NUVIATECH INSTRUMENTS

SPECIFICATION SHEET

NuNA MCB

DIGITAL MULTICHANNEL ANALYZER

The NuNA MCB digital multichannel analyser in a compact housing serves as an MCA base for processing signals coming from detectors equipped with a 14-pin, 10-stage photomultiplier tube.
Signal processing enables the display of energy spectra from photon radiation detected by the most common types of scintillation detectors such as NaI(Tl), LaBr3 (Ce), plastic materials and others.
NuNA MCB comprises a 14-Pin PMT socket, preamplifier, high voltage supply and control unit. NuNA MCB can be connected to a local network using the Ethernet interface or to a computer using the USB interface. NuSOFT GAMWIN Software provides control and display interface.

Benefits

- All the electronics can be seamlesslyintegrated with our in-house designed and developed detectors and software
- Compact and lightweight housing
- Low power consumption
- Easy setup and autonomous mode of operation

Key Figures

50 k cps
Maximum input count rate

4096 channels
Maximum conversion gain

+1250 volts
Maximum detector bias voltage

Product Specifications

MCB	
Dimensions	Ø 60 mm, length 112mm
Weight	285 g
Power supply	From 12 to 48 V DC / 2W (can be powered via USB, PoE)
Conversion gain	256, 512, 1024, 2048 or 4096 channels
Coarse gain	x1, x2
Fine gain	From 0.8 to 2.0
Dead time correction	Error<5% up to input count rate of 50 000 cps. Gedcke-Hale live-time clock algorithm
HV power supply	0 to +1250 VDC with 1 V DC step (adjustable by software)
Shaper	Trapezoidal shaper. Rise time: 0.5 to 20 µsec.. Flat top: 0.1 to 6 µsec.
Preset time	Live time, real time: 0 to 2^{31}, in step of 100 ms
Configuration	14 pin photomultiplier tube base (10 dynode)
Operating temperature	From -30 °C to +55 °C
Relative humidity	max. 80 %, non-condensing
CE	Conforms to CE standards for radiated and conducted emissions, susceptibility and low voltage power directives
Interface	mini USB, Ethernet RJ45, RS485 (or RS232 optionally), external thermometer input IIC

Control Software NuSOFT GAMWIN

The NuNA MCB is primarily controlled by the NuSOFT GAMWIN gamma-spectrometric software which both controls the device and evaluatesthe spectra measured.Alternatively, it is possible to deliver the custom- made software solution which, for example, loads the data measured, provides the data visualization and saves the data for later processing.

Product Application

Gamma scintillation and semiconductor spectrometry analysis counting.