

PACKAGE RADIATION MONITORING SYSTEM

Model # PIM-23B

FEATURES:

- AUTOMATIC DETECTOR SYSTEM FOR PACKAGE CONVEYOR
- RADIATION TRIGGER POINT IS CONTINUOUSLY ADJUSTABLE
- MANUAL OVERRIDE
- FIVE ENERGY (REGIONS OF INTEREST) WINDOWS

SYSTEM DESCRIPTION: The **PIM-23B** monitors packages while they are traveling on a conveyor belt.

Model **PIM-23B** Package Radiation Monitor is a sturdy, dependable, long life mechanical system with advanced electronics.

The detector is a 3" x 3" NaI Scintillator (**Optional:** 5" or 7" diameter) has its own electronics to give the greatest sensitivity.

Numerical measurement results are saved to the 60 Gig hard drive and are easily accessible for all packages: clean and radioactive.

Color LCD computer monitor shows measurement values from all 5 Energy Isotopes. Indicating lights show status as "CLEAN" or "RADIOACTIVE". The date, time and results of all data that day, that week and that year are available for display, print-out and safe storage.

Accessories: One set of calibration sources is supplied with **PIM-23B** Package Monitor. This consists of one each Ba-133, Cs-137, Co-60 calibration source standards. Each Source comes with NIST Traceable calibration certificate, test data, and Calibration Factors.

SPECIFICATIONS:

Conveyors:	Packages pass beside the detector, display shows status as "CLEAN" or "RADIOACTIVE/CONTAMINATED".
Detector:	Spectroscopic Grade 3" x 3" NaI Scintillation Detector. (Optional: 5" or 7" diameter)
Ultimate Sensitivity:	7 μ R/hr above background in 1 second.
Background:	Automatically subtracted.
Shielding:	2 cm lead over greater than 2 π . Lead shield is modular and easy to assemble (no piece over 65lbs.)
Electronics:	The Scintillation Detector has its' own PM tube. PMT base (dynode string circuit) Independent Modular high voltage and pre-amp discriminator. This provides improved sensitivity and easier maintenance if a PM tube is replaced.



PIM-23B



TECHNICAL ASSOCIATES

7051 ETON AVENUE * CANOGA PARK, CA 91303 TELEPHONE (818) 883-7043 * FAX(818) 883-6103

www.tech-associates.com

\$Revision: 1.2 \$

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SPECIFICATIONS (Continued):

Alarms:	Alarm threshold is continuously adjustable for each energy channel/ROI. High level alarm is user settable. Alarms are audio and visual plus screen display.
Operation:	Selectable: Continuous Mode, Calibration Mode
Computer System:	Pentium IV 1 Giga Hz. High Resolution Graphics Display 1024 x 768, 256 colors. Color LCD screen monitor on a movable arm for improved ergonomics.
Record Keeping:	All data automatically stored on 60 Gig hard drive. Data can be transmitted to other PC's by built in Ethernet connection (Optional: Telephone Modem). Graphics printer included. User can print tabular or graphical records of current day, week, month or year.
System Weight:	25 Kg plus Shielding.
Environmental Conditions:	45 ^o F to 100 ^o F, (8 ^o to 38 ^o C) 10% to 95% relative humidity, non-condensing
Power Supply:	100 - 120 V AC or 220 V 50/60 Hz with UPS
Battery Backup:	Uninterruptable "UPS" battery backup is supplied.
Energy Window:	Continuously adjustable for each energy window.
Data Analysis:	First individual channels and then combined channels. Noise rejection Background subtraction Energy Analysis Calibration and units conversion Statistical significance check. Alarm point trip level
Open Source:	All Technical Associates generated software is provided with source code to users.
Software Environment:	Technical Associates utilizes "Labtech notebook" software which allows user to make changes in system operation without being a programmer.
Electronic Functions:	Photo multiplier tube and base, Detector HV bias. Amplifier with 5 adjustable Energy Windows (Regions of Interest). Data sent to and acquired by PC. Data analysis. Alarm trigger. Data storage. Data printout. Optional: Data Transmission (Ethernet). System power UPS battery back-up.
Options:	Outlet Annunciator Panel. Spare detector plus other spare parts. Inlet Annunciator Panel. Calibration Jig. Wider Temperature Range. 5" or 7" diameter NaI Scintillation Detector. Additional Regions of Interest Energy Channels.



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