

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" Nal 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" Nal 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 \$

PACKAGE RADIATION MONITORING SYSTEM

Model # PIM-23B

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°F to 100°F, (8° to 38°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.



TECHNICAL ASSOCIATES

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

www.tech-associates.com

\$Revision: 1.2 \$