-4 Figure current A voltage table U accuracy at 0.001
 - 2-5 Connection request line loss as low as possible, please use stranded wire test high power products. So as not to affect the test precision

2、 Test key indicators

1) Output voltage precision

Nominal input voltage and nominal load conditions, the measured output voltage U_m and the nominal output voltage U_n difference value with the nominal output voltage value of percentage. According to a formula calculation.

Formula one: voltage accuracy

2) Load adjust rate

Nominal input voltage and output load from 10% - 100% change, measuring the change of output voltage and the quantity of output voltage values percentage, according to the calculated formula 2

formulator second: load adjust rate = $(U_{m10\%} - U_{m100\%}) / U_n$.

3) Voltage adjust rate

Access rated load, within bounds control input voltage, output voltage measurement and the variation of the output voltage and the percentage of the nominal value, according to the formula three calculation.

4) Ripple and noise

Ripple and noise, most adopt probe direct quantity method.

test method as figure second below:

If the distance is not in the probe ends test, should add a 10uF electrolytic capacitor and 0.1uF ceramic capacitor at the pin, and then will probe in the both ends of the capacitance testing power supply ripple and the noise, the test of ripple as power supply products of ripple is noise.

Ripple and the noise test value directly read from 20 MHz oscilloscope

5) Isolation withstand voltage and insulation resistance testing

Isolation ability is power converter very important characteristic. For isolation withstand voltage and insulation resistance test method usually test with isolation withstand voltage insulation resistance instrument

1) Isolation withstand voltage test: add the isolation voltage test 1min between the input pi and the output pin

2) Insulation resistance test: add the 500VDC between the input pin and output pin with insulation resistance, the test value insulation resistance more than 1GΩHM

Special note: isolation withstand voltage and insulation resistance testing shall bring some damage for products isolation capacitance C (FIG. 4) each time; input and output should connect well during the Isolation withstand voltage and insulation resistance testing, otherwise may cause the isolation power converter damage due to "arc"

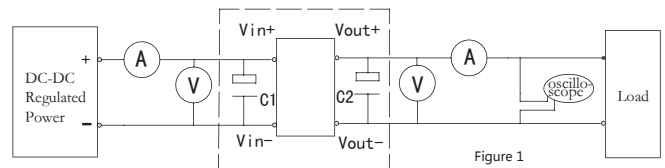


Figure 1

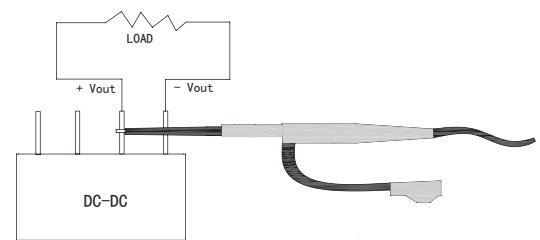


Figure 2

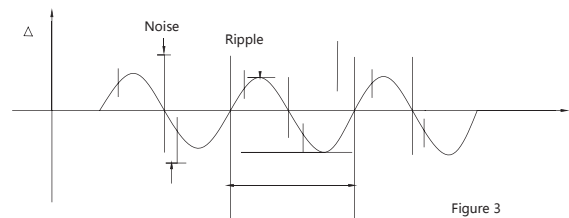


Figure 3

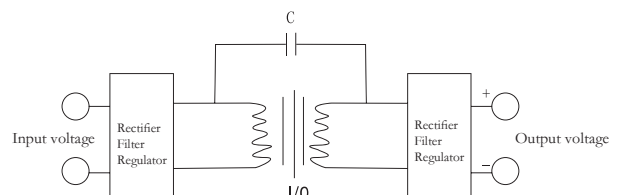


Figure 4

.AC- DC products model instruction and test

1.Confirm the power specification

First, refer to the " AC - DC Power Supply Converter Selection Manual Guide to confirm the power supply models , and then to a series of products to confirm the design specifications , and screened to determine the use of standard converters or need custom converter .

Basic requirement

A: confirm the input power model style

Make sure the power converter is AC or DC, if AC, then choose the AC/DC power converters, if DC, then choose to use DC/DC converter.

B: Input voltage accuracy requirement

1)Input power supply for wide voltage into: voltage range 85-265VAC

2)100VAC/50HZ,110VAC/60HZ,220VAC/50HZ, 230VAC/50HZ, 240VAC/50HZ, The general input voltage is 100VAC/50HZ,110VAC/60HZ,220VAC/50HZ, 230VAC/50HZ, 240VAC/50HZ instrument etc different voltage.

C: Output voltage

1)Output voltage depend on the load circuit type, such as high power drive, pure digital circuit, general low frequency simulation circuit, RS232 and RS485 isolation communication system etc has no higher power supply accuracy requirements , can choose uncontrolled series; Circuit sensor, A/D, D/A conversion circuit, signal acquisition circuit etc are sensitive on the power supply accuracy and ripple device choose low ripple low noise products;

2)Considering the cost and efficiency , such as lamps and lanterns products can consider ripple relative should not be too low, which shall help to reduce the cost, meanwhile reduce the points as far as possible, can also decrease the cost.

3)Input voltage :3.3V、 5V、 9V、 12V、 15V、 18V 24V and 36V etc..

4)If with higher input accuracy and the higher ripple requirement, shall increase the converter cost a lot and promote the design cost

D: output current

The load has been chosen, the output current also be decided, the load current value is the key to determine the power, meanwhile to directly effect of the converter price.

For little or no-load circuit Output power, such as to light coupling, relay power supply for RS232/485, CAN bus, do voltage reference usage, suggesting that add appropriate dummy load to improve the reliability of power supply converter USES, dummy load size is generally more than 10% of the rated load power; In the load situation can't be more than 100% load, to avoid a light and overload damage power. power converter should be derating for using under the high temperature circumstance, can choose more than 30-40% of the power margin for long-term work in 70 °C above occasions, please explain to the customer service center to select suitable power supply military converter for high temperature environment . In a word, the output current choice is to design the key to success, too big or too small output load current shall lead to products reliability and the high cost promotion.

E: Isolation voltage characteristics

Isolation characteristic , refers to the degree of insulation withstand voltage for the input and output converters . During the military line system , take the safe isolation when harsh environment (lightning, arc interference), also play a role to eliminate ground loops ;during the mixed circuits, actual sensitive analog circuits and digital circuits , hybrid circuits , noise isolated ; achieve voltage convert in the multi-voltage supply electrical system . AC-DC isolation voltage is generally voltage of 2000-2500VDC.

F: Products sealed and size

In order to meet the production process requirement, wave soldering to DIP series products should be conducted as per requirement after wave soldering. Power converter products size need to meet its own cooling requirements, such as the temperature characteristics of the demand is higher, then could select the big power products, but cost will be improved. So should pay attention to volume, cost, performance together. For and safety coefficient is relatively low, usage temperature higher products, can choose our military level with metal shell products; For usage temperature is low, request higher safety coefficient of the products, can choose our technical grade plastic shell products.

G: Multiple products selection

For A/D, D/A conversion circuit, the signal collection circuit, industrial control micro processor MCU and control output circuit multiplexed output voltage of the power supply converter, while the designing, output main circuit design and auxiliary circuit design for 50% of the output power for appropriate. General speaking, main circuit design and auxiliary circuit design load difference not more than 20% would be fine, namely main load design min is 30%, then the auxiliary design load design Max was 70%, on the contrast, was established.

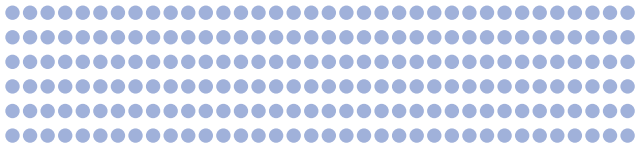
In a word, select the standard power converter as possible to satisfy the design cost be to lower, technical mature, decrease the research resistance, save the expand time purpose, promote the products design rate. for the special isolation withstand, two way or two way above output voltage products, high temperature and high pressure severe environment, EMC, CE, UL, GS, ROHS authentication products please contact our customer service center.

H: Products usage and storage

1)In principle should strictly according to the products specification for operation, pay attention to input and output may not mistake connection, especially products shall not be overloaded when using, lest damage the products.

2) Using our products, strictly should comply with the current distribution and temperature usage requirement, industrial-strength temperature is: - 25 ~ + 55 °C, military level temperature for: - 40 ~ + 85 °C

3) Products warehouse inventory, should be placed in a cool, dry conditions preservation, products storage can't be no longer than 3 months.



Products test instructions.

1、 Test method: Standard open's four terminal testing method, figure 1

Test instructions:

1) Test condition: room temperature=25°C , < 75% of the nominal input and rated load

2) Test instrument requirement:

2-1 Ac regulated power supply, the input voltage 0-305 v; At least meet the test input voltage range;

2-2 The input electric oscilloscope: bandwidth requirement: oscilloscope bandwidth or 20 MHZ; Probe requirements: please choose to take ground ring probe.

2-3 Load resistor: please use non-inductive rheostat, power demand at least for rated power more than twice, resistance value according to the test shows. Suggesting that don't use the electronic load when the rated voltage products or $\leq 2W$, high power products testing please use the electronic load machine (constant resistance mode).

2-4 Figure current A voltage table U accuracy at 0.001

2-5 Connection request line loss as low as possible, please use stranded wire test high power products. So as not to affect the test precision

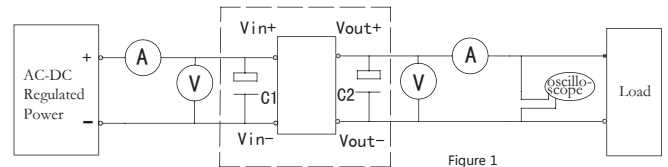


Figure 1

2、 Test key indicators

1) Output voltage precision

Nominal input voltage and nominal load conditions, the measured output voltage U_m and the nominal output voltage U_n difference value with the nominal output voltage value of percentage. According to a formula calculation.

Formula one: voltage accuracy

2) Load adjust rate

Nominal input voltage and output load from 10% - 100% change, measuring the change of output voltage and the quantity of output voltage values percentage, according to the calculated formula 2

formulator second: load adjust rate $= (U_{m10\%} - U_{m100\%}) / U_n$

3) Voltage adjust rate

Access rated load, within bounds control input voltage, output voltage measurement and the variation of the output voltage and the percentage of the nominal value, according to the formula three calculation.

$(U_{min} - U_{max}) / U_n$,

4) Ripple and noise

Ripple and noise, most adopt probe direct quantity method.

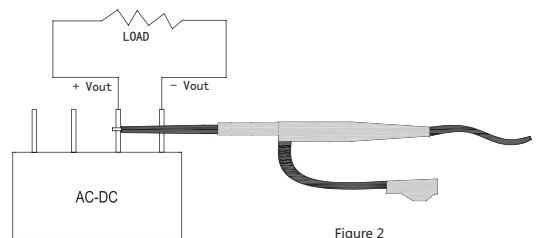


Figure 2

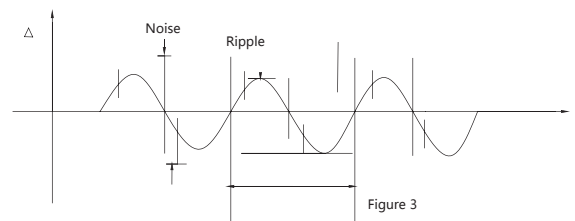


Figure 3

Test method as figure second below:

If the distance is not in the probe ends test, should add a 10 uF electrolytic capacitor and 0.1uF ceramic capacitor at the pin, and then will probe in the both ends of the capacitance testing power supply ripple and the noise, the test of ripple as power supply products of ripple is noise.

Ripple and the noise test value directly read from 20 MHZ oscilloscope

5) isolation withstand voltage and insulation resistance testing

Isolation ability is power converter very important characteristic. For isolation withstand voltage and insulation resistance test method usually test with isolation withstand voltage insulation resistance instrument

1) Isolation withstand voltage test: add the isolation voltage test 1min between the input pi and the

2) Insulation resistance test: add the 500VDC between the input pin and output pin with insulation resistance, the test value insulation resistance more than 1GOHM

Special note: isolation withstand voltage and insulation resistance testing shall bring some damage for product isolation capacitance C (FIG. 4) each time; input and output should connect well during the Isolation withstand voltage and insulation resistance testing, otherwise may cause the isolation power converter damage due to "arc"

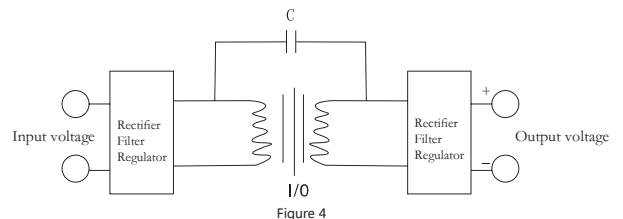


Figure 4

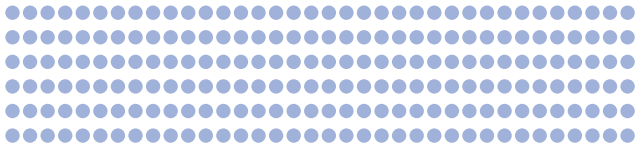
DC-DC power converter products selection manual guide

Input voltage (V)	Output voltage (V)	Isolation withstand voltage (V)	Power (W)	Circuit output	Product Series	Package	
DC-DC Power Input voltage	≤±5%	DC-DC Constant voltage unregulated Series	≤1000VDC	≤2W	Single	S(D)XXSXX-XW ; S(D)CXXSXX-XW ; ESXX(H)S(D)XX-XW ; DXXS(D)XXT-2W ; DXXSXXT-XW;	SIP,DIP , SMD
				≤2W	Dual uncoen-ground	S(D)XXDXX-XW ; S(D)XXTDXX-XW ; SXMXXXX-XW ; DXXDXT-1W ; DXXS(D)XXT-2W ; DXXTDXT-XW	SIP , SMD
			1000-3000VDC	≤2W	Single	S(D)XXHSXX-XW ; DXXHS(D)XXT-1W ; MDXXHSXXT-1W	SIP , SMD,DIP
				≤2W	Dual	S(D)XXHDXX-XW ; DXXHS(D)XXT-1W	SIP , SMD
			1000-4500VDC	≤2W	Single	ESXX(H)S(D)XX-XW ;	SIP
				≤2W	Dual	ESXX(H)S(D)XX-XW ;	SIP
		DC-DC Constant voltage regulated Series	≤1000VDC	≤2W	Single	SXXIS(HIS)XX-XW ; ESXX(H)IS(D)XX-XW ; DXXISXXT-1W	SIP,DIP , SMD
				≤2W	Dual uncoen-ground	SXXID(HID)XX-XW ; ESXX(H)IS(D)XX-XW ;	SIP,DIP
			1000-3000VDC	≤2W	Single	SXXIS(HIS)XX-XW ; ESXX(H)IS(D)XX-XW ; DXXHISXXT-1W	SIP,DIP , SMD
				≤2W	Dual	SXXID(HID)XX-XW ; ESXX(H)IS(D)XX-XW	SIP,DIP
			1000-4500VDC	≤2W	Single	ESXX(H)IS(D)XX-XW ;	SIP,DIP
				≤2W	Dual	ESXX(H)IS(D)XX-XW	SIP
	≥±5%	DC-DC Wide voltage Series	500-1500VDC	≤2W	Single	WRSXXS(D)XX-XW ; WRMDXXS(D)XXT-XW ; WRTDXXSXXT-2W	SIP , SMD
				≤2W	Dual uncoen-ground	WRSXXS(D)XX-XW ; WRSXXTDXX-XW ; WRDXXS(D)XXT-XW	SIP , SMD
			500-1500VDC	3-6W	Single	M (U) RTD(UMTD)XXS(D)XX-XW ; W (U) RTDXXS(D)XX-XW ; WRFDXXS(D)XX-XW ; URFD(URD)XXS(D)XX-XW	DIP
					Dual	M (U) RTD(UMTD)XXS(D)XX-XW ; W (U) RTDXXS(D)XX-XW ; WRFDXXS(D)XX-XW ; URFD(URD)XXS(D)XX-XW	DIP
			500-1500VDC	10W (12W)	Single	(U)RDXXS(D)XX-10W	DIP
					Dual uncoen-ground	(U)RDXXS(D)XX-10W ; W(U)RDXXMXX-XW ;	DIP
			500-1500VDC	15-20W	Single	W(U)RDXXS(D)XX-20W	DIP
					Dual	W(U)RDXXS(D)XX-20W	DIP
			500-1500VDC	25-30W	Single	W(U)RDXXS(D)XX-30W	DIP
					Dual	W(U)RDXXS(D)XX-30W	DIP
			500-1500VDC	40-50W	Single	W(U)RDXXS(D)XX-40-50W	DIP
					Dual	W(U)RDXXS(D)XX-40-50W	DIP
500-1500VDC	60-150W	Single	W(U)RDXXSXX-60-150W ; WRDXXSXX-(50-200)W	DIP			
500-1500VDC	50-200W	Single	WRDXXSXX-(50-200)W	DIP			
Non-isolation	0.5-1A	Single	H78SXX-XW	DIP			
Non-isolation	≤50W	Single	(B)KR(F)DXXSXX-XW	DIP			

AC-DC power converter products selection manual guide

Input voltage (V)	Output voltage (V)	Power (W)	Circuit output	Product Series	Package
AC-DC Power Input voltage	2000-2500VAC	≤3W	Single	AC220SXXDC-XW;AC110SXXDC-XW(36.8*18*16.8mm)(37*22.9*14.9mm)	DIP
			Dual	AC220DXXXDC-XW(40*25*20.8mm)(48*36*22mm)	DIP
		≤6W	Single	AC220SXXDC-XW(40*25*20.8mm)(48*36*22mm)	DIP
			Dual uncoen-ground	AC220DXXXDC-XW;AC220TDXXXDC-XW;AC220MXXXXXXDC-XW(48*36*22mm)	DIP
		≤10W	Single	AC220SXXDC-XW(55*45*22mm)	DIP
			Dual uncoen-ground	AC220DXXXDC-XW;AC220TDXXXDC-XW;AC220MXXXXXXDC-XW(55*45*22mm)	DIP
		≤20W	Single	AC220SXXDC-XW(62*45*22mm)	DIP
			Dual uncoen-ground	AC220DXXXDC-XW;AC220TDXXXDC-XW;AC220MXXXXXXDC-XW(62*45*22mm)	DIP
		≤30W	Single	AC220SXXDC-XW(72*50*25mm)	DIP
			Dual uncoen-ground	AC220DXXXDC-XW;AC220TDXXXDC-XW;AC220MXXXXXXDC-XW(72*50*25mm)	DIP
		≤40W	Single	AC220SXXDC-XW(72*50*25mm)	DIP
			Dual uncoen-ground	AC220DXXXDC-XW;AC220TDXXXDC-XW(72*50*25mm)	DIP
		≤60W	Single	AC220SXXDC-XW(76.2*76.2*27mm)	DIP

Note: S-single output; D-dual output; TD-dual uncoen-ground output; M-three or multiple.

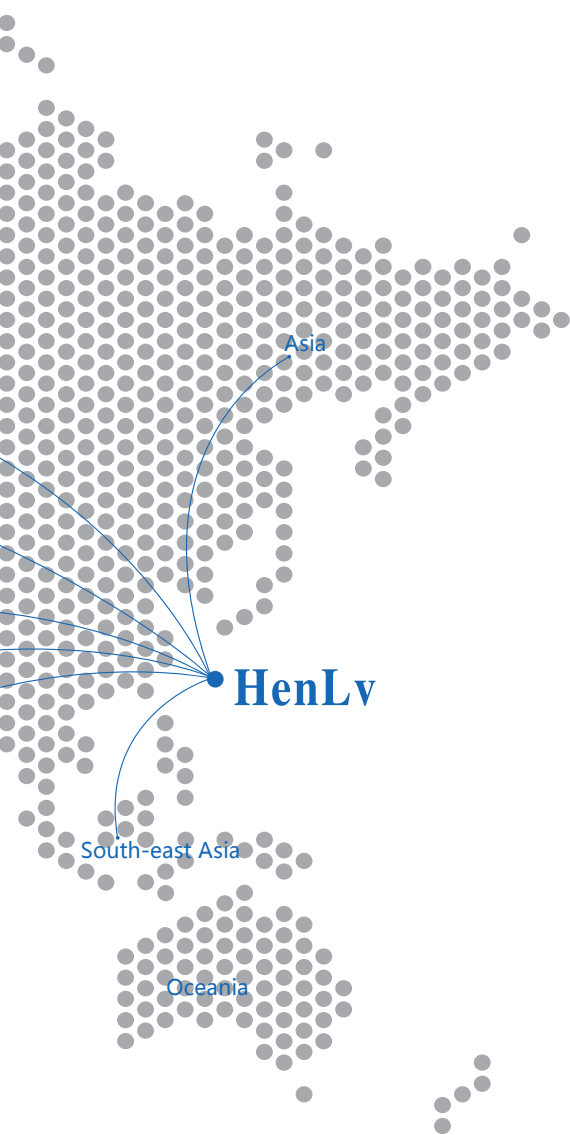


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Korea	Others	Japan	Europe	America	China
4%	7%	6%	13%	10%	60%

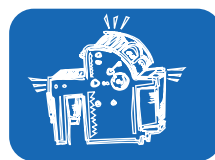
Main Application areas



Airline



Electricity



Instruments and meter



Industry control



Chemical industry



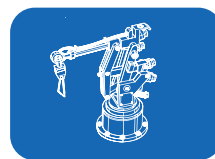
Highway



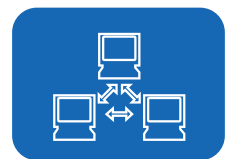
Oil industry



Lighting



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