B

300V~25KV
3W~6W
ISOLATION OUTPUT / INPUT BIPOLARITY

wisman®
High voltage power supply
威思曼高压电源

ISO9001:2015

APPLICATION SPECIFIC

- ***Micro, Light module with Input and Output Proportional***
- ***Low Noise***
- ***High Reliability***
- ***Input and Output Isolation(6KV and below)***
- ***Detachable Input Terminal block***

INTRODUCTION

B series module is a small bipolar input/output proportional high-voltage power supply module, which is mainly used in PMT, MCP, nuclear instruments, or in occasions where the load regulation rate is not demanding. The primary side ground and the secondary side ground of the module less than or equal to 6 KV are isolated, which is just for floating applications. Customers can change the polarity of the B series module power supply by changing the wiring according to their needs. The voltage range is from 300V to 25KV, and the power is from 3W and 6W. B series is ideal for OEMs.

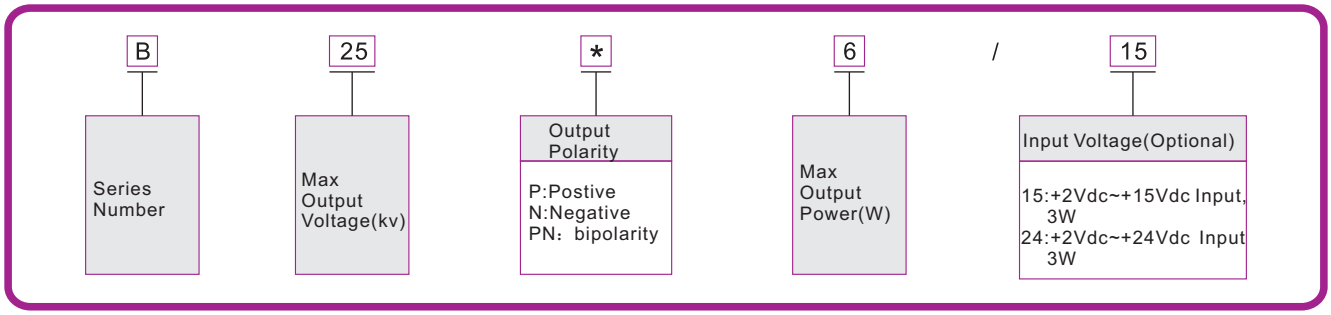
TYPICAL APPLICATION

Electrostatic chuck,PMT,MCP,Nuclear instrument,Electron beam,Ion beam,Mass spectrometer,Electron microscope, Avalanchephotodiode,Photomultiplier tube,Piezoelectric crystal device,Spectrum,Continuous ion beam, Electrophoresis,Printer,Flammability test, Capacitor charging.

SELECTION TABLE

kV	Output Voltage	mA	P(W)	Model	Mini load	Ripple(%p-p)	Shell	Isolation Voltage	kV	Output Voltage	mA	P(W)	Model	Mini load	Ripple(%p-p)	Shell	Isolation Voltage
0.3	0.02~0.3	10	3	B0.3PN3	30K	0.12	C1	2kV	3	0.2~3	1	3	B3PN3	3M	0.12	C2	3.5kV
	0.03~0.3	20	6	B0.3PN6	15K	0.15	C2	2kV		0.2 ~3	2	6	B3PN6	1.5M	0.2	C2	3.5kV
0.6	0.04~0.6	5	3	B0.6PN3	120K	0.12	C1	2kV	6	0.4~6	0.5	3	B6PN3	12M	0.15	C3	7kV
	0.05~0.6	10	6	B0.6PN6	60K	0.15	C2	2kV		0.3 ~ 6	1	6	B6PN6	6M	0.2	C3	7kV
1.1	0.1~1.1	2.75	3	B1.1PN3	400K	0.12	C1	2kV	10	0.8~10	0.25	3	B10*3	40M	0.05	C4	—
	0.1~1.1	5.5	6	B1.1PN6	200K	0.15	C2	2kV		0.5 ~10	0.5	6	B10*6	20M	0.05	C4	—
1.5	0.1~1.5	2	3	B1.5PN3	750K	0.12	C1	2kV	15	1.2~15	0.2	3	B15*3	75M	0.05	C5	—
	0.1 ~ 1.5	4	6	B1.5PN6	375K	0.15	C2	2kV		0.8 ~15	0.4	6	B15*6	37M	0.05	C5	—
2	0.2~2	1.5	3	B2PN3	1.3M	0.12	C2	2.5kV	25	2~25	0.12	3	B25*3	250M	0.05	C6	—
	0.2~2	3	6	B2PN6	0.65M	0.2	C2	2.5kV		1.4 ~25	0.24	6	B25*6	125M	0.05	C6	—

SELECTION EXAMPLE



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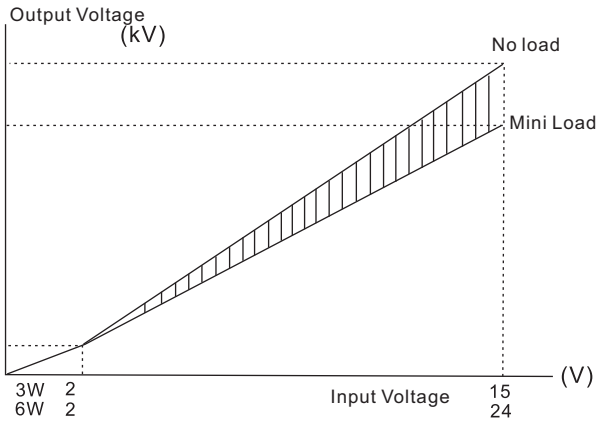
SPECIFICATION

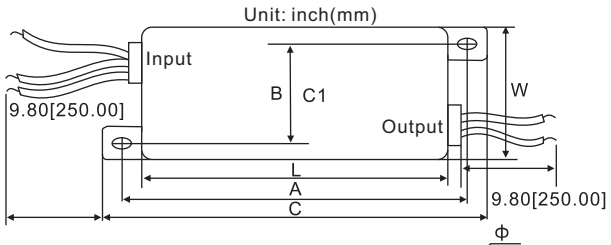
PARAMETER	DESCRIPTION
Input current/voltage	3W:+2Vdc~+15Vdc,the maximum output current is 300mA;6W:+2Vdc~+24Vdc the maximum output is 360mA
Output	0.3kv~25kv Optional, 3w~6W Optional
Output Polarity	PN type: Positive and Negative bipolarity; PN type: fixed polarity
Voltage regulation	3W:8% for load change of 50%,6W:12%,for load change of 50%
Operation temperature	-10℃~60℃
Storage temperature	-20℃~60℃
Protection	Arc protection and short circuit protection
Humility	-30%~85% RH, non-condensing
Input pin	25cm(0.8inches)cable(housingC1)3pins interface(2Kv~10kv)8pins interface(15kv~25kv)
Output pin	25cm(0.8 inches)two HV cables(≤6KV）;50cm(1.6inches) one HV cable(10kv~25kv)

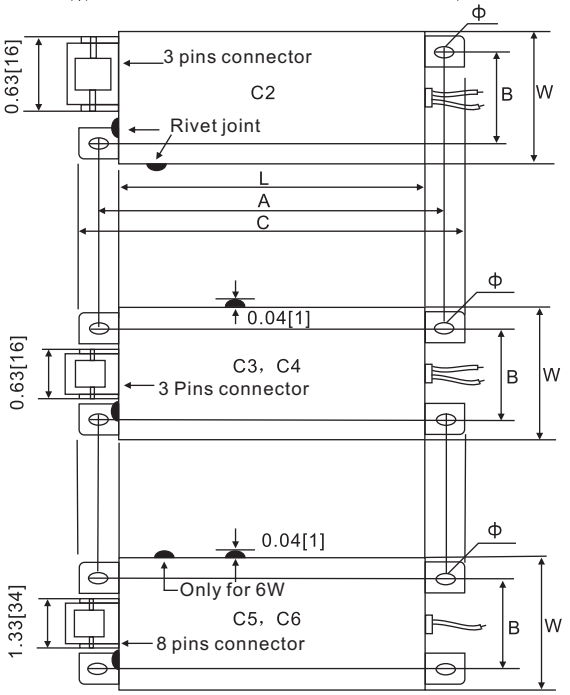
B OUTPUT/INPUT PROPORTION



B DIMENSION

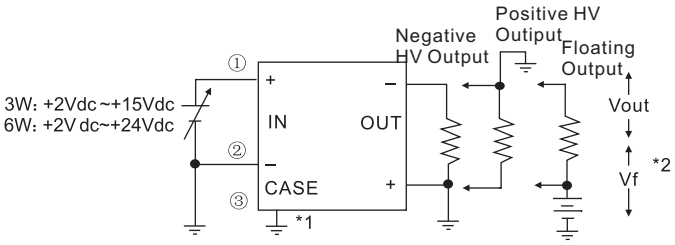
Housing	A	B	C	W	L	K	ϕ
C1	2.63[67]	0.63[16]	2.95[75]	1.02[26]	2.36[60]	0.94[24]	0.14×0.2 [3.5×5]
C2	3.27[83]	0.79[20]	3.58[91]	1.18[30]	3.01[76.5]	1.06[27]	
C3	3.86[98]	0.98[25]	4.17[106]	1.38[35]	3.58[91]	1.22[31]	
C4	4.65[118]	1.57[40]	4.96[126]	1.97[50]	4.33[110]	1.22[31]	
C5	4.72[120]	1.97[50]	5.12[130]	2.76[70]	4.33[110]	1.26[32]	0.18×0.24 [4.5×6]
C6	5.12[130]	2.76[70]	5.51[140]	3.94[100]	4.72[120]	1.38[35]	



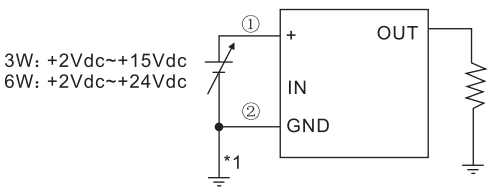


B WIRING DIAGRAM

6kv and below module(① ② reverse connection,reverse polarity)



10KV~25kv module



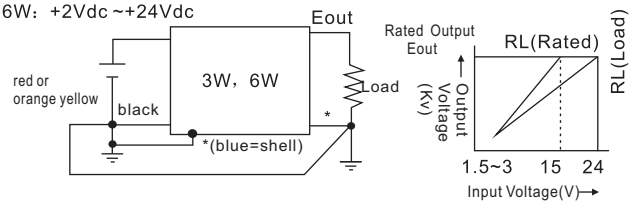
*1 Housing and Ground must connect to the ground correctly
*2 Vount+Vf should less than Isolation Voltage

APPLICATION SPECIFIC

REGULAR WORK

6Kv and below modules' shell(blue),Input ground(black) and the output ground are not connected internally, and must be connected to the ground.
10kv and above modules' shell is connected with input ground. For safe, the input ground must be connected to the ground.
10Kv and above modules's connection is the circuit diagram that is removed the * part . If you use the floating function, pls refer to the HV floating operation instructions.

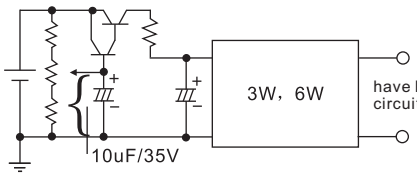
3W：+2Vdc ~+15Vdc
6W：+2Vdc ~+24Vdc



1. Ensure the module connected as above circuit diagram before running.
2. Using the programmed input voltage to control HV output
3. 6kv and below module with 3W has no output discharge resistor, when connect the capacitive load, pls add discharge resistor.
4. Turn off the input power after using

HOW TO REALIZE EXPECTED OUTPUT

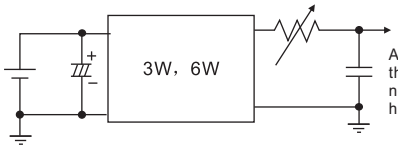
When need a high output stability



have little noise when using this circuit on the power supply side

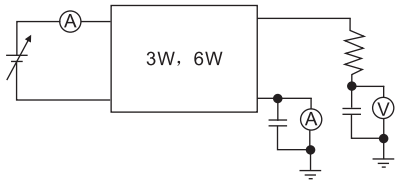
can use zener diode

When need low ripple



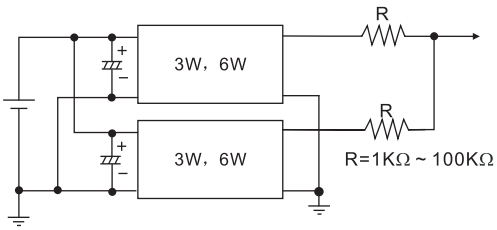
Adding a capacitor (0.01~0.1uF) at the output end can lower the output noise(ensure the capacitor has enough withstand voltage)

HOW TO MEASURE INPUT/OUTPUT VOLTAGE AND CURRENT



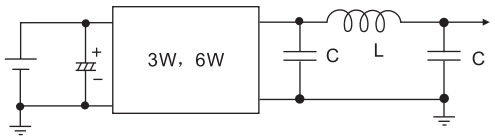
Observe by current and voltmeter

PARALLEL OPERATION



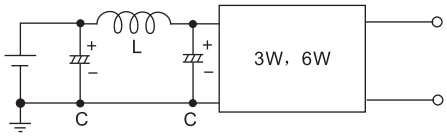
This connection circuit is only suitable for specific modules, avoid using on other modules

HOW TO REDUCE THE OUTPUT NOISE AND RIPPLE



L=1mH~5mH
C=0.01~0.1uF(Ensure the capacitor has enough withstand voltage)

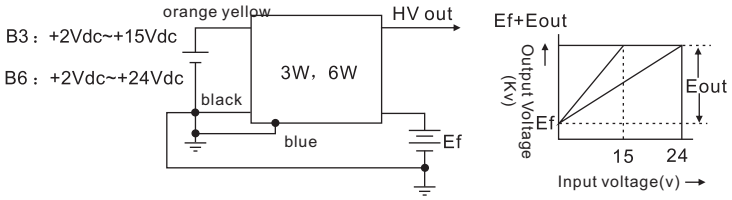
HOW TO REDUCE THE INFLUENCE OF SUPPRESSING INPUT RIPPLE ON POWER SUPPLY



This point to the GND
L≥100uH
C≥100uF/35V

FLOATING WORK

6KV and below modules ,the isolation input and output can work in the output floating state.
6Kv and below modules' shell(blue),Input ground(black) and the output ground are not connected internally,and must be connected to the ground.



1. Ensure the module connected as above circuit diagram before running.
2. Using the programmed input voltage to control HV output
3. In the floating state, the output can produce the common mode noise, and the impedance of Ef will be reduced
4. Turn off the input power after using

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