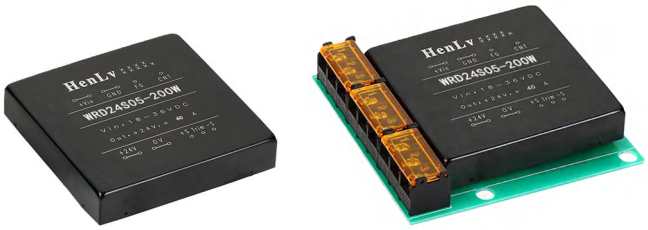
DC-DC Converter
WRD_S_(ZB)-200W Series

HenLv

Features

- Wide voltage input 2:1
- DIP、PCB board
- Operating temperature range：-40℃～+85℃
- Isolation voltage 1500VDC 0.5mA 1Minute
- Internal SMD design
- Metal shell
- Cooling natural
- It has good shielding anti-interference performance and electromagnetic compatibility, lightning protection, output over current, short circuit protection, overheat protection, self-recovery and other functions

Product Picture

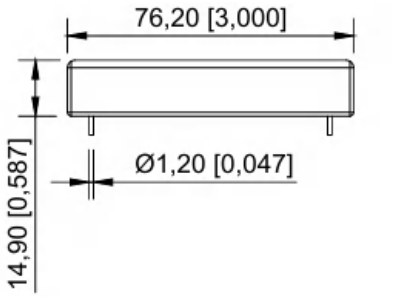


EMC-EN55032
EN55035
LVD-EN62368

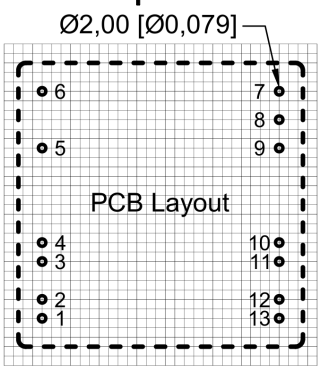
Dimensions

WRD_S_-200W Series Dimensions

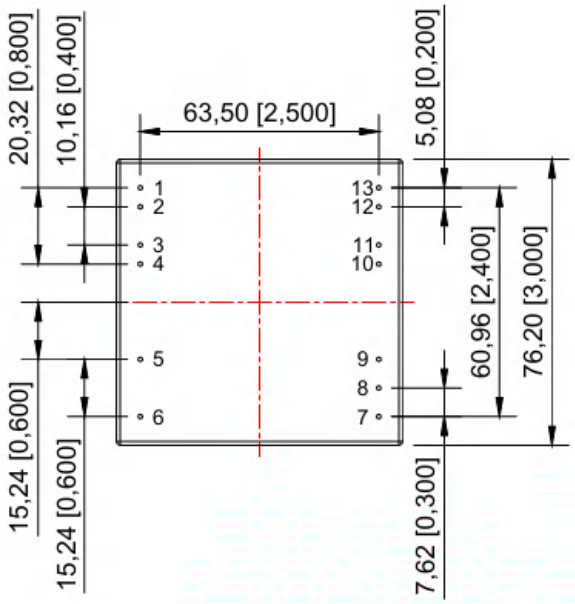
Front View



Top View



Note: The grid distance:2.54*2.54mm

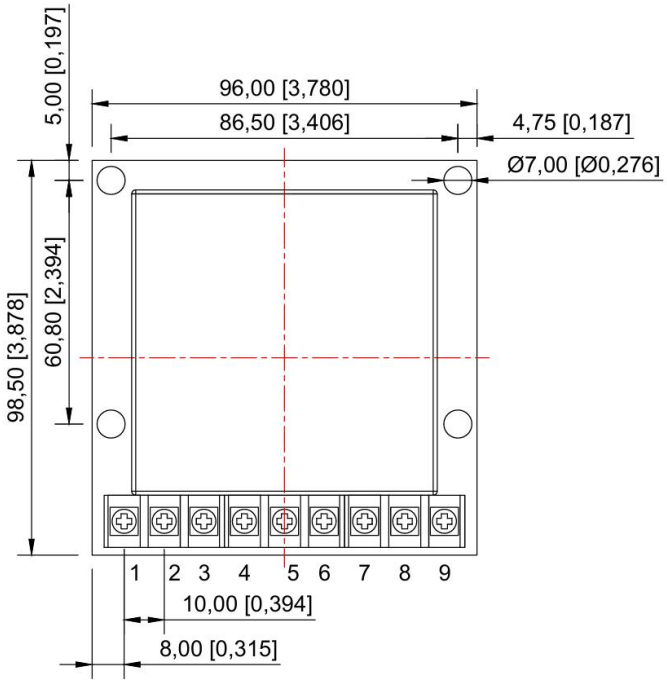


Bottom View

Pin mode	
Pin	Function
1,2	Vin
3,4	GND
5	FG
6	CNT
7	-S
8	TRM
9	+S
10,11	0V
12,13	+XXVDC

Note:
Size unit: mm[inch] Pin section tolerance: ±0.1[±0.004]
Unmarked tolerance: ±0.25[±0.01] The device layout is for reference only.

WRD_S_ZB-200W Series Dimensions



Pin mode	
Pin	Function
1	+Vin
2	GND
3	FG
4	CNT
5	-S
6	TRIM
7	+S
8	0V
9	+XXVDC

Note:
Size unit: mm[inch]
Pin section tolerance: ±0.1[±0.004]
Unmarked tolerance: ±0.25[±0.01]
The device layout is for reference only.

Application

Railway communication, display, monitoring equipment, petrochemical, industrial control, remote DC power supply system, switching system and other communication equipment.

Selection Guide

Model	Input(VDC)	Output (Vo±2%)	Current (mA)	Efficiency (%)	Isolation (VDC)	Weight (g±0.5)	Certification
WRD__S05-200W	12(9-18) 24(18-36) 48(36-72) 110(70-150)	5	40000	⩾85	1500		
WRD__S12-200W		12	16667	⩾88	1500		
WRD__S15-200W		15	13333	⩾88	1500		
WRD__S18-200W		18	11111	⩾88	1500		
WRD__S24-200W		24	8333	⩾88	1500		
WRD__S28-200W		28	7143	⩾88	1500		
WRD__S36-200W		36	5556	⩾87	1500		
WRD__S48-200W		48	4167	⩾87	1500		
WRD__S05ZB-200W		5	40000	⩾85	1500		
WRD__S12ZB-200W		12	16667	⩾88	1500		
WRD__S15ZB-200W		15	13333	⩾88	1500		
WRD__S18ZB-200W		18	11111	⩾88	1500		
WRD__S24ZB-200W		24	8333	⩾88	1500		
WRD__S28ZB-200W		28	7143	⩾88	1500		
WRD__S36ZB-200W		36	5556	⩾87	1500		
WRD__S48ZB-200W		48	4167	⩾87	1500		

Note: The company for customers to customize any input and output module power supply, if you have special needs, please call our company, unless otherwise specified, input =Vi, the characteristics of the module power supply should meet the requirements of Table 1, and applicable to the full temperature range (-40℃≤Tc≤85℃)

Electrical Specifications

Specifications	Symbol	Conditions Vi ,-40℃≤Tc≤85 (Unless otherwise specified)	Min	Max	Unit
Output Voltage	Vo	Full Load	Vo-2%	Vo+2%	V
Output Current	Iomax	—	—	P(Power)/ U(Output voltage)	A
Output Ripple Voltage	Vp-p	Full Load，Vi，BW=20MHz，Normal Temperature	100	240	mV
Output Noise Voltage	Vp-p	Full Load，Vi，BW=20MHz，Normal Temperature	150	480	mV
Voltage Regulation	Sv	Vimin、Vi、Vimax，Full Load	—	＜2%	%
Load Adjustment	Si	Vi，Io=(10%~100%)Lomax	—	＜1%	%
Efficiency	η	Vi，Full Load，Normal Temperature	85	—	%
Insulation Resistance	Rl	Input-output, Insulation Voltage 500VDC	1000	—	MΩ

General Specifications

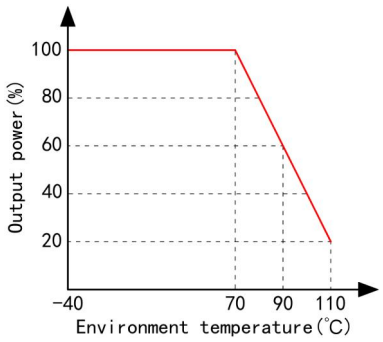
EMC Specifications	Magnetic Field Sensitivity Test	GB-4943
	Electrostatic Discharge Sensitivity Test	GB-4943
	Radiation Sensitivity Test	GB-4943
	Conduction Sensitivity Test	GB-4943
Temperature Drift	≤0.02%/℃	
Storage Temperature	-40℃~125℃	
Input Frequency	270KHz~400KHz	
Humidity	10%~90%RH	
MTBF	≤0.02%/℃	

Mechanical Specifications

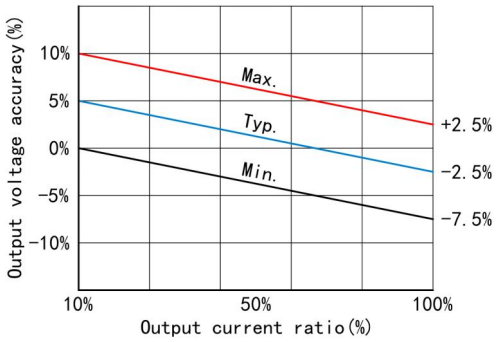
Size	76.20 x 76.20 x 14.90 mm，ZB：96.00 x 98.5 mm

Typical Specifications Curves

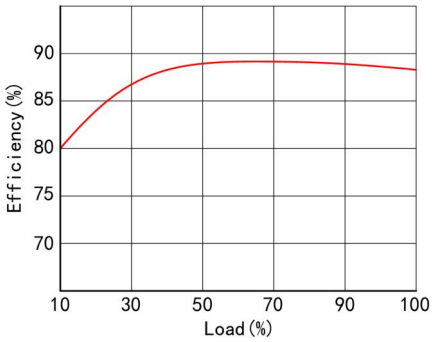
Temperature Chart



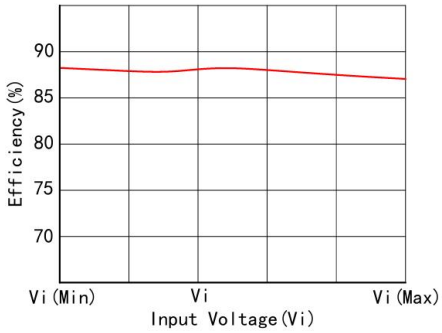
Error Envelope Graph



Efficiency/Load Graph

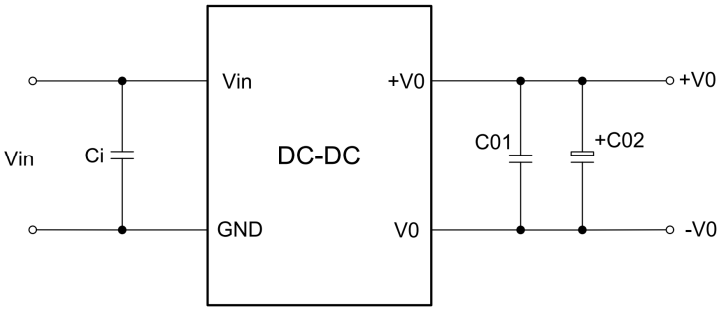


Efficiency/Input Voltage Graph



Typical Application

Design Reference



Recommendation Test

Filter: In some circuits that are sensitive to noise and ripple, an external filter capacitor can be connected to the DC/DC input and output terminals to reduce the impact of ripple on the system, but the value of the filter capacitor should be appropriate, if the capacitor is too large, it is likely to cause startup problems, for each output, under the condition of ensuring safe and reliable operation, the maximum capacitance of the filter capacitor can be referred to the external capacitance table. In order to obtain very low ripple, an "LC" filter network can be connected to the input and output end of the DC/DC converter, so that the filtering effect will be better, and it should be noted that the size of the inductance value and the frequency of the "LC" filter network should be staggered from the frequency of the DC/DC module power supply to avoid mutual interference. For each output, under safe and reliable working conditions, the recommended capacitive load value is shown in (Table 1).

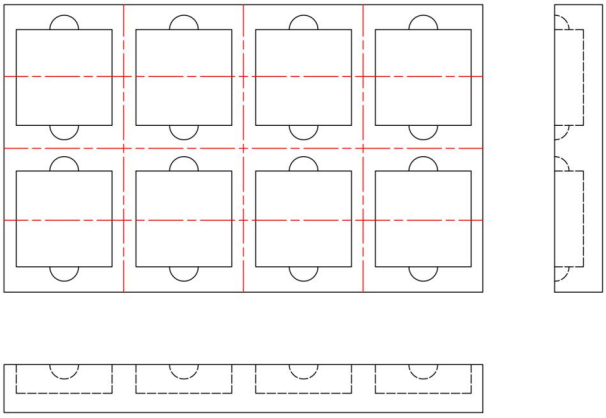
Single Input	Cout	Dual Vout	Cout
5-12VDC	22-68uF	±5-±12VDC	4.7-22uF
24-48VDC	10-47uF	±24-±48VDC	4.7-10uF

Recommended output max capacitive load value table (Table 1)

Precautions

Package

This series of modules are packed in shockproof and anti-static foam.



Transport

The package containing the module is allowed to be transported by any means of transport, which should avoid direct rain and snow and mechanical damage.

Storage

The module should be stored in a warehouse where the ambient temperature is -40 degrees ~ 125 degrees, the relative humidity is 20%~95%, and the surrounding environment is free from acidic, alkaline and other harmful gases.

Note: 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, so if there is any inconsistency between the manual and the product specification documents, please refer to the specification documents. If you have special needs, please contact us directly.