



Multi Channel Analyzer MS Hybrid

Application

Amplification, optimal filtering, analog-digital conversion of signal from semiconductor detectors of ionizing radiation, the accumulation of spectra and transfer to a PC via an RS-232 or USB, the formation of the necessary voltages for detecting units (high voltage for semiconductor detector and power for preamplifier). Hybrid is designed to work with HPGe or SiLi detectors produced by Baltic Scientific Instruments or other manufacturers.

Complete set

- Analog processor - ADC;
- Microprocessor unit with memory and I/O port RS-232 or USB;
- Power supply for detector and preamplifier;
- Cable set;
- Emulation software.

Features

- High speed;
- Low self-noise;
- Analog signal processing of the spectrometric signal;
- Rejection of superimposed pulses and taking into account the dead time of the spectrometer;
- High linearity of the amplifier path;
- Simultaneous registration of signals in the eight energy ranges;
- Via PC or manual control of the spectrometer;
- Switch on and off collecting spectra for a preset time;
- Collecting spectrum by "live" or real-time;
- Setting the number of channels by software;
- The possibility of energy calibration;
- Definition of energy resolution, centroids of the peaks of total absorption and peak areas with and without taking into account the background under the peak;
- Works with I/O ports RS-232 or USB;
- Compatibility with spectra processing software LSRM, SpectraLine, ANGAMMA, AXILL.

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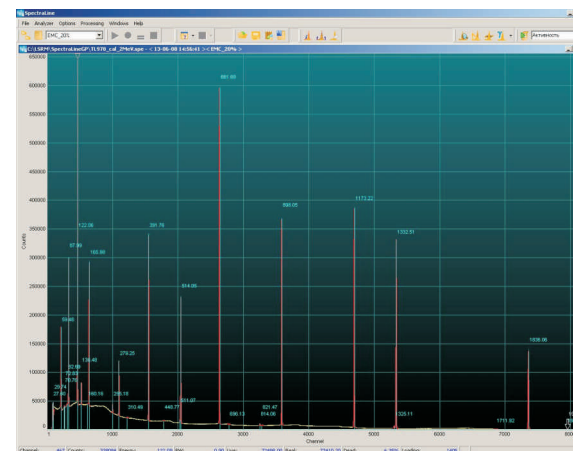
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Specification

Parameter	Value
ADC conversion time, μ s	7
Number of channels	1024, 2048, 4096, 8192, 16384
Channel capacity	$2^{32}-1$
Gain, adjustable (manual transmission)	
gradually	1 -2,5
roughly *	X1, X2, X4, X8
Noise level (adducted to the entrance), mV	<5
Integral non-linearity, %	<0.04
Temperature instability, %/ $^{\circ}$ C	<0.01
Shaping time constants (switchable)**, ms	1-16
Output load frequency control (for each of the outputs)	TTL
Power supply range, V	+/- 0-5000
Dimensions, mm	305 x 210 x 85
Weight, kg	2,8
Power consumption, W	<10
Supply voltage, V	220
Frequency, Hz	50

* 4 fixed settings are set by the manufacturer depending on the detection unit.

** 2 fixed settings are set by the manufacturer depending on the detection unit.



Software package

SpectralLineGP spectra processing includes calibration, peaks parameters determination, nuclides identification, activities calculation and using the true-coincident factors for the gamma-emission intensity correction. Non-parametric model for pattern of the full energy peak provides a correct model for a line in any energy range. Adjustment of the DigiSpectrum parameters.