PASS THROUGH CART MONITOR WITH SCALE

Model ~ LIM-PC-11

FEATURES:

- GAMMA DETECTORS

- STOP AND COUNT OPERATION

- ALARM: AUDIO & VISUAL - USER SETTABLE

- TWO PASS THROUGH TOWERS & ONE OVERHEAD DETECTOR

  - **EACH TOWER HAS:**
  (5) PLASTIC SCINTILLATION PANELS – EACH PANEL:
      792 in^3 VOLUME EACH
      SENSITIVE AREA: 528 in^2 EACH

  - **OVERHEAD DETECTOR WITH :**
  (1) PLASTIC SCINTILLATION PANEL – EACH PANEL:
      792 in^3 VOLUME
      SENSITIVE AREA: 528 in^2

- **STANDARD:** DIGITAL WEIGH SCALE

- **OPTIONAL**: INTEGRATED PLACEMENT OF WEIGH SCALE IN BASE

- TOUCH SCREEN COMPUTER & SOFTWARE

- REAL TIME DATA DOWNLOAD & ARCHIVE

- USB / THUMB DRIVE AND ETHERNET

- SYSTEM COMPATIBLE WITH USER'S BAR CODE READER

- DIGITAL PRINTER

- DYNAMIC BACKGROUND SUBTRACT – EACH DETECTOR

- CONTINUOUS OPERATION: ``SET AND FORGET''

- ERGONOMIC BI-LATERAL ENTRY DIRECTION

- OPERATES ON AC

- BATTERY ``BACK-UP'' – RETAINS DATA AND PARAMETERS FOR 24 HOURS AND TEMPORARY SYSTEM USE

- **OPTIONAL**: REMOTE NOTIFICATION – PHONE, EMAIL, TEXT, ETC.

- **IP 62 DETECTOR;** IP 52 ELECTRONICS

TYPICAL 6 DETECTOR PASS THROUGH MONITOR.

THIS PICTURE DOES NOT REPRESENT THE

LIM-PC-11 WITH TOTAL 11 DETECTORS.

2 TOWERS (5 DETECTORS EACH)

1 OVERHEAD DETECTOR

APPLICATION:

The **LIM-PC-11** is suited for use in Nuclear Power Plants, research labs using radioactive materials, or in designated laundry facilities accepting garments and materials from industries utilizing radioactive materials.

DESCRIPTION:

Model LIM-PC-11 is a high sensitivity Gamma Monitoring system for determining possible radiation contamination in carts passing between the towers and under the overhead detector.

Please see the LIM (Laundry Monitor) Comparison Chart

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DESCRIPTION:

Model LIM-PC-11 is a high sensitivity Gamma Monitoring system for determining possible radiation contamination in, carts holding laundry and materials used within the facility. The 'pass through' is between two towers, each with 5 plastic scintillation sheets, and under the overhead detector. Monitor has bi-lateral exit/entry ergonomic ramps. Measurement process is a stop-and-count between the towers for higher sensitivity.

NOTE: Plastic scintillation sheets/slabs have higher sensitivity than cylindrical shaped scintillation crystals due to the larger surface area.

Background is continually updated and subtracted thus giving net contamination reading.

- **LIM-PC-11** includes the electronic control/alarm feature with (11) plastic scintillation sheets, (5) in each of two towers and one overhead detector.

- Each plastic scintillation sheet has 792 in^3 volume and & a sensitive area of 528 in^2 in each detector. Total sensitivity area of 2640 in^2 each tower. Total detector sensitivity area of 2 towers and overhead 5808 in^2 .

- A PM tube is matched with each scintillation sheet.

- Operates from 110/220 AC power main.

- Battery ``back-up'' – retains data and parameters for 24 hours and provides temporary system use.

- Since the operation of this instrument is based on radiation measurement, the system will reliably pick up contamination as it passes through the monitor.

SPECIFICATIONS:

Detectors - Plastic Scintillators:	(10) 12" W x 1.5" D x 44" H (30.4 cm x 3 cm x 112 cm) (2) Towers with (5) detectors in each.
Detectors - Plastic Scintillators:	(1) 12" W x 1.5" D x 44" H (30.4 cm x 3 cm x 112 cm) (1) Overhead with (1) detector.
Sensitivity Range:	<200 nCi of Cs-137 MDA In 10 Seconds
Net Activity:	10 nCi to 200 µCi
Net Specific Activity:	0.1 µCi/kg to 2 µCi/kg of Cs-137
Energy Range:	**Gamma:** 106 KeV to 1.7 MeV.
Detection Confidence:	95%
Power Requirements:	110/220 Volts AC, 50/60 Hz.
Power Connection:	Conduit or cable 6 ft. cable standard (Longer is available). Three Prong grounded connector.
Battery Back-Up:	Retains data and parameters for 24 hours and provides temporary system use.
High Level Alarm:	Flashing red light and intermittent 2900 Hz tone. (90 dB)
(4) Alarm Set Points - User Settable:	Low and High Activity Levels
Cables and Connectors:	All necessary cables and connectors included

ENVIRONMENT:

Temperature:	14º F – 104º F (-10º C TO 40º C)
Humidity:	RH (non-condensing) - 10 to 99%

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DISPLAY

Alarms:	Audio / Visual - User Settable
Touch Screen Controls:	Start, Reject / Reset, Bar Code By-Pass, Background Count Rate on Demand, Alarm Acknowledge and Reset
Engineering Units:	User Selectable
	Count (cpm, cps), **Activity** (Bq, nCi), **Specific Activity** (cpm/kg, Bq/kg, nCi/kg),
Display & Alarm Indicators:	Ready, Busy, High Background, Updating Background, Equipment Malfunction, Incomplete Count, High Activity, Low Activity,
Count Time:	10-second count
Communications:	USB for thumb drive - Built-in Ethernet.
Data Download Print Out:	Date, Time, Cart ID, Weight, Total Net Activity in nCi, Net Specific Activity in nCi/Kg, Summary Report
Weigh Scale Range:	Digital 0 lbs – 1102 lbs (0 – 500 kg)
Calibration:	Computer assisted with on-screen prompts for the four material types:

1. Cotton overalls and towels
2. Plastic suits
3. Mixed washables such as gloves and booties
4. Rubber hoses and respirator equipment

Computer:	Windows10, LIM-PC-11 System Software, Recovery Software, USB ports, Touch Screen Montor, Compatible with user supplied Bar Code system, Mouse, Keyboard, Local and Remote Logging capabilities, System is Network Aware

CONSTRUCTION:

WEIGHT & DIMENSIONS:

Dimensions:	Control Box / Computer: 16'' x 20'' x 10'' (40 cm x 50.8 cm x 25.4 cm) typical size
Detector Carts:	72'' H x 28'' W x 39'' L (183 cm x 71 cm x 99 cm)
System Towers (2):	Nominal Size of system to accommodate user's carts
Outside:	65" W x 78''H x 69'' L (165 cm x 198 cm x 175 cm) each, excludes the ramp dimensions and alarm beacon dimensions
Inside:	32.5" W x 76" H x 69"L (82.5 cm x 193 cm x 175 cm) each
System Weight:	Under 3,000 lbs (1,361 kg)
Platform:	Stainless Steel
Platform Max Load:	661 lbs (300 kg)
Shielding:	**Standard:** 3/8" steel Shielding each tower and overhead detector
	Optional: ½" Pb or ¾" steel

ACCESSORIES:

User Available Output:	5-amp SPDT Relay to operate other circuits.
Remote Alarm:	RAL-3W flasher, siren.

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OPTIONS:

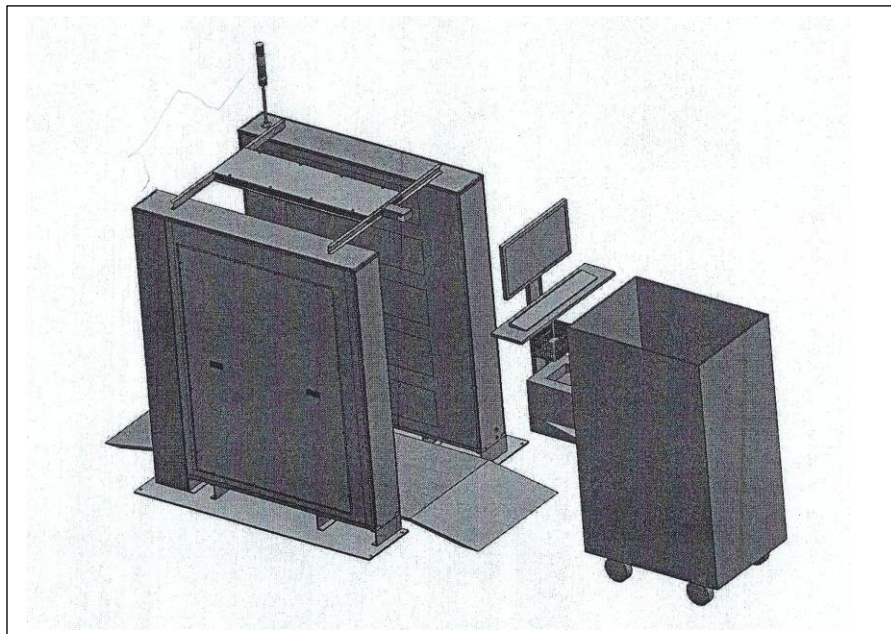|	
OPTIONAL:	**Check Source: Cs-137** source; license exempt.
OPTIONAL:	Video capture of 'pass through' triggered by alarm.
OPTIONAL:	Integrated placement of weigh scale in base
OPTIONAL:	Shielding - ½" lead or ¾" steel

LIM-PC-11 SET UP

PASS THROUGH CART MONITOR SYSTEM WITH SCALE