SXX(H)(I)SXX-2WH2 Series

Fixed input voltage

Isolated(regulated)unregulated single output DC/DC Converter

• Product Feature

- Constant voltage input(5-24VDC±5%)
- Efficiency up to 76%
- Wide operating temperature range： -40℃~+ 85℃
- Isolation voltage 1500VDC 0.5mA 1Minute 3000VDC (with "H")
- Voltage accuracy： 4% or 2% (With "I")
- Plastic shell flame retardant package
- Comply with the RoHS directive
- Heat dissipation mode: natural cooling
- Mean time without failure: 500000H
- SIP Package

• Application Area

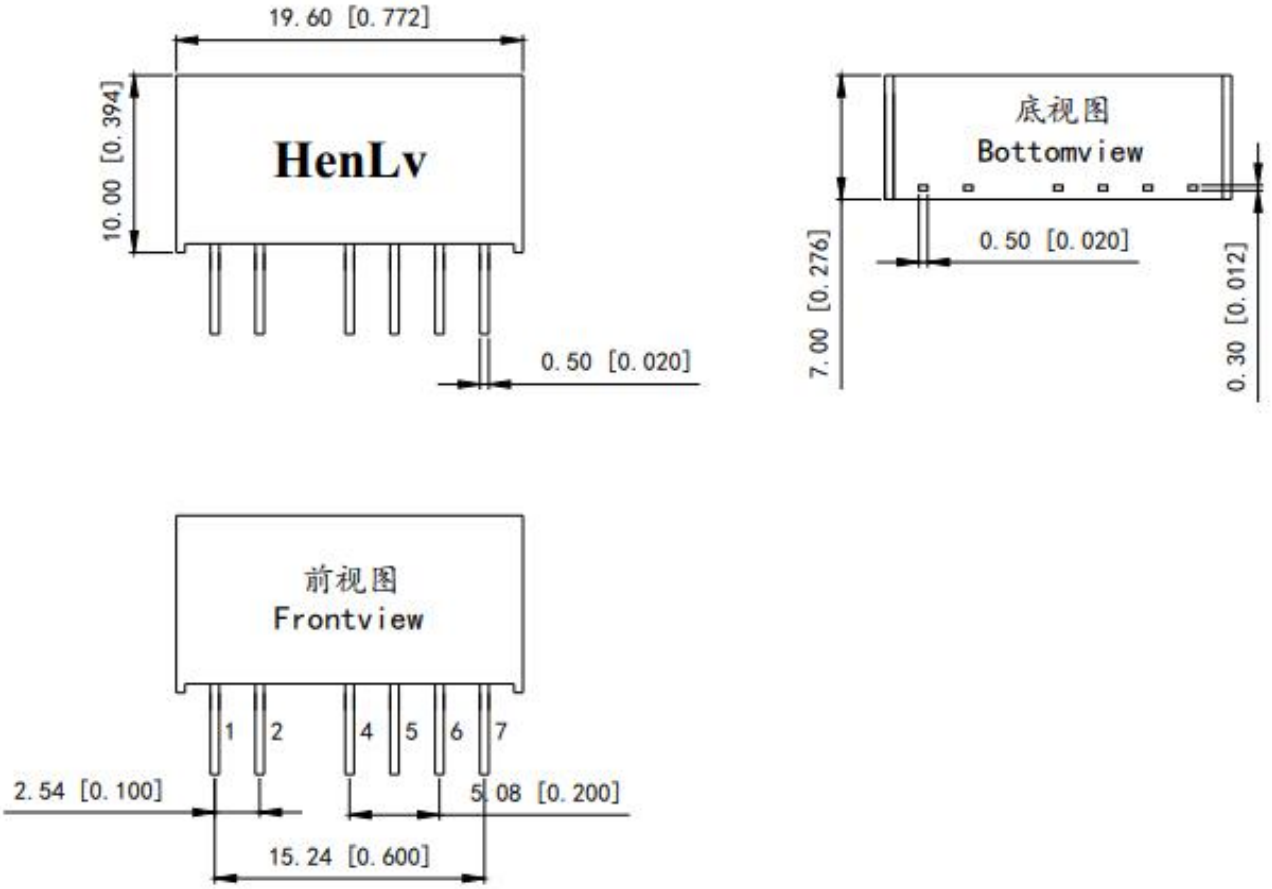
Communication interface converter (RS232/485) cellular phone, semiconductor laser, operational amplifier power supply, portable instrument, automatic control device, etc.

SXXSXX-1WH2 DC/DC Converter Parameters

Part No.	Input Voltage (V)	Output Voltage (V±4%)	Full load output current(mA)	Efficiency	Isolatio withstand voltage (VDC)	Maximum capacitive load(uF)	Packaging	Certification
S05(H)(I)S3.3-2WH2	+5VDC(±5%)	3.3	606	≥72%	1500	220	SIP	CE RoHS
S05(H)(I)S05-2WH2		5	400	≥72%	1500		SIP	
S05(H)(I)S09-2WH2		9	222	≥72%	1500		SIP	
S05(H)(I)S12-2WH2		12	167	≥75%	1500		SIP	
S05(H)(I)S15-2WH2		15	133	≥75%	1500		SIP	
S05(H)(I)S24-2WH2		24	83	≥78%	1500		SIP	
S12(H)(I)S3.3-2WH2	+12VDC(±5%)	3.3	606	≥72%	1500		SIP	
S12(H)(I)S05-2WH2		5	400	≥72%	1500		SIP	
S12(H)(I)S09-2WH2		9	222	≥72%	1500		SIP	
S12(H)(I)S12-2WH2		12	167	≥75%	1500		SIP	
S12(H)(I)S15-2WH2		15	133	≥75%	1500		SIP	
S12(H)(I)S24-2WH2		24	83	≥78%	1500		SIP	
S24(H)(I)S3.3-2WH2	+24VDC(±5%)	3.3	606	≥72%	1500		SIP	
S24(H)(I)S05-2WH2		5	400	≥72%	1500		SIP	
S24(H)(I)S09-2WH2		9	222	≥72%	1500		SIP	
S24(H)(I)S12-2WH2		12	167	≥75%	1500		SIP	
S24(H)(I)S15-2WH2		15	133	≥75%	1500		SIP	
S24(H)(I)S24-2WH2		24	83	≥78%	1500		SIP	

Overall dimensions and pin definition

SXX(H)(I)SXX-2WH2 Series (SIP) 19.60×7.00×10.00mm



引脚	SXX(I)SXX-2WH2	SXX(I)DXX-2WH2	SXXH(I)SXX-2WH2	SXXH(I)DXX-2WH2	SXXTDXX-2WH2
1	Vin	Vin	Vin	Vin	Vin
2	GND	GND	GND	GND	GND
4	0V	-XXVDC	No Pin	No Pin	0V1
5	No Pin	COM	0V	-XXVDC	+XXVDC
6	+XXVDC	+XXVDC	No Pin	COM	0V2
7	No Pin	No Pin	+XXVDC	+XXVDC	-XXVDC

Unit of size: mm[inch]
Terminal diameter tolerance: ±0.10[±0.004]
Unmarked tolerance: ±0.25[±0.010]

Electrical Characteristics

Electrical Characteristics

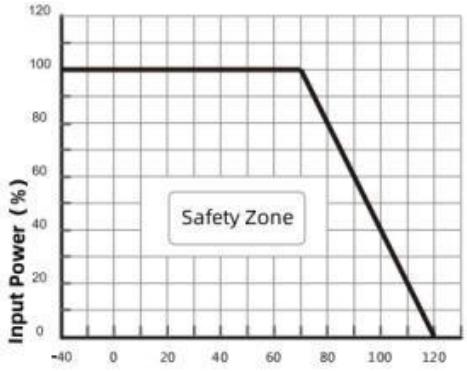
Item	Symbol	Condition except as otherwise herein provided Vi ,-40℃ ≤Tc≤85℃	Limit Value		Unit
			Min	Max	
Output Voltage	Vo	Full Load	Vo-4%Vo	Vo+4%Vo	V
Max Output Current	Iomax	-	-	Po/Uo	A
Output Ripple Voltage	Vp-p	Full Load， Vi， BW=20MHz，Normal Temperature	50±10%	300±10%	mV
Voltage regulation factor	Sv	Vimin、Vi、Vimax，Full Load	-	2.00	%
Load regulation	Si	Vi， Io =(10%~100%)Iomax	-	1.00	%
Efficiency	η	Vi，Full Load，Normal Temperature	72.00	-	%
Insulation Resistance	RI	Add 1000VDC between the input and output points Room temperature, t≥3S	50	-	MΩ

General Characteristics

EMC	Magnetic field sensitivity test Electrostatic discharge sensitivity test Radiation sensitivity test Conduction sensitivity test	GB6833.2-87 GB6833.3-87 GB6833.5-87 GB6833.6-87
Temperature excursion	0.03%/℃	
Frequency	50K HZ~300K HZ （MAX）	
Humidness	90% (max)	
Leak Current	N0	
MTBF	>500,000 Hours	

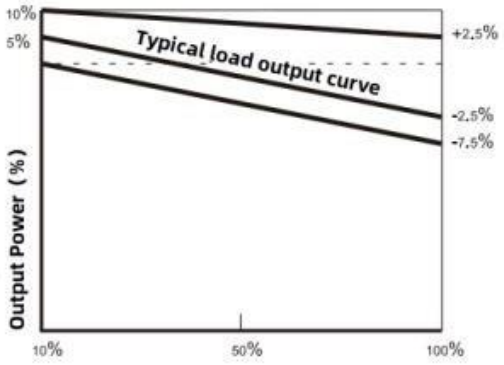
Temperature curve,error envelope curve

• Typical efficiency curve



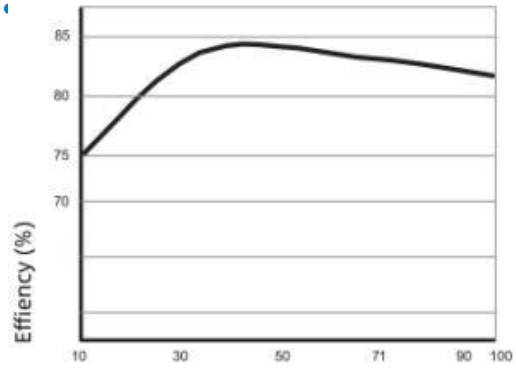
Environment temperature (℃)

Temperature profile



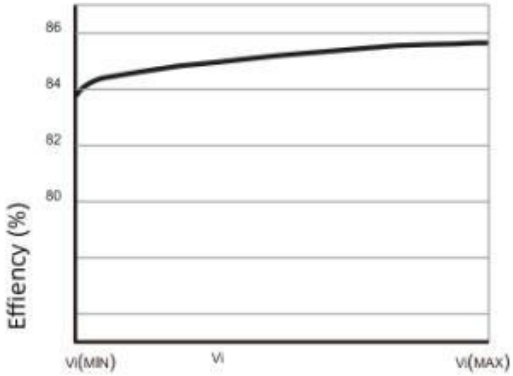
Environment temperature (℃)

Error envelope graph



Load(%) (Input Voltage=Vin)

Efficiency/load graph

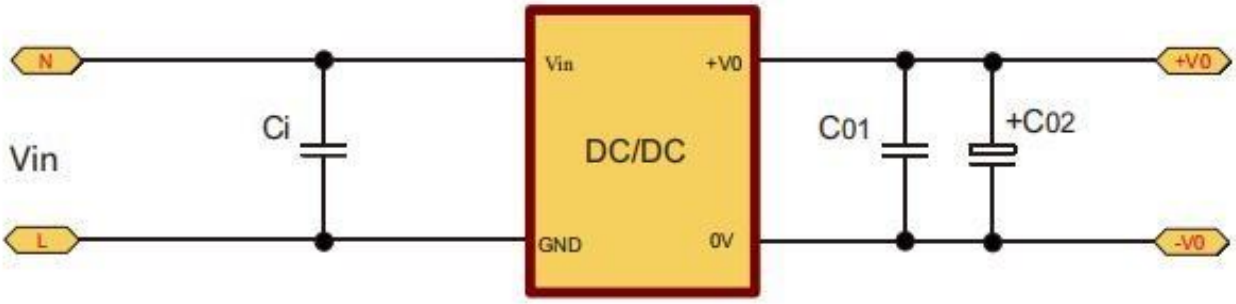


Load(%) (Input Voltage=Vin)

Efficiency/Input voltage graph

Typical Application

• Recommended Circuit



Typical Application

• Recommendation test

Filtering：In some circuits sensitive to noise and ripple, a filter capacitor can be externally connected to the input and output terminals of DC/DC to reduce ripple's impact on the system, but the value of the filter capacitance should be appropriate. If the capacitor is too large, it may cause startup problems. For each output line, under the condition of ensuring safe and reliable operation, The maximum capacity of its filtering capacitance can be referred to the external capacitance table. In order to obtain very low ripple, an "LC" filtering network can be connected to the input and output end of DC/DC converter, so that the filtering effect will be better. At the same time, it should be noted that the value of inductance and the frequency of "LC" filtering network should be staggered from the frequency of DC/DC module power supply to avoid mutual interference.
For each output line, it is recommended to see the capacitive load value (Table 1) under safe and reliable working conditions.

Table of recommended capacitive load values (Table 1)

Input Voltage (Vin+)	Input Capacitor(Cin)	Output Voltage(Vout)	Output Capacitor Cout)
5V	1uF	3.3V	4.7uF
12V	4.7uF	9V	2.2uF
24V	1uF	15V	0.47uF

Explanatory matters

• Packing

This series module adopts shockproof and antistatic package {¡ Packaging.

• Transport

The modular package is allowed to be transported by any means of transport, which shall avoid direct rain or snow and mechanical damage.

• Store

Modules should be stored in a warehouse where the ambient temperature is -40 degrees ~ 125 degrees, the relative humidity is 10%~90%, and the surrounding environment is free from acid, alkaline and other harmful gases.

The above are the performance indicators of the product series listed in this manual. Some indicators of non-standard products may exceed the above requirements. In case of any inconsistency between the manual and the product specification documents, please refer to the specification documents.