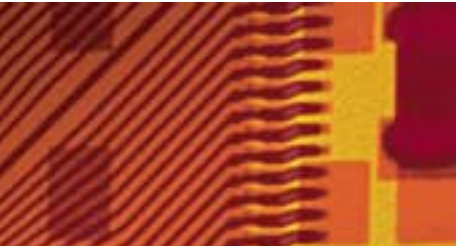


Thermo Electron Corporation—the one source for x-ray generation. Thermo's Kevex X-Ray line has been providing quality x-ray sources to x-ray markets since 1978. We are known and respected worldwide for our innovation in x-ray source integration and microfocus technology.

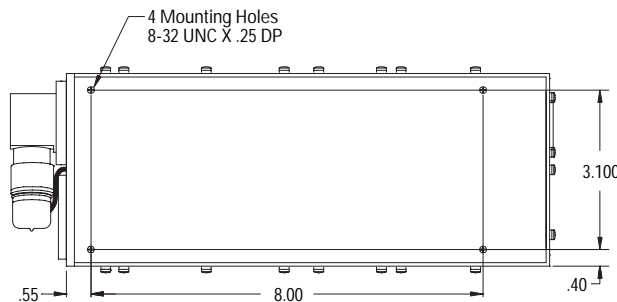
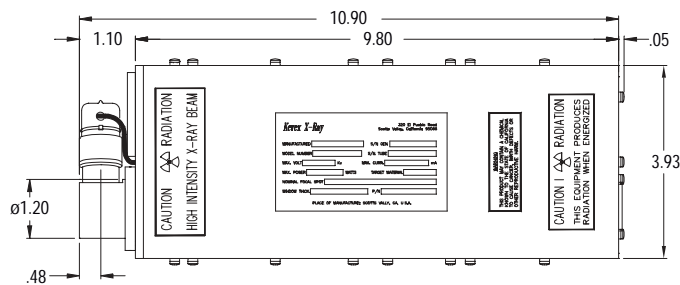
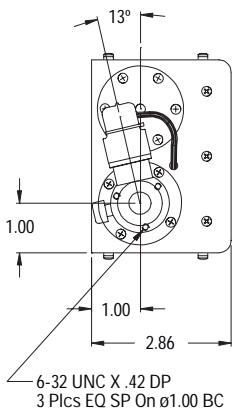
## Kevex™ PXS5-925EA

MicroFocus Portable X-Ray Source  
90 kV, End Window

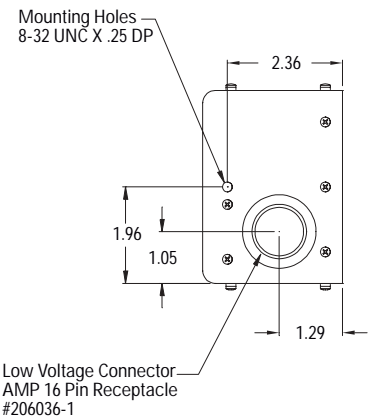


The Kevex PXS5-925EA is a constant potential, continuous duty microfocus portable x-ray source for use in high resolution radiographic and real time imaging applications. The 7 micron spot size coupled with the end window design and short target-to-window spacing facilitate the generation of high resolution direct x-ray magnified images from any size object. Typically, the source can resolve features as small as 2 microns\*.

The Kevex PXS5-925EA combines the x-ray tube and high voltage power supply into one compact package that is powered from a 12 VDC source. A matching digital or analog controller is available for driving the Kevex PXS5-925EA as well as for adjusting and monitoring both target voltage and electron beam current.



View of Opposite Side



All dimensions in inches

\*Siemens lithography pattern

## **KeveX PXS5-925EA**

### **Maximum Target Voltage**

90 kV

### **Minimum Target Voltage to Obtain Maximum Current**

20 kV

### **Maximum Electron Beam Current**

0.09 mA @ 90kV, isowatt operation

0.18 mA @ 45kV, isowatt operation

### **Spot Size and Power Dissipation (45 - 90kV)**

Less than 9 microns \* @ 8 watts

Less than 7 microns \* @ 4 watts

### **Input Voltage**

12 ± 3 VDC

### **Input Current**

3.4 amps at nominal input voltage

### **Target Material**

Tungsten

### **Target Type**

Solid

### **Window Material and Thickness**

Beryllium - 0.005 inches (0.13 mm)

### **Window Diameter**

0.37 inches (9.4 mm)

### **X-Ray Cone of Illumination**

40 degrees inclusive

### **End of Tube to Focal Spot**

0.47 inches (12 mm)

### **Cooling Requirement**

Cooling airflow is required to keep the base-plate temperature below 55 °C. Maintaining a cooler temperature is recommended for greater stability and longer life.

### **Maximum Baseplate Temperature**

55 °C

### **Radiation Shielding**

The user must provide adequate shielding in the exposed tube area. Shielding of the housing is sufficient to ensure that the x-ray leakage is less than 0.5 mR/hour measured one inch away from any part of the housing.

### **Recommended Shielding**

Lead, 0.15 inches thick (3.8 mm).

### **Tube Type**

Sealed, Metal-Glass

### **High Voltage Polarity**

Grounded Cathode

### **Electron Emission Source**

Dispenser Cathode

### **Duty Cycle**

Continuous

### **High Voltage Insulation**

Diala Oil

### **X-Ray Flux at 90 kV**

27 R/minute at 8 watts

Measured at a distance of one foot with a Keithly 96035B ion chamber and 35050A readout.

### **Ambient Operating Environment**

0 °C to 40 °C to an altitude of 5,000 feet.

### **Monitor and Control Connector**

The same multi-pin connector used to supply the input power to the unit also provides connections for remote monitoring and control of the target voltage and electron beam current.

### **Voltage and Current Control**

Target voltage and electron beam current are adjusted by using a separate external variable DC voltage source, or by adjusting

the programming signal available from the multi-pin connector with external potentiometers.

### **Weight**

8 lbs (3.7 kg).

### **Main Dimensions**

See drawing.

### **Cables**

Up to 33 foot (10 meter) interconnect cable ordered separately

### **Mounting**

The KeveX PXS5-925EA is designed with five mounting holes, four on the side panel, and one near the rear connector.

### **Appropriate Controller**

CU017, CU021 or KeveX PXS5 Digital Controller.

*\*Measured using the British Ball Standard Method, the only internationally recognized method for microfocus sources. Spot size is defined as the average (not the smaller) of the two axes.*



Product covered by one or more of U.S. Patent Numbers: 4,646,338; 4,694,480; 5,077,771; 6,229,876 B1.

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#### **Worldwide Sales**

320 El Pueblo Road, Scotts Valley, CA, USA 95066  
Phone: 831-438-5940, Fax: 831-438-5892

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