- ONE POWER SUPPLY CAN BE USED AS THREE SETS, OPTICAL FIBER COMMUNICATION OPTIONAL
- 8kW's IN SINGLE 6U (10.5'')CHASSIS
- MODEL FROM 2kV to 140kV
- CONSTANT VOLTAGE AND CURRENT CROSSOVER CONTROL
- ARCING AND SHORT CIRCUIT PROTECTION
- ETHERNET, RS-232 DIGITAL INTERFACE
- OEM CUSTOMIZATION AVAILABLE

INTRODUCTION

Wisman's SDF Series are available in positive or negative polarities in 16 different models with outputs ranging from 2kV to 140kV.A full featured front panel allows easy local control, while an extensive analog interface provides comprehensive remote capability. The standard Ethernet and RS-232 digital interfaces can integrate the SDF into your system design easily. SDF's robust IGBT inverter is inherently fault tolerant and is ideal for demanding applications like semiconductor processing and vacuum deposition. Many operational features can be configured by the user to suit their particular requirements.
One SDF can be used as three, such as SDF140PN8 can be used as SDF70P4 SDF70N4 and SDF140PN8.SDF has the control unit, adopting Wisman's unique synchronous technique, realizing positive and negative high voltage output synchronization.

TYPICAL APPLICATION

Accelerator, Capacitor charging, Ion beam Implantation, Semiconductor Processing, Electron Beam Welding, High Power RFTRANSMITTERS, Electrostatic Precipitators, X-ray Systems, Science experiments, Industrial Application

SDF SELECTION TABLE

kV	mA	P(kW)	MODEL	kV	mA	P(kW)	MODEL
2	4000	8	SDF2*8	30	267	8	SDF30*8
4	2000	8	SDF4*8	40	200	8	SDF40*8
6	1333	8	SDF6*8	60	133	8	SDF60*8
8	1000	8	SDF8*8	70	114	8	SDF70*8
12	667	8	SDF12*8	80	100	8	SDF80PN8
16	500	8	SDF16*8	100	80	8	SDF100PN8
20	400	8	SDF20*8	120	67	8	SDF120PN8
24	333	8	SDF24*8	140	57	8	SDF140PN8

SDF SELECTION EXAMPLE

SDF	140	*	8
Series Number	Maximum output voltage (Kv)	Output polarity P:Positive N:Negative PN:Bipolarity	Maximum output power (KW)

OPTION			
3PH220	180~264Vac,Three Phase	BFP	Blank Front Panel
AX	Arc Trip Count	CP	Constant Power
AQX	Arc Quench Time	LX	Unshield Cable Optional
ARX	**Arc Re-Ramp Time**	HST	High Stability
AOL	Adjustable Overload Trip	SSX	Slow Start Ramp Times
APT	Adjustable Power Trip	OPT	Optical fiber control

SPECIFICATION

PARAMETER	DESCRIBE
Output Voltage	Standard: 180~264Vac, 50/60 HZ, single phase Optional:180~264Vac,50/60HZ, three phase(3PH220)
Input current	Standard: 180~264Vac, Single phase,76A,Maximum Optional:180~264Vac,three phase,34A,Maximum
Output Voltage	Output from 2kV to 140kV, 16 models in total
Stability	0.02% per hour after 1 hour's warm up
Ripple	0.1%p-p+1Vrms
Current/Voltage monitor	0~10Vdc =0~100% rated output
Voltage local programming	Internal potentiometer to set voltage from 0 to 100% rated output
Current local programming	Internal potentiometer to set current from 0 to 100% rated output
Voltage remote programming	External 0~10Vdc control sign can set voltage from 0 to 100% rated output
Current remote programming	0~+10Vac proportional from 0 to rated output current
Voltage load regulation	0.05%+500mv(no load to rated load)
Voltage line regulation	0.05%+500mv(Input voltage line change ±10%)
Current load regulation	0.05%±100uA(no load to rated load)
Current line regulation	0.05%(voltage line change ±10%)
Temperature coefficient	25ppm/℃, higher stability can be customized(HST:15 ppm/℃)
Operation temperature	0℃~+40℃
Storage temperature	-40℃~+85℃
Humidity	10%-90%, RH, non-condensing
Cooling	Forced air,inlet through side panel,outlet at rear panel
Metering	Digital voltage and current meters,accurate to within 1%
HV Output connection	3 meters hv cable can be released from the back panel
Inout and Output connerction	DB50,including control and monitor signal
Control unit dimension	1.73″ H x 19.00″ W x 19.00″ D(44mm x 482.5mm x482.5mm)。
HV unit dimension	10.5″ (6U)H X 19″ W X 24″ D (266mm x 482.5mm x 610mm)。
Weight	40kg。

RS-232 DIGITAL INTERFACE (A、B、C) D

JB3/J5	SIGNAL
1	N/C
2	TXD/Transmit data
3	RXD/Receive data
4	N/C
5	Digital Ground
6	N/C
7	N/C
8	N/C
9	N/C

ETHERNET DIGITAL INTERFACE(A、B、C) D

JB2/J6	SIGNAL	
1	RX+	Receive data+
2	RX-	Receive data-
3	TX+	Transmit data+
4	N/C	N/C
5	N/C	N/C
6	TX-	Transmit data-
7	N/C	N/C
8	N/C	N/C

The power supply consists of three parts: A,B and C.
A is for control unit. The customer can realize the high-voltage via remote computer control;
B is the positive high voltage power supply unit;
C is the negative high voltage power supply unit

SDF ANALOG INTERFACE(B,C)

JB1	Signal	parameters
1	Power Supply Ground	Power Supply Ground
2	Reset/HV Enable	GND= Reset/HV OFF , FLOATING = HV ON
3	External interlock	+24Vdc at open,＜25mA at closed
4	External interlock return	External interlock for return
5	Current monitor	0 to 10Vdc=0 to 100% rated voltage, Zout=1kΩ,1%
6	Voltage monitor	0 to 10Vdc=0 to 100% rated voltage, Zout=1kΩ,1%
7	+10Vdc Reference	+10Vdc@1mA
8	Remote Current Program Input	0 to 10Vdc = 0 to 100% rated voltage, Zout =10MΩ
9	Local Current Program Output	0~10Vdc=0~100% rated voltage,front panel potentiometer
10	Remote Voltage Program Input	0 to 10Vdc = 0 to 100% rated voltage, Zout =10MΩ
11	Local Voltage Program Output	0~10Vdc=0~100% rated voltage, front panel potentiometer
12	Power Supply Ground	Power Supply Ground
13	Remote Power On Return	Return for Remote Power On
14	Remote HV Off	+15Vdc at open, local, connect with 15pin (to the ground),HV Off
15	Remote HV off/HV ON common	Remote HV off/HV ON common
16	Remote HV On	+15Vdc at open, local, connect with 15pin (to the ground),HV off
17	Remote HV OFF Indicator	Low=HV OFF
18	Remote HV ON Indicator	Low=HV ON
19	Power Supply Ground	Power Supply Ground
20	+24Vdc Output	+24Vdc@100mA,Maximum
21	Voltage mode indicator	Open Collector, Low = Voltage mode
22	Current mode indicator	Open Collector, Low = Current mode
23	Power mode indicator	Open Collector, Low = Power mode(Optional)
24	Interlock closed Indicator	Open Collector, Low = Internal closed
25	N/C	N/C
26	N/C	N/C
27	N/C	N/C
28	N/C	N/C
29	Over Power Fault	Open Collector, Low = Over Power Fault
30	Over Voltage Fault	Open Collector, Low = Over Voltage Fault
31	Over Current Fault	Open Collector, Low = Over Current Fault
32	System fault	Open Collector, Low = System Fault
33	RGLT Error Fault	Open Collector, Low = RGLT Error Fault
34	Arc Fault	Open Collector, Low = Arc Fault
35	Over Temp Fault	Open Collector, Low = Over Temp Fault
36	AC Fault	Open Collector, Low = Ac Fault
37	N/C	N/C
38	N/C	N/C
39	N/C	N/C
40	Alarm indicating collector pull-up voltage	connect with pin44 or 45
41	N/C	N/C
42	N/C	N/C
43	N/C	N/C
44	+5Vdc output	+5Vdc@100mA,Maximum
45	+15Vdc output	+15Vdc@100mA,Maximum
46	-15Vdc output	-15Vdc@10mA,Maximum
47	N/C	N/C
48	N/C	N/C
49	N/C	N/C
50	Power supply Ground	Power supply Ground

HV OUTPUT(B,C)

J1	HV OUTPUT

FIBER INTERFACE(B,C)Ⓓ

JB4	PARAMETER	
1	TX	Transmit data
2	RX	Receive data

FIBER INTERFACE(A)Ⓓ

J3	#17 PACK PARAMETER	
1	TX	Transmit data
2	RX	Receive data

J4	#25 PACK PARAMETER	
1	TX	Transmit data
2	RX	Receive data

INHIBIT(A) Ⓓ

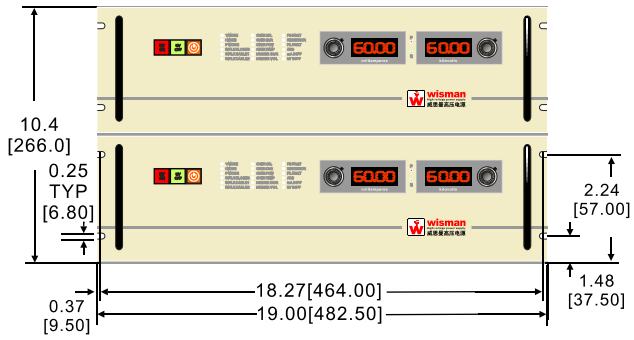
J2	SIGNAL	
6	INHIBIT	REMOTE ENABLE OUTPUT
7	GND	GND
OTHERS	N/C	N/C

F RACK MOUNT

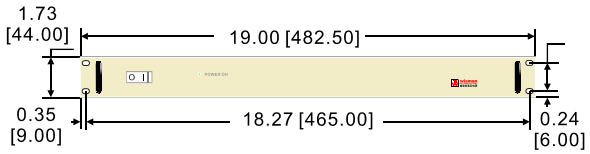
DIMENSION

DIMENSIONS:in[mm]

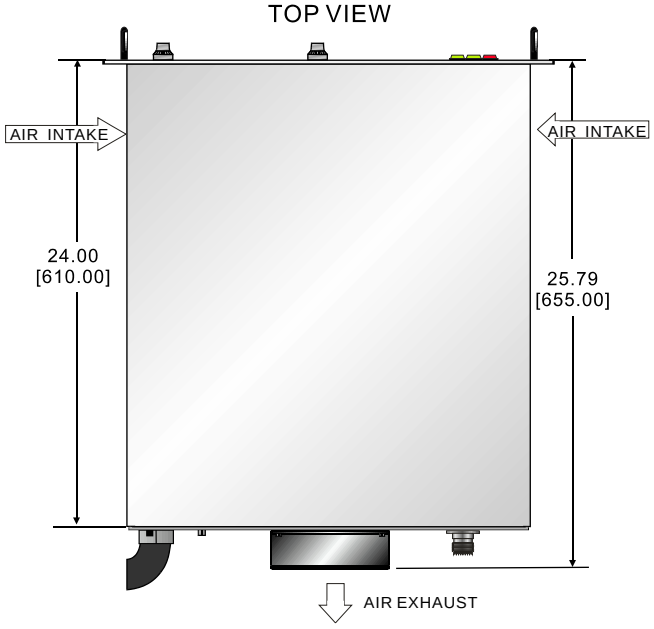
FRONT VIEW



FRONT VIEW



TOP VIEW



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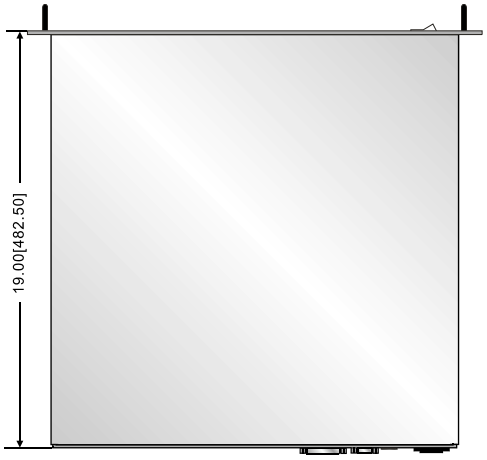
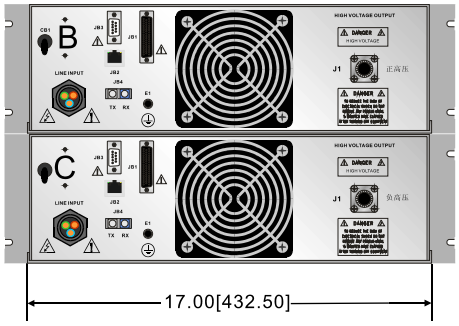


BACK VIEW

BACK VIEW



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