

I-SCAN IMS Hand-Held Trace & Vapors Detector for Explosives & Narcotics



LDS 3500-i



I-SCAN designed to detect trace quantities of low-volatile organic substances, LDS' I-SCAN provides a handheld sensor, detecting explosives, drugs and toxic substances in the air around controlled objects, on the surface of different objects or on fingers and clothes.

The I-SCAN can be used when inspecting territories, premises, mobile objects and cargo in checkpoints, during customs and border control, in expert criminology laboratories of different departments, analytical laboratories of industrial enterprises and scientific research organizations.

The scope of application for the detector:

- Vehicle, cargo and people inspection at customs control and military checkpoint
- Territories and objects inspection by environmental control services
- Suspects inspection by law-enforcement officials etc.

The I-SCAN is operated and serviced by a single person and is designed for work both in field environment (directly at the place of control) and under conditions of stationary and mobile specialized laboratories.

I-SCAN Advantages and Benefits

- Small light weight tri-mode of operation:
Explosives, Narcotics, Chemical agents
- Non-radioactive ionization source
- Doesn't require high-priced expandable materials
- Open database of substances with customer updating and expansion possibility
- Wide range of detected chemical agents including home-made peroxide explosives



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General Information

I-SCAN Detector operating software analyzes the peaks of received range of inspected substances, using mathematical expectation (assembly average) and time dispersion, corresponding to peaks with target substances taken from the systems' library.

Basic Features

Technology	Ion Mobility Spectrometry (IMS)
Sample collection	Trace particle and vapor
Overall dimensions of the detector, mm	110x162x410
Weight, kg	3
Measurement range of normalised (reduced) mobility of analyzed ions, $\text{cm}^2\text{V}^{-1}\text{s}^{-1}$	0.5 – 3.0
Detection range of low-volatile organic substances based on 2,4,6 trinitrotoluene (TNT), g	$1.0 \cdot 10^{-11}$ – $2.0 \cdot 10^{-7}$
Threshold for detecting low-volatile organic substances based on 2,4,6 trinitrotoluene (TNT)	
- particulate matter, g	$1.0 \cdot 10^{-11}$
- based on vapours, g/cm ³	$1.0 \cdot 10^{-14}$
Time for operating mode start-up, min	15
Measurement time, s	< 5
Time of changing the type of analyzed ions (negative or positive), min	< 1 – 2
Possibility of false response, %	1
Time of continuous autonomy work with regular block of accumulation batteries, hour	2
Time of detector cleaning under regular operating conditions, min	3

I-SCAN has a combined sampling apparatus allowing both sampling of air containing vapors and suspended particulate matter and sampling of particles collected on a special sampling wipe.

Vapor detection



Insertion of the sampling wipe

