

# Thermo Scientific PXS10 Microfocus X-ray Sources

Thermo Scientific™ PXS10 Microfocus X-ray Sources provide a powerful, digitally controlled, 130kV solution for the most demanding imaging, inspection, and testing tasks. Primary applications include in- and at-line battery inspection, notably for lithium batteries for EVs (electric vehicles), where complex, multilayered structures give rise to high attenuation. More generally, PXS10 sources are used in other areas of component inspection - for particularly challenging, complex electronic assemblies, for example - in high resolution non-destructive testing and micro-CT (micro computed tomography). Wide beam variants and the option to extend the window away from the cabinet deliver the flexibility to tailor magnification and field-of-view and the ability to meet individual integration requirements. All PXS10 sources are specified for highly stable, high intensity output, with a rugged design for trouble-free, long-term operation in exacting environments.

## Key features

- **Small, round spot:** to produce high-resolution, low distortion, high-quality images
- **Short FOD (focal object distance):** to deliver excellent geometric magnification and short image acquisition times
- **Ultra-wide beam angle and expanded field of view (various options available):** to aid magnification and provide the flexibility to position larger objects closer to the source to reduce image acquisition times
- **High flux and spot location stability:** to ensure consistent high-quality imaging with minimal temporal variation
- **Automatic source conditioning:** to minimize the risk of damage as the source comes up to operating conditions
- **Digital interface:** to enable easy operation with access to diagnostics and operating logs to ensure optimal on-going performance
- **Fully integrated design:** to reduce space requirements, with X-ray tube, high-voltage power supply, and controller in a single package powered from a 24 VDC source

*Note: The three options in the PXS10 source range vary with respect to beam angle and field of view. Individual detailed specifications for the PXS10-NB, PSX10-WB and PSX10-WBE sources are included for reference.*

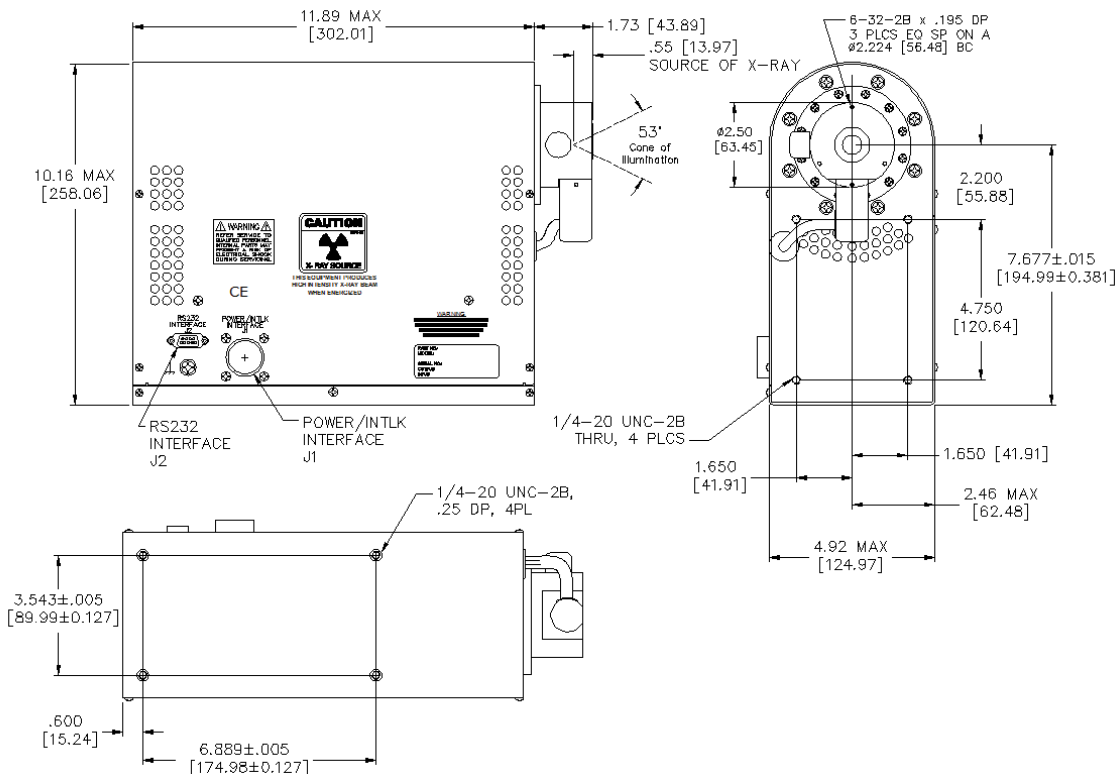


PXS10 X-ray Source

## Specifications

PXS10 X-ray Source	
Maximum tube voltage	130 kV
Operating voltage range	45–130 kV
Tube current operational range	0–500 µA
Maximum power output	65 W
Minimum focal spot size	6 µm
X-ray beam angle	53°, round beam
Focus to object distance (FOD)	14.0±0.5 mm
Target material	Tungsten
X-ray output window material	Beryllium
Weight	13.6 kg. Lightweight model (LW) 9.5 kg
Ambient temperature and humidity	0–32 °C, 0–95% RH, up to 1,500 m (5,000 ft) altitude
Method of cooling	Internal fan. Adequate air circulation around unit must be provided
Input power	24–26 VDC, 6A max
Control interface	RS-232, digital

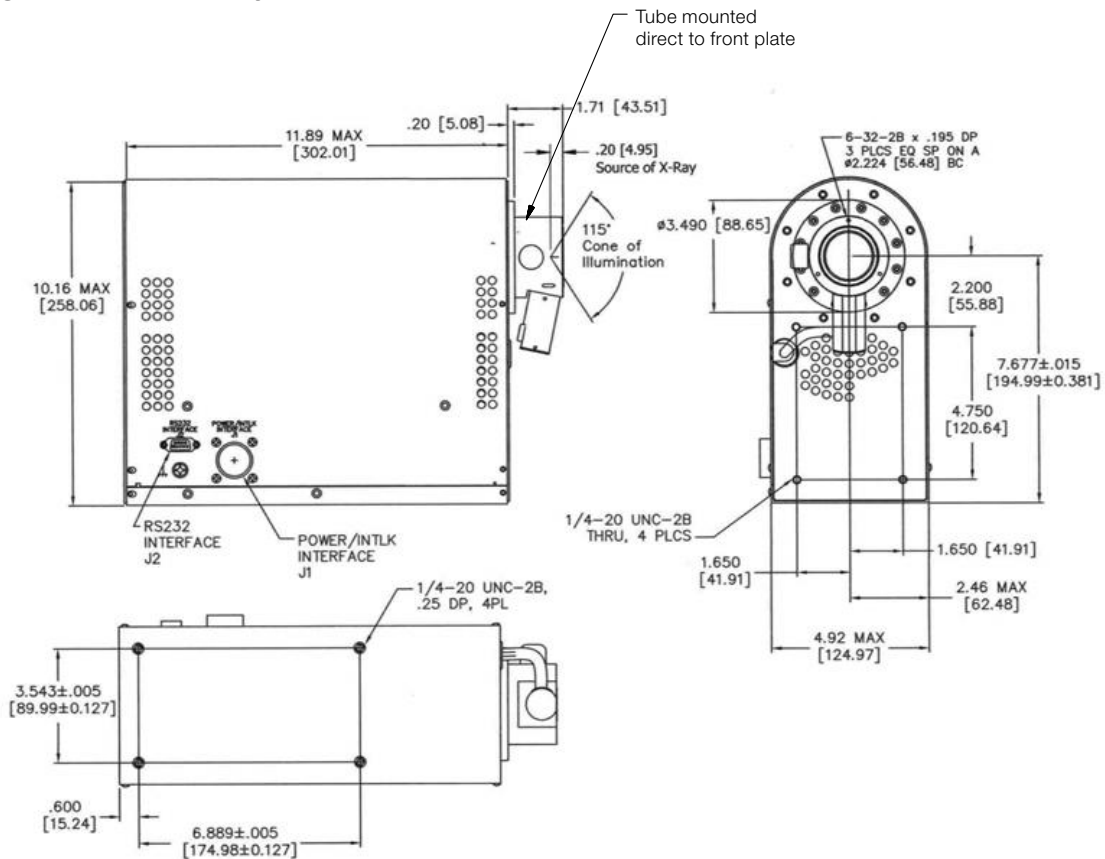
## Outline drawing of PXS10 X-ray Source



## Specifications

PXS10-WB X-ray Source	
Maximum tube voltage	130 kV
Operating voltage range	45–130 kV
Tube current operational range	0–500 $\mu$ A
Maximum power output	65 W
Minimum focal spot size	7 $\mu$ m
X-ray beam angle	115°, round beam
Focus to object distance (FOD)	10.0 $\pm$ 0.5 mm
Target material	Tungsten
X-ray output window material	Beryllium
Weight	13.6 kg. Lightweight model (LW) 9.5 kg
Ambient temperature and humidity	0–32 °C, 0–95% RH, up to 1,500 m (5,000 ft) altitude
Method of cooling	Internal fan. Adequate air circulation around unit must be provided
Input power	24–26 VDC, 6A max
Control interface	RS-232, digital

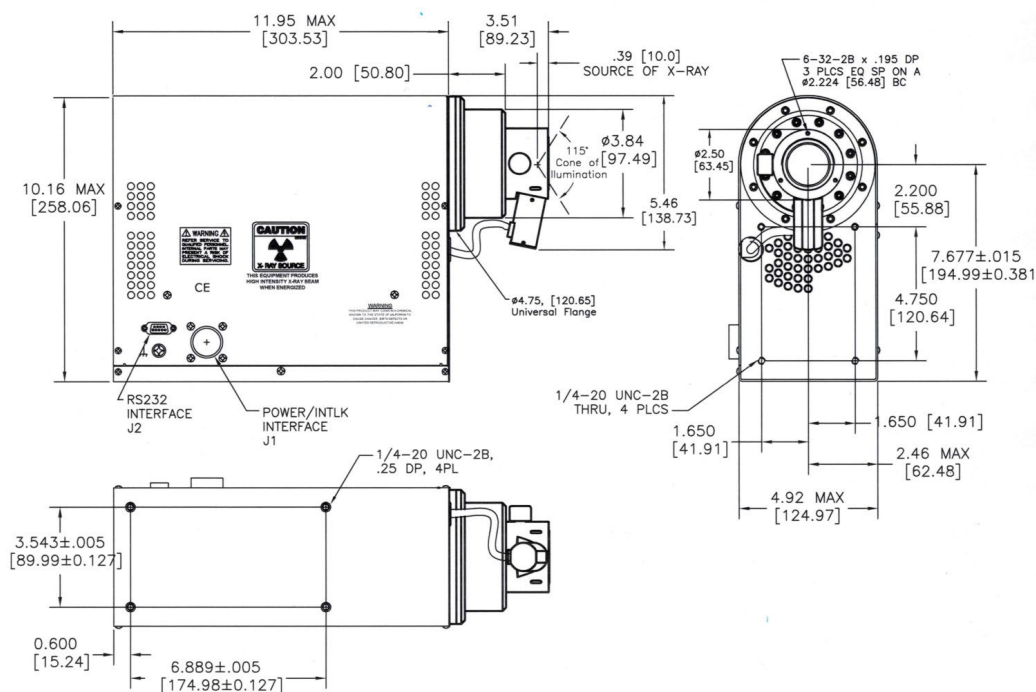
## Outline drawing of PXS10-WB X-ray Source



## Specifications

PXS10-WBE X-ray Source	
Maximum tube voltage	130 kV
Operating voltage range	45–130 kV
Tube current operational range	0–500 $\mu$ A
Maximum power output	65 W
Minimum focal spot size	7 $\mu$ m
X-ray beam angle	115°, round beam
Focus to object distance (FOD)	10.0 $\pm$ 0.5 mm
Target material	Tungsten
X-ray output window material	Beryllium
Weight	13.6 kg. Lightweight model (LW) 9.5 kg
Ambient temperature and humidity	0–32 °C, 0–95% RH, up to 1,500 m (5,000 ft) altitude
Method of cooling	Internal fan. Adequate air circulation around unit must be provided
Input power	24–26 VDC, 6A max
Control interface	RS-232, digital

## Outline drawing of PXS10-WBE X-ray Source



Learn more at [thermofisher.com/xraysources](https://thermofisher.com/xraysources)

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