



Detector sytem 9910

The unit is designed to count X-rays in laboratory or production equipment and in synchrotron radiation experiments.

The 9910 is a wide dynamic range, X-ray counting system. X-rays up to 100 keV are detected using a scintillator coupled to a photomultiplier and signal processing electronics to provide a TTL output.

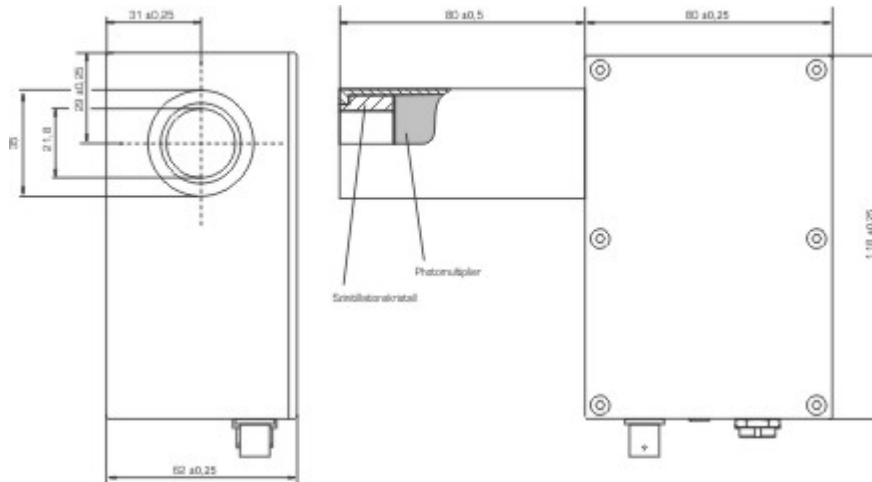
The detector uses a window discriminator to detect X-rays within a selected energy band. The width and threshold (lower limit) of the window and the HV of the photomultiplier can be set by the user with the 9910-CONTROL.

Fast count rates are achieved by using a YAP(Ce) scintillator, selected for its very fast (30ns) decay time, and high speed electronics, designed to minimise dead-time.

As well as counting X-rays in a set energy band, the unit can be used to generate an energy spectrum by using a narrow (energy) window and progressively increasing the lower threshold. This feature is also used to calibrate the detector, using Gamma and X-ray sources of known energy.

Technical data:

Scintillator:	Yttrium Aluminium Perovskit (Cer dotiert) - YAlO ₃ (Ce)
Detection range:	5 to 100 keV
Lower window discriminator:	100 mV
Max. window width:	3 V
Max. count rate:	5 MHz (indicated counts) 10 MHz (actual counts)
Background counts:	0.15 Hz
Supply voltage:	4.75 to 5.75 V
Supply current:	80 mA at 1 MHz count rate



- A: TTL Ausgang
BNC
- B: Versorgungsspannung
PIN 1 +5V
PIN 2 0V
- C: Unit Interface

