



PRELIMINARY RELEASE
Contact Sales for availability

- **10KW'S IN SINGLE 6U (10.5") CHASSIS**
- **FLOATING FILAMENT-7V @ 4A**
- **OPTIONAL FLOATING BIAS OUTPUT**
- **REMOTE ANALOG AND REMOTE ETHERNET INTERFACE**
- **CUSTOM PARALLEL AND BIPOLAR OPERATION AVAILABLE**
- **CUSTOMER CONFIGURABLE FEATURES VIA ETHERNET INTERFACE**

Spellman's new XT Series of 10kW X-Ray generators are available with negative output polarities in 13 different models with voltages ranging from 10kV to 120kV. Internal filament and optional bias outputs are referenced to the cathode output voltage and are controlled by internal emission control circuitry to provide stable and repeatable X-Ray tube currents.

A full featured front panel allows easy local control, while an extensive analog interface provides comprehensive remote capability. The standard Ethernet digital interface simplifies integrating the XT into your system design. Many operational features can be configured by the user to suit their particular requirements via a Java applet and any standard web browser. The XT's IGBT inverter is inherently fault tolerant and the high voltage section is encapsulated to provide reliable, maintenance free operation.

HARDWARE BASED OPTIONS

- BFP** Blank Front Panel
- HS** High Stability
- SL** Mounting Slides
- LL(X)** High Voltage Cable Length
- FB** Floating Bias Output

SOFTWARE CONFIGURABLE OPTIONS

- AOL** Adjustable Overload Trip
- ARC 1** Arc Trip Count
- ARC 2** Arc Quench Time
- ARC 3** Arc Re-Ramp Time
- CPC** Constant Power Control
- PT** Adjustable Power Trip
- NSS** No Slow Start

SPECIFICATIONS

Input Voltage:

180-264Vac, 50/60Hz, three phase, 90% efficiency, 0.85 power factor

Output Voltage:

13 models from 10kV to 120kV. Negative output polarity.

Local Output Controls:

Voltage and current are continuously adjustable over entire range via ten-turn potentiometers with lockable counting dials.

Voltage Regulation:

Load: 0.05% of full voltage +500mV for full load change.
Line: 0.05% of full voltage +500mV over specified input range.

Current Regulation:

Load: 0.05% of full current ±100µA for any voltage change.
Line: 0.05% of full current over specified input range.

Ripple:

0.5% p-p +1Vrms. Lower ripple available via special order

Stability:

0.02%/hr. after 1 hour warm-up.

Temperature Coefficient:

100ppm/°C. Higher stability (50ppm/°C) available on special order

Filament Voltage:

+7Vdc maximum, referenced to the output voltage

Filament Current:

4 amps, maximum. Filament is controlled by internal emission control circuitry.

Bias Voltage (optional):

0 to +4kV, referenced to the output voltage

Bias Current: 1mA, maximum

Environmental:

Temperature Range:
Operating: 0°C to 40°C
Storage: -40°C to 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%

System Status Display:

"Dead Front" type indicators provide status of up to 12 system operations including voltage and current regulation, fault conditions and circuit control.

Digital Interface:

Ethernet digital interface implemented with 12 bits of resolution. A VB GUI is provided.

Input Line Connector:

A 6 foot (1.8 meter) long captive line cord is provided.

Analog Interface Connector:

50 pin female D connector

High Voltage Connector:

10kV to 70kV: 75kV Federal Standard X-Ray connector
80kV to 120kV: R28 X-Ray connector

Dimensions:

10kV to 70kV:
 10.5" (6U)H X 19" W X 19" D
 (266mm x 482mm x 482mm)
 80kV to 120kV:
 10.5" (6U)H X 19" W X 24" D
 (266mm x 482mm x 610mm)

Weight:

10kV to 20kV: approx. 100 pounds (37.32kg)
 30kV to 70kV: approx. 130 pounds (48.51kg)
 80kV to 120kV: approx. 150 pounds (55.98kg)

Regulatory Approvals:

Compliant to 2004/108/EC, the EMC Directive and 2006/95/EC, the Low Voltage Directive.

XT SELECTION TABLE

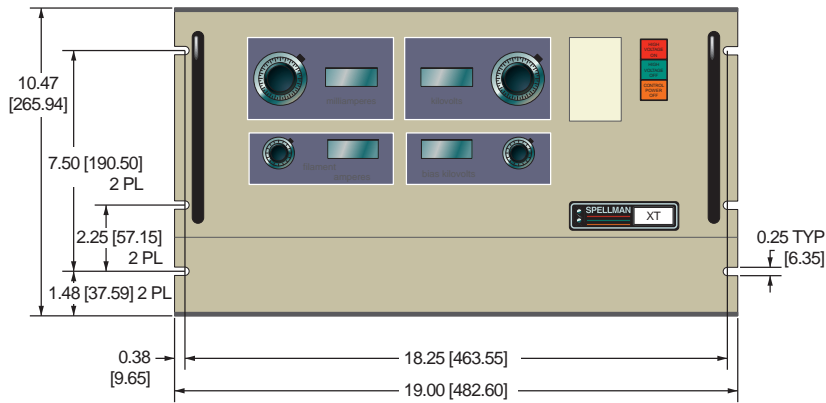
MAXIMUM RATING		MODEL NUMBER
kV	mA	
10	1,000	XT10N10
12	833	XT12N10
15	666	XT15N10
20	500	XT20N10
30	333	XT30N10
40	250	XT40N10
50	200	XT50N10
60	166	XT60N10
70	143	XT70N10
80	125	XT80N10
100	100	XT100N10
110	91	XT110N10
120	83	XT120N10

**XT ANALOG INTERFACE—
50 PIN FEMALE D CONNECTOR**

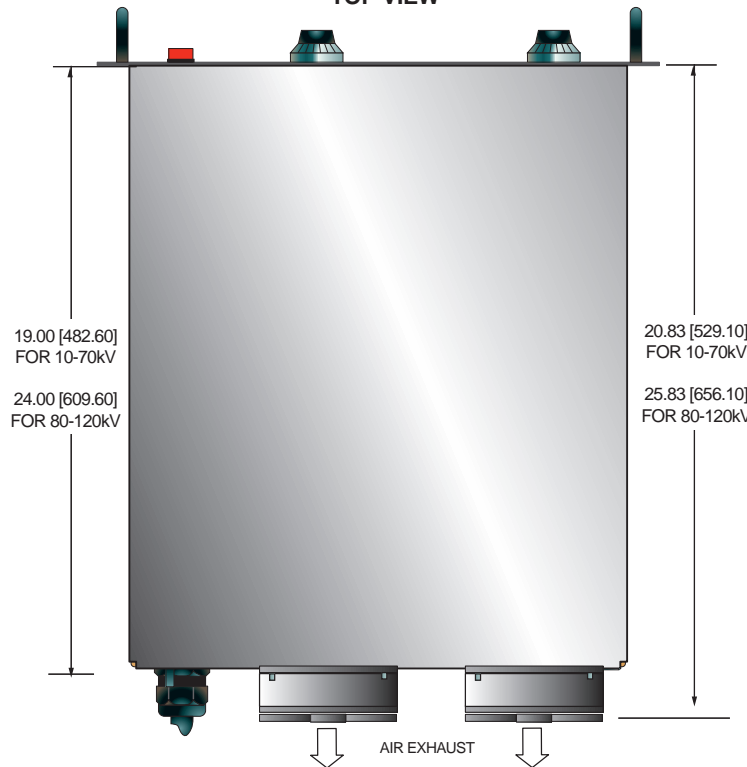
PIN	SIGNAL	PARAMETERS
1	Power Supply Common	Power Supply Ground
2	Reset/HV Inhibit	
3	External Interlock	+24Vdc @ open, <25mA @ closed
4	External Interlock Return	Return for External Interlock
5	mA Test Point	0-10Vdc = 0-100% rated output, Zout= 1KΩ, 1%
6	kV Test Point	0-10Vdc = 0-100% rated output, 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 Return	Return for Remote Power On
13	Remote Power On Output	+24Vdc @ open, <25mA @ closed
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, momentarily connect to pin 15 enable high voltage
17	HV Off Indicator	
18	HV On Indicator	
19	Power Supply Common	Supply Ground
20	+24Vdc Output	+24Vdc @ 100mA, maximum
21	Status 1	
22	Status 2	
23	Status 3	
24	Status 4	
25	Power Monitor Output	0-10Vdc = 0-100% rated output, Zout= 5KΩ, 1%
26	Spare	
27	Spare	
28	Remote Overvoltage Adjust	0-10Vdc = 0-100% rated output, Zin>10MΩ
29	Status 5	
30	Status 6	
31	Status 7	
32	Status 8	
33	Status 9	
34	Status 10	
35	Status 11	
36	Status 12	
37	Spare	
38	Spare	
39	Spare	
40	Spare	
41	Spare	
42	Remote Power Program Input	0-10Vdc = 0-100% rated output, Zin>10MΩ
43	Local Power Program Output	0-10Vdc = 0-100% rated output, front panel pot
44	+5Vdc Output	+5Vdc @ 100mA, maximum
45	+15Vdc Output	+15Vdc @ 100mA, maximum
46	-15Vdc Output	-15Vdc @ 50mA, maximum
47	RS232 Tx	
48	RS232 Rx	
49	RS232 GND	
50	Power Supply Common	Power Supply Ground

DIMENSIONS: in.[mm]

FRONT VIEW



TOP VIEW



BACK VIEW

