



- **OPTIONAL USB2.0,RS-232 OR RS-485 IS AVAILABLE**
- **60kV AT 2 mA, 100 WATT MAX**
- **70kV AT 2 mA, 100 WATT MAX**
- **FLOATING FILAMENT SUPPLY**
- **OVERVOLTAGE,ARC,SHORT CIRCUIT PROTECTION**
- **VOLTAGE & CURRENT PROGRAMMING**
- **LOCAL AND REMOTE CONTROL**
- **SAFETY INTERLOCK**
- **OEM CUSTOMIZATION AVAILABLE**

INTR

Wisman's XFN Series is designed to power floating filament X-ray tubes from various manufacturers. It features a 10~70kV high voltage output, and up to 2mA of emission current limited to 50, 65, 75 or 100 Watts, operating from a +24Vdc input. The XFN utilizes a closed loop filament beam control circuit to provide a highly regulated beam current. The floating filament supply operates between 0.3~5 A. Offering tight regulation, high stability and low ripple, XFN provides users both local and remote analog control to set beam voltage, emission current and filament current limit. An optional USB2.0, RS-232 and RS-485 interface is available.

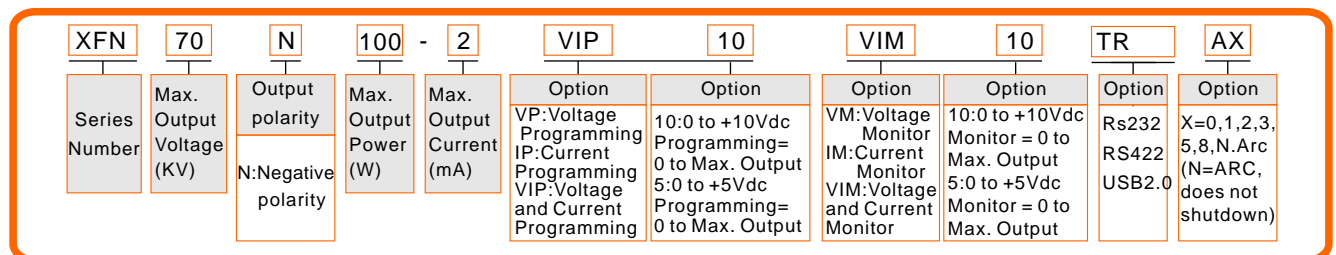
TYPICAL APPLICATIONS

Grounded anode X-ray tubes from Kevex, Oxford, RTW, Superior, Varian and Trufocus, ESD,Sulfur-detector,X-ray fluorescence instrument, X-ray imaging, X-ray diffractometer ,Non-destructive testing , Portable X-ray machine, Rohs detector, Precious metal detector , Life Science, Medical industry, Science experiment and so on.

XFN SELECTION TABLE

kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL
10	1.00	10	XFN10N10	30	2.17	65	XFN30N65	60	0.17	10	XFN60N10	70	0.93	65	XFN70N65
	3.00	30	XFN10N30		2.50	75	XFN30N75		0.50	30	XFN60N30		1.07	75	XFN70N70
	5.00	50	XFN10N50		3.33	100	XFN30N100		0.83	50	XFN60N50		1.43	100	XFN70N100
	6.50	65	XFN10N65		0.25	10	XFN40N10		1.08	65	XFN60N65		2.00	50	XFN50N50-2
	7.50	75	XFN10N75		0.75	30	XFN40N30		1.25	75	XFN60N75		2.00	75	XFN50N75-2
	10.0	100	XFN10N100		1.25	50	XFN40N50		1.67	100	XFN60N100		4.00	75	XFN50N75-4
20	0.50	10	XFN20N10	40	1.63	65	XFN40N65	65	0.15	10	XFN65N10	60	2.00	60	XFN60N60-2
	1.50	30	XFN20N30		1.88	75	XFN40N75		0.46	30	XFN65N30		2.00	75	XFN60N75-2
	2.50	50	XFN20N50		2.50	100	XFN40N100		0.77	50	XFN65N50		2.00	100	XFN60N100-2
	3.25	65	XFN20N65		0.20	10	XFN50N10		1.00	65	XFN65N65		2.00	60	XFN65N65-2
	3.75	75	XFN20N75		0.60	30	XFN50N30		1.15	75	XFN65N75		2.00	75	XFN65N75-2
	5.00	100	XFN20N100		1.00	50	XFN50N50		1.54	100	XFN65N100		2.00	100	XFN65N100-2
30	0.33	10	XFN30N10	50	1.30	65	XFN50N65	70	0.14	10	XFN70N10	70	2.00	65	XFN70N65-2
	1.00	30	XFN30N30		1.50	75	XFN50N75		0.43	30	XFN70N30		2.00	75	XFN70N75-2
	1.67	50	XFN30N50		2.00	100	XFN50N100		0.71	50	XFN70N50		2.00	100	XFN70N100-2

XFN SELECTION EXAMPLE





XFN SPECIFICATIONS

PARAMETER		DESCRIBE		
Input		+24Vdc ± 10% ,5.0A maximum for 70W, 8.0A maximum for 100W.		
Output		10kV, 20kV, 30kV, 40kV, 50kV, 60kV, 65kV, 70kV Maximum output Voltage option.		
Stability		0.02% per 8 hours after 1/2 hour warm-up.		
Temperature Coefficient		25ppm/ .		
Ripple		0.1% p-p of maximum rated output voltage.		
Voltage/Current Monitor		0~+10Vdc corresponds to 0 to maximum output, Zout=10kV/accuracy: ±1%.		
Voltage Local Programming		Internal potentiometer to set voltage from 0 to maximum output voltage.		
Voltage Remote Programming		0~+10Vdc proportional from 0 to maximum output voltage, Zin=10MVV		
Current Local Programming		Internal potentiometer to set current from 0 to maximum output current.		
Current Remote Programming		0~+10Vdc proportional from 0 to maximum output current, Zin=10MVV		
Voltage Load Regulation		0.01% (no load to full load change).		
Voltage Line Regulation		± 0.01% (input voltage line change ± 10%).		
Current Load Regulation		0.01% (no load to full load change).		
Current Line Regulation		± 0.01% (input voltage line change ± 10%).		
Filament Supply		Current: 0.3~5A, adjustable limit, Voltage: 0~5volt adjustable limit.		
Operating Temperature		0 ~+50		
Storage Temperature		-40 ~+85		
Humidity		20%~85% RH, non-condensing.		
Dimensions	60kV	7.28 " H x 2.95 " W x 8.07 " D(185.00mm x 75.00mm x 205.00mm)	Weight	4.7kg
	60kV(Option USB/RS232/RS422)	8.03 " H x 2.95 " W x 8.07 " D(204.00mm x 75.00mm x 205.00mm)		4.75kg
	70kV	7.28 " H x 2.95 " W x 8.98 " D(185.00mm x 75.00mm x 228.00mm)		5.1kg
	70kV(Option USB/RS232/RS422)	8.03 " H x 2.95 " W x 8.98 " D(204.00mm x 75.00mm x 228.00mm)		5.15kg

XFN POWER INPUT

J4	SIGNAL	PARAMETER
1	+24Vdc Input	+24 Vdc
2	24Vdc Return(Gnd)	Power Ground

XFN ANALOG INTERFACE

I/O	SIGNAL	PARAMETER
1	Monitor Return	Ground
2	Voltage Monitor	0~+10Vdc=0 to maximum output
3	Current Monitor	0~+10Vdc=0 to maximum output
4	Interlock Output	Alternate Interlock Configurations
5	+10Vdc Reference	+10Vdc@ 1mA , maximum
6	Filament Monitor	1Vdc=1A , Zout=10k
7	Voltage Program Input	0~+10Vdc=0 to maximum output
8	Local Voltage Program	10 turn pot, screwdriver adjust
9	Filament Limit Setpoint	1Vdc=1A, screwdriver adjust
10	Current Program Input	0~+10Vdc=0 to maximum output
11	Local Current Program	10 turn pot, screwdriver adjust
12	N/C(+24VOut for Interlock)	Optional Interlock Configuration
13	N/C(Interlock Coil)	Optional Interlock Configuration
14	Filament Preheat Setpoint	1Vdc=1A,screwdriver Adjust
15	Interlock Return	Ground

RS-232/RS-485 DIGITAL INTERFACE ^D

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

XFN LED INDICATORS ^D

LED	SIGNAL	LED	SIGNAL
1	POW Power ON	5	UC Low current occurs
2	ARC Arc fault occurs	6	OV Over voltage occurs
3	OT Over temperature occurs	7	UV Low voltage occurs
4	OC Over current occurs	8	HV HV ON

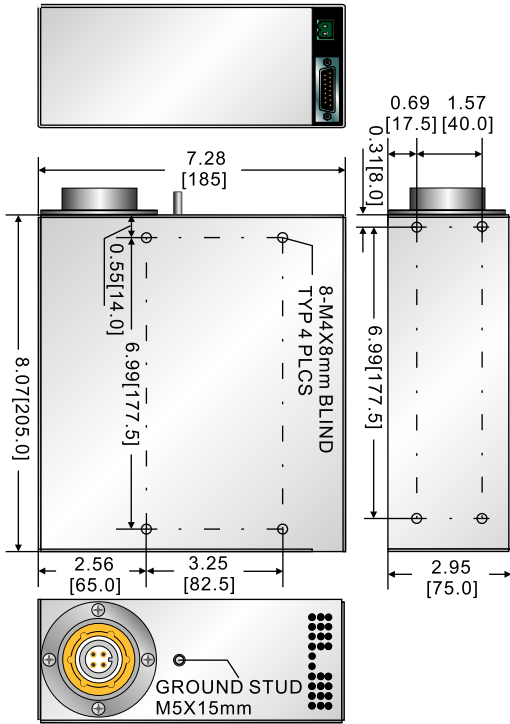
USB DIGITAL INTERFACE ^D

USB	SIGNAL	USB	SIGNAL
1	VBUS +5Vdc	3	D+ Data+
2	D- Data-	4	GND Ground

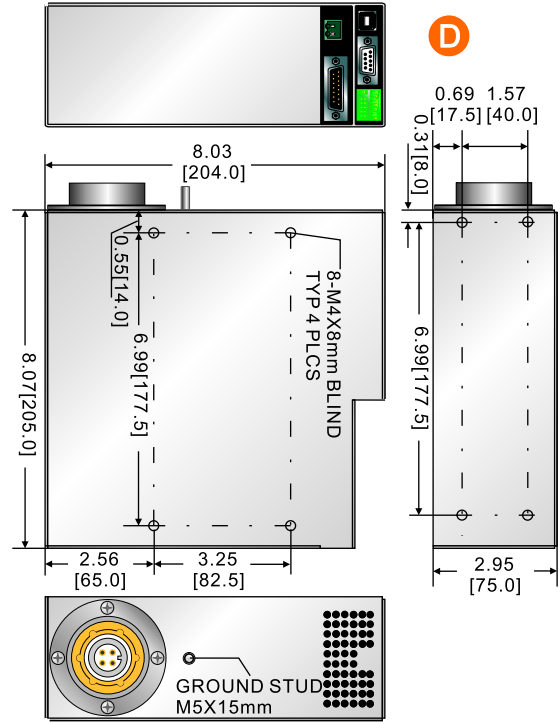
DIMENSIONS

DIMENSIONS in.[mm]

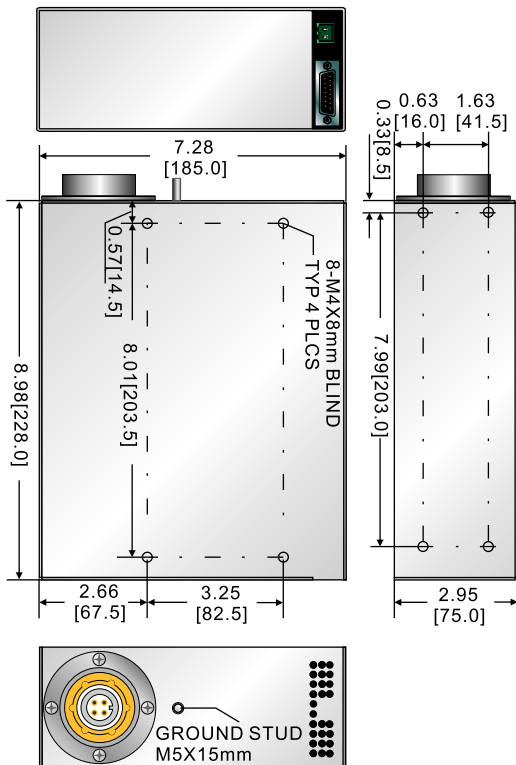
6kV~60kV :



6kV~60kV (USB2.0/RS-232/RS-485):



60kV~70kV:



60kV~70kV (USB2.0/RS-232/RS-485):

