



POLIMASTER®

®

Innovating Radiation Detection Technologies Since 1992



# MULTIPURPOSE RADIATION MONITOR

## PM1403



α  
γ  
β  
η

USB  
RS 485  
Wi-Fi  
GPS  
GPRS



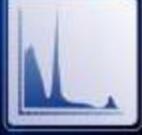
ALARM



LOCATION



MEASUREMENT



IDENTIFICATION



This highly versatile Hand-held radiation monitor is a robust spectroscopic and lightweight powerhouse. Connectability of four exchangeable smart probes, built-in CsI(Tl), makes the PM1403 ideal for the detection and locating of Alpha, Beta, Gamma, Neutron radiation sources. Add in the ability for precision measurement for alpha and beta contamination, dose rate measurements for gamma and neutron radiation, reliable spectroscopic identification of radioisotopes, and networkability provides a complete solution in one package.

With the built-in spectroscopic scintillation CsI(Tl) detector you can search, detect, and locate gamma radiation sources. Additionally the spectroscopic nature of this device allows you to collect, analyze, store, and view spectra files at will.

BDGI is based on the highly sensitiva spectroscopic scintillation detector material NaI(Tl). BDG1 is capable of search and spectroscopic functions.

BDGIH utilizes LaBr<sub>3</sub> scintillation material capable of search and spectrometry with better relativa energy resolution in comparison with BDG1.

Using an energy-compensated Geiger Muller tube at the BDG2 for precise measurement of the ambient equivalent dose rate of gamma radiation in the range of Background to 10Sv/h (1000 R/h).

BDN, Neutron radiation detection unit is intended to search, detect, locate, and provide readings on the relevant radiological environment.

Capable of detecting alpha and beta radiation, the BDAB is ideal for surface contamination surveys/flux density readings.

### Features

- Alpha, beta, gamma, neutron, spectroscopic external probes
- Built-in CsI(Tl) spectroscopic detector
- Built-in fast and reliable identification of isotopes
- Wi-Fi, GSM/GPRS wireless communication
- USB, RS485 - interfaces
- Built-in GPS receiver
- Audible, visual alarms
- Shockproof hermetic case

### Application

- First responders
- Customs and Border Patrol
- Police
- Emergency teams
- Law enforcement
- HazMat teams
- Security guards



Innovating Radiation Detection Technolo

# PM1403

## SPECIFICATIONS

	MAIN UNIT	BDG1	BDG1H	BDG2	BDN	BDAB
<b>Detector</b>	CsI(Tl)	Nal(Tl)	LaBr3	G-M tube	Slow neutron detector	Proportional counter
<b>Energy range</b>	gamma 0.05 - 3.0 MeV	gamma 0.03 - 3.0 MeV	gamma 0.03 - 3.0 MeV	gamma 0.03 - 3.0 MeV	neutron from thermal to 14.0 MeV	alpha 4 - 7 MeV beta 0.15 - 3.5 MeV
<b>Dose rate</b>	gamma 0.1- 40 µSv/h (10 µR/h - 4 mR/h)	gamma 0.1 µSv/h-1 mSv/h (10 µR/h - 100 mR/h)	gamma 0.1 µSv/h-1 mSv/h (10 µR/h - 1000 R/h)	gamma 0.1 µSv/h-10 Sv/h (10 µR/h - 1000 R/h)	neutron (Pu-Be sources) 1 µSv/h - 5 mSv/h (10 µR/h - 0.5 R/h)	-
<b>Flux density</b>	-	-	-	-	-	alpha 10- 5·10 <sup>5</sup> min <sup>-1</sup> cm <sup>-2</sup> beta 10- 10 <sup>6</sup> min <sup>-1</sup> cm <sup>-2</sup>
<b>Accuracy</b>	±30 %	± (20+2/H)%, where H - dose rate in µSv/h	± (20+2/H)%, where H - dose rate in µSv/h	± (20+2/H)%, where H - dose rate in µSv/h	± (30+10/H) %, where H - dose rate in µSv/h	± (20+A/cp)%, where A for alpha radiation - 10 min·cm <sup>-2</sup> , for beta radiation 100 min·cm <sup>-2</sup> , (j) - flux density in min·cm <sup>-2</sup>
<b>Relative energy resolution on <sup>137</sup>Cs</b>	not more than 7 %	not more than 7,5 %	not more than 3,5 %	-	-	-
<b>Integral nonlinearity</b>	not more than 1 %	not more than 0,5 %	not more than 0,5 %	-	-	-
<b>Size</b>	82x180x61 mm	290x70 mm	290x70 mm	162x40 mm	230x60 mm	72x45x130 mm
<b>Weight, not more than</b>	750 g (26.5 oz)	1300 g (45.9 oz)	1300 g (45.9 oz)	110 g (3.8 oz)	660 g (23.3 oz)	480 g (16.9 oz)



## MULTIPURPOSE MONITOR PM1403

<b>Data recording</b>	up to 1000 sets of data (including: time and date; spectrum; time of spectrum accumulation; dose rate (count rate, flux density); real time in measurement mode; error message)
<b>Alarm type</b>	Visual, audible
<b>Environmental protection</b>	IP65
<b>Power supply</b>	built-in accumulator
<b>Operation temperature</b>	-20 °C to 50°C (-4 °F to 122°F)

Design and specifications of the device can be changed without further notice.