

Intelligent integrated detector series

Introduction



Intelligent integrated detector is a miniaturized and integrated gamma ray detection intelligent probe, which integrates high-voltage and Preamplifier electronics modules with high stability, digital multi-channel analyzer, energy spectrum analysis and control, power conversion and communication electronics modules, it can realize continuous measurement and analysis of gamma spectrum.

Various scintillation crystals: NaI(Tl)、LaBr₃(Ce)、CeBr₃、SrI₂(Eu) can be selected with different sizes, photoelectric converter can be selected with PMT, also the SiPM is available for capsulation, this makes the intelligent probe more small and delicate.

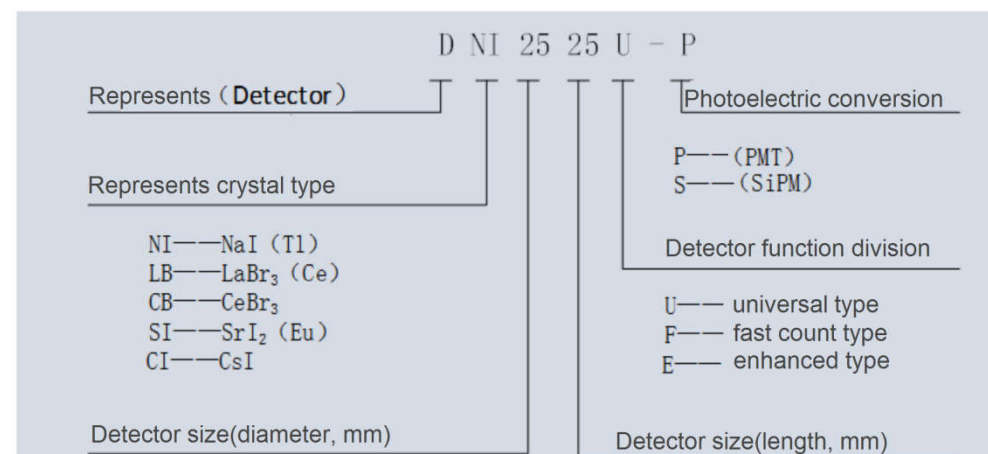
Functions

- Dose equivalent rate measurement
- Storage function of measurement data
- Radionuclide identification: Meet the requirements of the identification of relevant radionuclides 《GB/T 31837-2015 Hand-held radiation monitor for detection, alarming and identification of radioactive material》, can identify the ²⁴¹Am、¹³³Ba、⁵⁷Co、⁶⁰Co、¹³⁷Cs、¹⁵²Eu、¹⁵⁵Eu、¹⁸F、⁸⁵Kr、⁶⁷Ga、¹⁶⁶Ho、¹²³I、¹³¹I、¹²⁵I、¹¹¹In、¹⁹²Ir、⁴⁰K、⁵⁴Mn、²²Na、²³⁷Np、²¹⁰Pb、^{99m}Tc、²²⁶Ra、²³⁸U、²³⁵U、⁷⁵Se、²³²Th、¹⁰⁹Cd、¹³⁴Cs、¹³³Xe with four major classes of radionuclides (medical, industry, special material)
- Editable nuclide
- Isotope monitoring and alarm
- Data access and parameter setting are carried out by upper computer software

Features

- Integrated intelligent probe with high performance scintillation detector, integrated with digital multichannel and embedded energy spectrum measurement software, can be used for gamma ray monitoring and nuclide identification in various scenarios;
- Single nuclide recognition time: ≤30s, Mixed nuclide recognition time: ≤90s (The dose equivalent rate is 0.5 μGy/h higher than the background at the location of the detector)
- It is a portable spectrometer that can meet the various needs of users
- Scintillation crystal end window with thin window design
- Use FPGA to complete trapezoidal filtering shaping, automatic baseline recovery
- Flexible communication interface: RS485、USB、Ethernet
- Integrated design, meet IP67 level of protection, compact structure, easily carried

Type explanation



Specifications

Item#	Size (in)	Energy Range (keV)	Dose equivalent rate range ($\mu\text{Sv/h}$)		Relative intrinsic error(%)	Energy resolution (%@662keV)		Channel (Ch)	ADC Resolution (bit)	ADC Sample rate (MSPS)	Automatic spectra- stabilization	Power supply (V)	Communication	Operating temperature & humidity ($^{\circ}\text{C}$ 、%)	Protection grade
			Universal U	Fast count F		Universal U	Improved I								
DNI2525X	1.0×1.0	20~3000	0.1~300	0.01~600	< ± 15	≤ 7.5	≤ 6.5	1024	14	40/65/80	Standard configuration	4.5~5.5V DC	RS232 、 RS485/RS4 22、Wifi、 USB 、 Bluetooth	-40~60 ， ≤ 95	IP67
DNI2530X	1.0×1.2														
DNI3838X	1.5×1.5														
DNI5151X	2.0×2.0	25~3000	0.1~200	0.01~400											
DNI7676X	3.0×3.0	30~3000	0.01~100	0.01~200											
DNI127X	5.0×5.0	30~3000/ 50~10000	0.01~20	0.01~40		≤ 9	≤ 8								
DLB2525X	1.0×1.0	20~3000	0.1~1000	0.1~2000	< ± 15	≤ 3.5	≤ 2.5	1024/204 8/4096	14	40/65/80	Standard configuration	4.5~5.5V DC	RS232 、 RS485/RS4 22、Wifi、 USB 、 Bluetooth	-40~60 ， ≤ 95	IP67
DLB2530X	1.0×1.2														
DLB3838X	1.5×1.5														
DLB5151X	2.0×2.0	25~3000	0.1~200	0.1~400											
DLB7676X	3.0×3.0	30~3000	0.1~100	0.1~200											
DCB2525X	1.0×1.0	20~3000	0.1~1000	0.1~2000	< ± 15	≤ 4.5	≤ 3.5	1024/204 8/4096	14	40/65/80	Standard configuration	4.5~5.5V DC	RS232 、 RS485/RS4 22、Wifi、 USB 、 Bluetooth	-40~60 ， ≤ 95	IP67
DCB2530X	1.0×1.2														
DCB3838X	1.5×1.5														
DCB5151X	2.0×2.0	25~3000	0.1~200	0.1~400											
DCB7676X	3.0×3.0	30~3000	0.1~100	0.1~200											
DSI2525X	1.0×1.0	20~3000	0.1~50	0.1~100	< ± 15	≤ 3.5	≤ 3.0	1024/204 8/4096	14	40/65/80	Standard configuration	4.5~5.5V DC	RS232 、 RS485/RS4 22、Wifi、 USB 、 Bluetooth	-40~60 ， ≤ 95	IP67
DSI2530X	1.0×1.2														
DSI3838X	1.5×1.5														
DSI5151X	2.0×2.0	25~3000													

Note: SiPM capsulation detectors do not list in the above table, if need this type please refer to the above parameters for customized made.