



- 6kW's IN SINGLE 6U (10.5") CHASSIS
- MODELS FROM ±1kV to ±150kV
- POLARITY REVERSIBLE
- CURRENT AND VOLTAGE PROGRAMMING
- ARC AND SHORT CIRCUIT PROTECTED
- STANDARD ET INTERFACE, RS-232 CONTROL
- OEM CUSTOMIZATION AVAILABLE

## INTRODUCTION

Wisman's DR series of 6kW polarity reversible high voltage power supplies are available in positive or negative polarities in 19 different models with outputs ranging from ±1kV to ±150kV. DR series' front panel can realize local control easily, while the analog interface of the back panel can realize remote control. The standard Ethernet and digital interfaces RS-232 can be designed to integrate the DR series into yours system.

Wisman's DR series adopts IGBT inverter, which is suitable for all kinds of harsh applications like semiconductor processing and vacuum deposition. Most operational functions of Wisman's DR series can be configured by the user to meet their particular requirements.

DR Series power supply adopts wisman's unique external polarity reversible design, polarity reversible by changing external wiring.

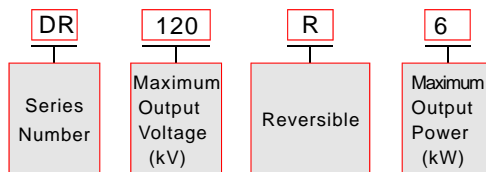
## TYPICAL APPLICATIONS

Capacitor Charging, Electronic Component Aging, Insulation Test, High Voltage Testing, Electron Beam /Ion Beam, Focus Ion Beam, Ion Impouring, Lithography Technology, Electrostatics Applications, Electrostatic Deflexion, Electrospinning, Electro-phoresis Capillary Electrophoresis, Microchip Electrophoresis, Accelerator, DNA sequencing, Piezoelectricity material Testing, Science, Laboratory Applications, Industrial Applications.

## DR SELECTION TABLE

kV	mA	P(kW)	MODEL	kV	mA	P(kW)	MODEL
1	6000	6	DR1R6	30	200	6	DR30R6
2	3000	6	DR2R6	40	150	6	DR40R6
3	2000	6	DR3R6	50	120	6	DR50R6
4	1500	6	DR4R6	60	100	6	DR60R6
6	1000	6	DR6R6	70	86	6	DR70R6
8	750	6	DR8R6	80	75	6	DR80R6
10	600	6	DR10R6	100	60	6	DR100R6
12	500	6	DR12R6	120	50	6	DR120R6
15	400	6	DR15R6	150	34	5	DR150R5
20	300	6	DR20R6				

## DR SELECTION EXAMPLE



OPTION			
3PH220	180~264Vac, three Phase	BFP	Blank Front Panel
AX	Arc Trip Count	CP	Constant Power Control
AQX	Arc Quench Time	LX	High Voltage Cable Length
ARX	Arc Re-Ramp Time	HST	High Stability
AOL	Adjustable Overload Trip	SSX	Slow Start Ramp Times
APT	Adjustable Power Trip		



## DR SPECIFICATIONS

ISO9001:2015

Page 2 of 3

RACK MOUNT

PARAMETER	DESCRIBE
Input Voltage	Standard: 360-528Vac 50/60Hz, three phase. Optional: 180-264Vac, 50/60Hz, three phase.(3PH220)
Input Current	Standard: 360-528Vac, three phase; 15 amps, maximum. Optional: 180-264Vac, three phase; 25 amps, maximum.
Output Voltage	19 models from ±1kV to ±150kV. Each model is available with positive or negative outputs.
Stability	0.02% hr. after 1 hour warm-up.
Ripple	0.1% p-p +1Vrms. Lower ripple available via special order
Voltage/Current Monitor	0~+10Vdc corresponds to 0 to maximum output.
Voltage Local Programming	Internal potentiometer to set voltage from 0 to maximum output voltage.
Current Local Programming	Internal potentiometer to set current from 0 to maximum output current.
Voltage Remote Programming	0~+10Vdc proportional from 0 to maximum output voltage.
Current Remote Programming	0~+10Vdc proportional from 0 to maximum output current.
Voltage Load Regulation	0.05%+500mV ( no load to full load change).
Voltage Line Regulation	0.05%+500mV (input voltage line change±10%).
Current Load Regulation	0.05%±100uA ( no load to full load change).
Current Line Regulation	0.05% (input voltage line change±10%).
Temperature Coefficient:	25ppm/°C. Higher stability (15ppm/°C) available on special order via the HS option.
Operating Temperature	0°C ~ +40°C.
Storage Temperature	-40°C ~ +85°C.
Humidity	10% to 90% RH, non-condensing.
Cooling	Forced air; inlet through side panels, outlet at rear panel.
Metering	Digital voltage and current meters, accurate to within 1%.
HV Output Connector	A detachable shielded HV cable is provided.
Input/Output Connector	DB50, contain control and monitor signal.
Dimensions	1kV to 120kV: 10.5" (6U)H X 19" W X 21" D (266mm x 482.5mm x 533mm) 150kV: 10.5" (6U)H X 19" W X 23" D (266mm x 482.5mm x 584mm)
Weight	1kV to 50kV: <100 pounds (45.36kg) 60kV to 120kV: <140 pounds (63.50kg) 150kV: <150 pounds (68.03kg) Individual kV models may vary.

## ETHERNET DIGITAL INTERFACE <sup>D</sup>

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



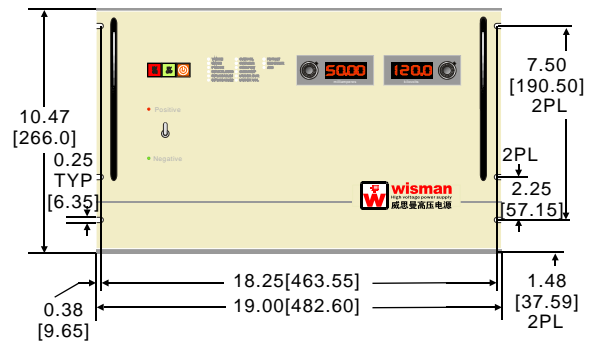
**ANALOG INTERFACE CONNCTION**

JB1	SIGNAL	PARAMETERS
1	Power Supply Common	Power Supply Ground
2	Reset/HV Inhibit	Normally open, Low = Reset/Inhibit
3	External Interlock	+24Vdc @ open, <25mA @ closed
4	External Interlock Return	Return for External Interlock
5	mA Test Point	0~10Vdc=0~100% rated output, Zout=1kΩ, 1%
6	kV Test Point	0~10Vdc=0~100% rated output, Zout=1kΩ, 1%
7	+10Vdc Reference Output	+10Vdc @ 1mA
8	mA Program Input	0~10Vdc = 0~100% rated output, Zin=10MΩ
9	Local mA Program Output	0~10Vdc = 0~100% rated output, front panel pot
10	kV Program Input	0~10Vdc = 0~100% rated output, Zin=10MΩ
11	Local kV Program Output	0~10Vdc = 0~100% rated output, front panel pot
12	Remote Power On Output	+24Vdc @ open, <25mA @ closed
13	Remote Power On Return	Return for Remote Power On
14	Remote HV Off	+24Vdc @ open, <25mA @ closed, connect to pin15 for front panel operation
15	Remote HV Off/On Common	HV On/Off Common
16	Remote HV On	+24Vdc @ open, <25mA @ closed, connect to pin15 for front panel operation
17	HV Off Indicator	Low = HV Off
18	HV On Indicator	Low = HV On
19	Power Supply Common	Supply Ground
20	+24Vdc Output	+24Vdc @ 100mA, maximum
21	Voltage Mode Status	Open Collector, Low = Active
22	Current Mode Status	Open Collector, Low = Active
23	Power Mode Status	Open Collector, Low = Active(Option)
24	Interlock Closed Status	Open Collector, Low = Active
25	Spare	Spare
26	Spare	Spare
27	Spare	Spare
28	Spare	Spare
29	Over Power Fault	Open Collector, Low = Active
30	Over Voltage Fault	Open Collector, Low = Active
31	Over Current Fault	Open Collector, Low = Active
32	System Fault	Open Collector, Low = Active
33	RGLT Error Fault	Open Collector, Low = Active
34	Arc	Open Collector, Low = Active
35	Over Temp Fault	Open Collector, Low = Active
36	AC Fault	Open Collector, Low = Active
37	Interlock	connect to pin19 for Interlock closed
38	Spare	Spare
39	Spare	Spare
40	Pull Voltage	Option connect to pin 44 or pin 45
41	Spare	Spare
42	Spare	Spare
43	Spare	Spare
44	+5Vdc Output	+5Vdc @ 100mA, maximum
45	+15Vdc Output	+15Vdc @ 100mA, maximum
46	-15Vdc Output	-15Vdc @ 10mA, maximum
47	RS232 Tx	RS232 Tx
48	RS232 Rx	RS232 Rx
49	RS232 GND	RS232 GND
50	Power Supply Common	Power Supply Ground

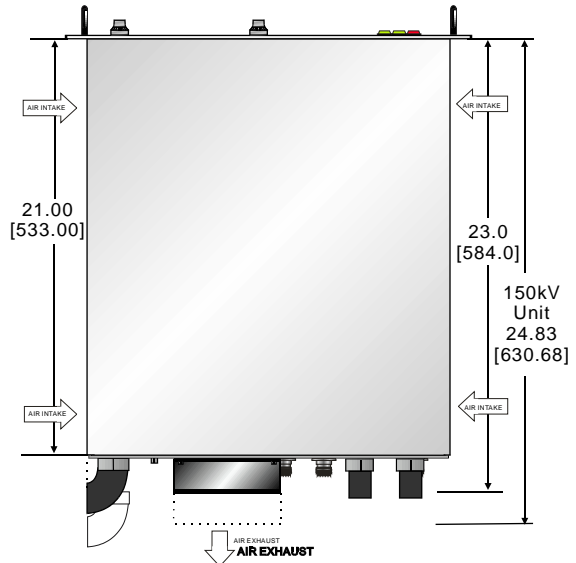
**DR DIMENSIONS**

DIMENSIONS: in.[mm]

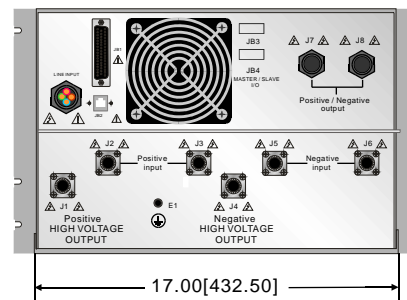
FRONT VIEW



TOP VIEW



BACK VIEW



**RACK MOUNT**