



- OUTPUT VOLTAGE FROM -30kV TO -60 kV
- ADJUSTABLE INTEGRATED FILAMENT SUPPLY
- OVER VOLTAGE, ARC& SHORT CIRCUIT PROTECTION
- VOLTAGE & CURRENT PROGRAMMING
- STANDARD ET, RS-232, RS-485 OPTIONAL
- LOCAL AND REMOTE CONTROL
- SAFETY INTERLOCK
- OEM CUSTOMIZATION AVAILABLE



D X-RAY GENERATOR

INTRODUCTION

The XRF series are dedicated high stability chassis type power supplies, with perfect protection system, features output voltage and current local and remote programming. The front panel has voltage and current monitor. The XRF is provided with safety interlock, short-circuit, arc, over temperature, over voltage and over current protection, adjustable wide range and more optional functions. XRF series can be internally and externally controlled and controlled by computer as well, providing standard RS-232 RS-485 and ET communication interface.

TYPICAL APPLICATIONS

X-ray tubes, X-ray Fluorescence Instrument, X-ray diffractometer, Medical Industrial, Science experiment.

XRF SELECTION TABLE

kV	mA	P(W)		kV	mA	P(W)	
30	20	600	XRF30N600	50	12	600	XRF50N600
	40	1200	XRF30N1200		24	1200	XRF50N1200
	50	1500	XRF30N1500		32	1600	XRF50N1600
	60	1800	XRF30N1800		40	2000	XRF50N2000
40	15	600	XRF40N600	60	10	600	XRF60N600
	30	1200	XRF40N1200		20	1200	XRF60N1200
	40	1600	XRF40N1600		30	1800	XRF60N1800
	50	2000	XRF40N2000		40	2000	XRF60N2000

XRF SELECTION EXAMPLE

XRF	60	N	2000	-	40	V10	D
Series Number	Maximum Output Voltage (kV)	Output polarity N: Negative	Maximum Output Power (W)		Maximum Output Current (mA)	Option Program and Monitor V10:+10Vdc V5:+5Vdc	Option D:TR/ET AB:RS485

XRF SPECIFICATIONS

PARAMETER	DESCRIBE
Input	220Vac ±10%
Output	-30~-60kV Maximum output Voltage option, 600~2000W power option
Stability	100ppm per hours after 1/2 hour warm-up
Temperature Coefficient	≤25ppm/°C
Ripple	0.1% p-p



Voltage Programming	Front panel: voltage are continuously adjustable from 0 to maximum voltage by internal potentiometers External remote: voltage are continuously adjustable from 0 to maximum voltage by 0 ~+10Vdc External voltage, Zin=10MΩ.
Current Programming	Front panel: current are continuously adjustable from 0 to maximum current by internal potentiometers External remote: current are continuously adjustable from 0 to maximum current by 0~+10Vdc External voltage, Zin=10MΩ.
Voltage/Current Monitor	0~ +10Vdc corresponds to 0 to maximum output, Zout=4.99kΩ, accuracy:±1%
Output Voltage Remote Programming	Voltage is continuously adjustable from 0 to maximum voltage by External potentiometers
Output Current Remote Programming	Current is continuously adjustable from 0 to maximum voltage by External potentiometers
Voltage Load Regulation	0.005%+500mV (no load to full load change)
Voltage Line Regulation	±0.005%+500mV (input voltage line change±10%)
Current Load Regulation	0.01%±100uA (no load to full load change)
Current Line Regulation	±0.005% (input voltage line change±10%)
Filament Supply	AC filament @5A
Operating Temperature	0°C~+50°C
Storage Temperature	-40°C~+85°C
Dimensions	3.46" H x 19.00" W x 19.00" D(88mm x 482.5mm x482.50mm)
Weight	14kg

XRF ANALOG INTERFACE

J2	SIGNAL	PARAMETER	J2	SIGNAL	PARAMETER
1	Ground	Signal ground	14	Remote HV OFF	+15Vdc at Open, Connect to HV OFF for Fp Operation
2	N/C	N/C	15	HV OFF Indicator	Low=OFF, High=ON
3	External Interlock	+15Vdc at Open, <15mA at Closed	16	Remote HV ON	+15Vdc, maximum current 10mA, HV ON
4	Ground	External interlock ground	17	Remote HV ON Monitor	Low =ON, High=OFF
5	Current Monitor	0~+10Vdc=0 to maximum rated output, Zout=4.99kΩ	18	Reset signal	Low=Reset
6	Voltage Monitor	0~+10Vdc=0 to maximum rated output, Zout=4.99kΩ	19	Voltage Mode	Low
7	+10Vdc Reference	+10Vdc reference voltage, 1mA @maximum	20	Current Mode	Low
8	Remote Current Input	0~+10Vdc=0 to maximum rated output, Zin=10MΩ	21	N/C	N/C
9	Local Current Output	Front panel current output	22	Remote PS Fault	0=Fault, +15Vdc, 0.1mA Max=No Fault
10	Remote Voltage Input	0~+10Vdc=0 to maximum rated output, Zin=10MΩ	23	15Vdc Input/Output	+15Vdc, 100mA @ maximum
11	Local Voltage Output	Front panel voltage output	24	Failure monitor	0~+10Vdc= 0~10A, Zout=10MΩ
12	N/C	N/C	25	Ground	Chassis ground
13	N/C				

RS-232/RS-485 DIGITAL INTERFACE ^D (9 Pin Female)

J3	SIGNAL	
1	N/C	6 N/C
2	TXD/Transmit Data	7 RS-485B Option
3	RXD/Receive Data	8 N/C
4	N/C	9 RS-485A (Option)
5	SGND	

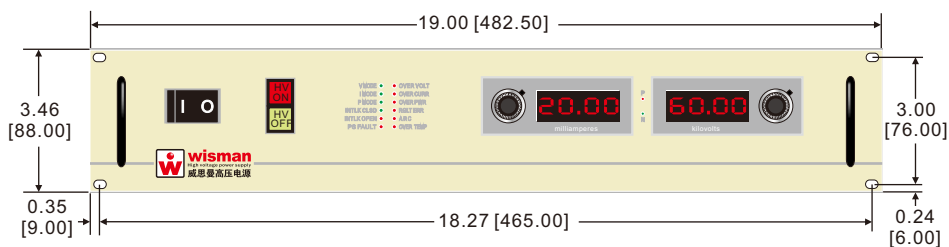
ET DIGITAL INTERFACE ^D

J4	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

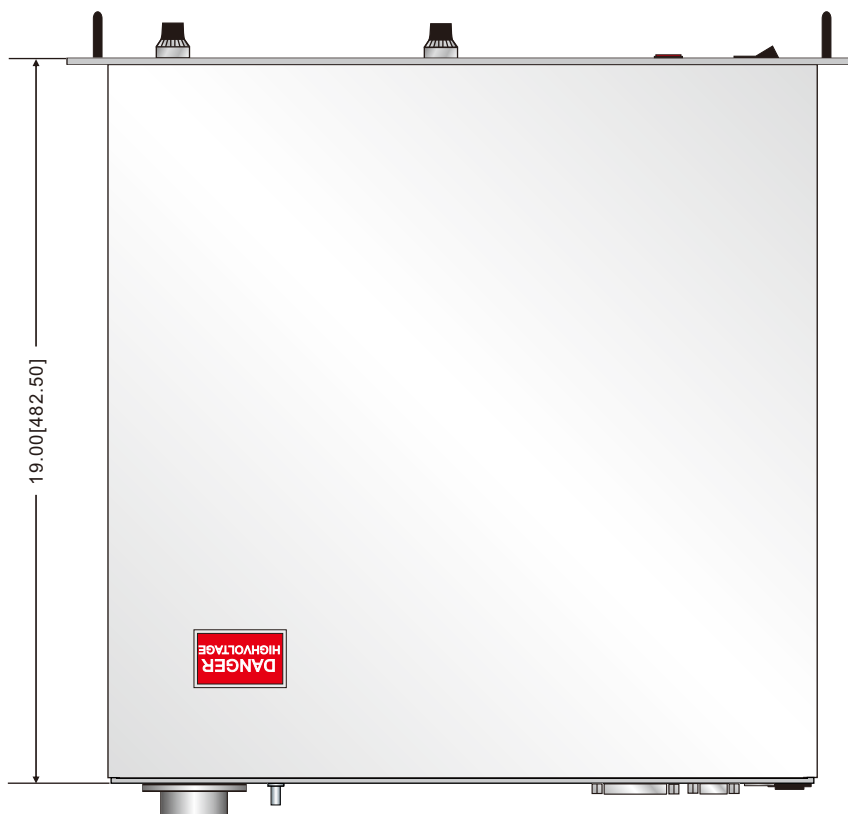
DIMENSIONS

DIMENSIONS: in. [mm]

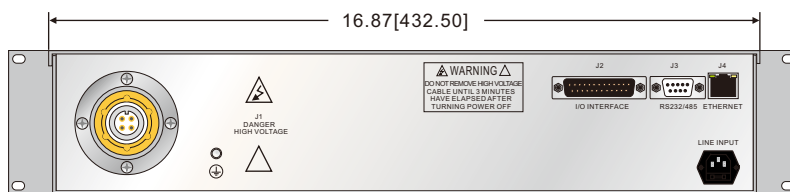
FRONT VIEW



TOP VIEW



BACK VIEW



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