POLIMASTER

SPECIFICATION

Meets recommendations of IAEA, Interpol and World Customs Organization, according to the ITRAP program for handheld radiation monitors

It also meets the GOST P.51635-2000 requirements for the portable instruments of gamma sensitivity of $IIIH_{\gamma 20}$ category and for neutron sensitivity of IVH_{n100} category.

SEARCH AND SPECTROMETRY GAMMA CHANNEL

Detector		CsI(Tl)
Sensitivity, (s- 1 / (µSv/h)) no less thon:	On 241 Am On 137 Cs	200,0 200,0
Energy range oi gomma radiation, (MeV) according to a sp ecial arder		0,06 - 3,0 0,03 - 3,0
Coefficientn setting range, (lhe number oi mean sauore deviations oi backqroundl		1,0 -9,9
The number of accumulation channels of the scintillation spectra		10 24
The number of spectra, stored in non-vo lot ile memory		AO 100
Detection oi gamma radiation sources ato distance oi 0,2 m, velocity oi 0.5 m/s and levei oi rodiation background oi no more thon 0,25 µSv/h when the activity oi the sources (kBq) is:	I33Bo I37Cs ^{60}Co	55,0 100,0 50,0
Detection of the sampling sources ata distance oi 0,2m,velocity oi 0.5m/s and levei oi radiation background no more than 0,25 µSv/h when the weight oi l he sources (g) is:	-Pu -U	0,3 10

NEUTRON SEARCH CHANNEL

Detector	Slow neutron counter
Enerav range , (MeV)	From thermal to 14
Coefficientn setting range , (lhe number oi mean squore deviat ions oi background)	1,0- 9,9
Detection of the 252Cf a lternalive source with neutron flux l ,5x l 0^4cl ai o distance of l m, velocity of 0.5 m/s and lhe levei of rad iation background of no more than 0.25 µSv/ h, equiva lent of plutonium (g)	250

MEASURING GAMMA-CHANNEL

Detector	GM-counter
Dose equivalent rate measurement ranae (DER), (µ Sv/ h l	0, 1- 10^5
Enerav range, (MeVI	0,015 - 20
Energy response relative to 0,662 MeV (^{137}Cs) in the photon rad iation measuring mode, (%) no more: -within lhe energy range from 0,0 15 up to 0,045 MeV -within lhe energy range from 0,045 up to 20,0 MeV	 ±40 +30
The allowable limits of the main relative error oi DER measurement*, (%)	±(15 +K/ H)

* where fl - DER value in mSv/h, K- coeff icient equal 0,00 15 mSv/h

MEASURING ALPHA-CHANNEL

Detector	GM -counter
a-flux density measurement range of, (min-cm') the minimal detectable flux density (min·-'cm·')	from 15 to 10 5 from 2
The limits of allowable main relative error of measurement of lhe a - flux density on ^{239}Pu , (%) where cp - l he measured density of a - flux in mi·n! cm A - coefficient eaual 450 min -' cm ^{2}	±(20 + A /cp)

MEASURING BETA-CHANNEL

Detector	GM -counter
B- **flux density measurement ranae,** (min -1 . cm-2)	from 6,0 to l 0°
The limits of allowable main relative error of measurement oi - particles within the range on 90Sr + 9üy, (%) where cp - the measured density of - flux in min-1 cm-2 A - coefficient equa l 60 min-1 -cm-2	±(20 + A /cp)

Design and specificotions oi lhe device con be changed without lurther notice.

POLIMASTER

Innovative Radiation Detection Technologies Since 1992

MULTIPURPOSE HANDHELD RADIATION MONITOR

PM1401K

PM1401K is a basically new instrument designed for performing all kinds of radiation control. Being worn on a belt and working in an automatic mode, the PM1401K is the smallest and the lightest instrument in the world which is capable to operate simultaneously as an alarming device, a search instrument, a radiation monitor, a spectrometer and a identifier.

Performance

e All the detectors are b uilt int o o ne case of sma ll dimensions an d weig ht .

e Waterproof sh oc kpro of case of the instrume nt pro vides the IP65 p ro tect ion rate.

Use

- By the customs, bo rder and spec ia l service s for p r e venting both illega l tra fficking of rad ioac tive and nuclear mater iais a n d us in g these materiais fo r terro ri st purposes.
- By ra diolog ical and iso tope labo ra tar ies.
- By emergency serv ices.
- By fire brigades.
- By police.
- By var ious industry bra nches etc. where the nuclear technica l units a nd ionizing rad iation sou rces are used.

ALARM

LOCATION

IDENTIFICATION

MEASUREMENT

IRDA

Bluetooth

Performance capabilities

o **Alarm:** detection of all kinds of radioactive sources on their photon, alpha, beta and neutron radiation.

- **Location:** search for radioactive and nuclear materiais.
- **Identification:** determination of the source type by its gamma spectrum along with Pocket PC or PC
- **Measurement** of photon radiation dose rate and contamination factor of the surface by alpha and beta sources.
- IRDA (IR channel) and Bluetooth® (radio channel) for the PC communication.
- Audible alarm and vibration alarm device for hidden detection.
- Operation as a pari of the expert analytical complex.