

CONTRABAND DETECTOR PM2030

DETECTION OF HIDDEN ITEMS

Purpose

PM2030 is a portable contraband detector for non-destructive inspection is used as a "smuggling detector" to detect hidden items (drugs, explosives, weapons, currency, etc.) inside the closed cavities of transport vehicles, freight containers, etc.

The device is indispensable in the field, where it is impossible to use stationary inspection equipment, and allows you to determine the location of contraband inside any enclosures, such as containers, fuel tanks, wheels, internal cavities of vehicles and trains.

The instrument is manufactured in two models:

- Contraband Detector **PM2030**
- Contraband Detector **PM2030 NB** without the Bluetooth interface for using the headset.

Functions

- Search for illegal objects
- Determination of the detected item compounds: plastic and 6 groups of metals, including 40 chemical elements (silver, lanthanum, gadolinium, tungsten, gold, lead, polonium, mercury, etc.)
- Library of the scanned objects
- Search for gamma radiation sources
- Data transfer to a PC via USB
- Telescopic extension for examination of large objects
- Vibration alarm in the handle for covered detection
- Bluetooth wireless audible alarm (PM2030)

Features

- Detection of hidden items (depth of scanning up to 150 mm)
- Modular design for the application in hard-to-reach places

Application

- Security and law enforcement services
- Customs protection
- Border control
- Police



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Design

The Contraband Detector features the plastic case and consists of two units: display and control unit and scan unit with rubber handle.

Operation Principle

In the operation mode the detector emits a beam of gamma radiation into the object being inspected and measures the backscatter.

PM2030 features the build-in radiation source ^{133}Ba with activity no more than 370 kBq. The source is housed within the lead safety container-collimator of the scan unit.

The intensity of the backscatter depends on the illegal object features (its density and size). The device is moved along the surface of the object. The change of the backscatter's intensity is displayed on LCD and accompanied with light, sound and vibration alarms. The frequency of alarm repetition depends on the size and density of the detected cavity or items.

The lead container-collimator provides the necessary narrow zone of the object radiation during examination and complete protection of the operator from gamma radiation.

Scanning specifications

When scanning behind 1 mm steel partition or 20 mm wood partition, with the speed no more than 5 cm/s, PM2030 detects hidden bars:

- | | |
|----------------|-----------------|
| • aluminum | 30 × 30 × 30 mm |
| • polyethylene | 70 × 70 × 20 mm |
| • steel | 30 × 30 × 10 mm |

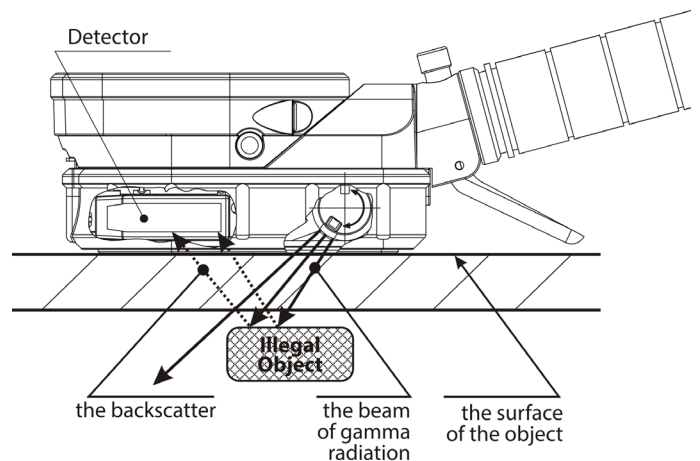
Alarms

- Visual
- Audible
- Vibration

Power supply

- from two AA (LR6) standard batteries of total voltage 3 V
- from two rechargeable batteries of total voltage 2.6 V
- from USB socket of PC (5 V)
- from AC power supply of 220V/50 Hz via adapter 220 VAC/5 VDC
- from car DC power supply via car USB adapter 12 VDC/5 VDC

Battery lifetime (up to low battery warning indication)
no less than 50 hours



Ingress protection	IP65
Mass , no more than	1.13 kg
Dimensions , no more than	284 × 87 × 98 mm

Reliability

- mean time between failures, at least 20000 hours
- mean service lifetime, for at least 10 years
- mean recovery time, no more than 60 min

Operation Conditions

- ambient air temperature from -30 °C up to 50 °C
- relative humidity (at 40 °C and lower) up to 98 %
- atmospheric pressure from 84 up to 106.7 kPa

Optional Accessories

- holster for carrying the instrument on a waist belt
- telescopic extension pole of 1.7 m and 3.6 m for inspection of the large objects
- wireless headphones (Bluetooth 4.0)
- carrying bag

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Quality management system
ISO 9001

- Customer focus
- Customer satisfaction
- Continuous improvement
- System/process effectiveness

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