RS DYNAMICS®

Science for Homeland Safety

EXPLONIX 2

Fast and reliable detection and identification of smallest traces of explosives together with all radioactive materials and gunshot residues

Instant 1 second detection
No radioactive source inside

Portable Trace Detector / Identifier Explosives & Radioactivity

MAIN FEATURES

- 1-second detection
- Advanced swipe mode and vapor mode with infra-red sampling
- Particulate Mode with identification
- Simultaneous explosives and radiological detection and identification
- The best false alarm rate
- Detection mode for Gun Shot Residues (GSR)
- Fast and easy self-cleaning after excessive exposure
- Patented, "Needle Sampler" for Analytical Particulate Mode
- Easy, user friendly one-botton operation with automatic data logging. Pre-set operation profiles quickly select optimal operaional parameters
- Full featured, built-in Gamma-Ray Spectrometer, running silently on background, detects and identifies radioactive contraband
- Optional Bar-Code Reader for instant identification of scanned subjects (baggage)
- Docking Station for continuous operation

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Specifications

EXPLONIX 2

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is a highly sensitive, portable, multi-functional explosives/radiological compounds detection and analytical system offering optimal power & flexibility for fast, reliable detection and identification of a wide range of explosive and radioactive material traces.

Detection and analytical range

- Explonix detects all ICAO standard and military/industrial explosives down to picogram level, including TATP and other home made explosives and all plastics (PETN/HMX/RDX based explosives) even with no taggant added

Sampling principles

- The revolutionary new Infra Red Continuous Vapour Mode instantaneously detects the presence of all explosive materials, including non-volatile explosives. This is the first principle, capable to sample and detect high vapour pressure (non-volatile) explosives (HMX, RDX, PETN based) in continuous vapour mode!
- Analytical Particulate Mode facilitates a highly effective sampling method. The new, patented "needle sampler" can collect even from the tiniest crevices or on flat smooth surfaces without any need for gloves and facilitates reliable detection even in heavy rain
- The innovative Cold Vapour Mode utilizes a new type of metal tube sampler and sampling technology that ensures maximum sensitivity with minimal loss of explosive material for subsequent detection. Suitable also for GSR (Gun Shot Residues) detection
- Analytical Particulate Mode provides detailed identification into basic root explosive components (PETN, TNT, NG, NC, HMX, RDX and others), also showing the volume of explosive material being sampled
- All the operational modes feature effective prevention against system saturation and/or overload. Sampling even extremly high concentration cannot cause false alarm and does not bring any cleaning problem.
- Both the measured data together with baggage identification (bar code registered) are automatically stored and optionally wirelessly sent to the airport data logistic system.
- Advanced technology enables fast and user friendly in-situ calibration and fast detectability verification, securing proper instrument operation at any time, anywhere, without any special lab equipment

Explosives section

- Output values: picogram reading
- Excellent Suppression of interfering compounds (perfumes, diesel exhausts, various odours, diesel fuel vapours, various desolvents and other organics)
- Detection time: 1 second for both vapor modes
- Detection range: all known explosives, upgradable
- Analytical time: < 30 second in Particulate Mode
- Warm-up time: 1 minute
- Cleaning time: typically 10 seconds up to several minutes in case of huge contamination

Radiological section

- Full-featured Gamma-Ray spectrometer with radionuclide identification and internal upgradable library, PC graphic spectrogram output and automatic background correction and calibration. Immediate response/alarm on exposure of smallest level of radiation.
- Sensitivity (static): 30 cps per MBq/m (Cs_137)
- Resolution: Better then 9% FWHM at energy 662 keV
- Energy Range: 20 keV - 3.0 MeV
- Number of Channels: 1024
- Radionuclide identification library: upgradable
- Calibration standard: Cs_137

General

- Warm-up time: 1 minute
- User-friendly one button operation
- Automatic system check on start-up
- Direct Internet Connection - no computer needed
- Remote operation via wire or wire-less Internet, providing full remote control of all operations, set-up, configuration and calibration, data download and system check from manufacturer
- Communication: USB 2.0, RS 232, RJ45 Ethernet, WiFi
- Data format: EXCEL spread sheet via EXPLONIX_VIEW software
- Operating system: Win10/Win7/Vista/XP/2000 compatible
- Dimensions: 105 x 260 x 170 mm (including handle)
- Weight: 3.2 kg without batteries, 3.9 kg including batteries
- Shipping weight: 13 kg (incl. transport case, calibration kit, docking station, accessories)
- Automatic calibration of all analytical channels
- Operates in a number of factory pre-sets and/or user-defined profiles, adapting the system capabilities to various application tasks and operating conditions
- Built-in Bar-Code reader
- Acoustic, visual or remote alarm for all channels
- Vapour sampling rate: 0.1 and 7 litres/min (GSR mode)
- Power Supplies: Internal Battery 21V, continuos charging in Docking Station powered by 100-240 V AC or 12 V DC
- One charge Battery Operation : up to 4 hours (detection mode only)
- Continuous operation in Docking Station
- Display: full graphic back-light
- Keyboard input: multi-function sealed keys
- Operating environment temperature: -10 to +54 °C (conditions specified in User Manual)

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