

Explosives Vapor Detector Pilot

Pilot-M1

Has no radioactive source and is absolutely safe for operator and environment



Opportunities and advantages

Pilot-M1 is intended for detection both vapor and trace amounts (microparticles) of explosives (type DNT, TNT, HMX, PENT) at surface of various objects. Detection is ensured by taking air samples from inner space of inspected objects and their subsequent analysis. Remote trier with grid thickener (part of delivery set) allows to take samples in dusty and smoky areas. Special software allows comparing registered spectrum to typical spectrum of pure and mixed explosives and sending it to a remote PC.

Technical characteristics

Detected explosive vapours	TNT, EGDN, PETN, cyclonite, NG and compositions on their base
Sensitivity threshold (TNT sample) at 20 ± 2 °C, not worse than, g/cm ³	10-13
Response time, sec	1
Readiness time, sec	10
Remoteness at taking air samples up to, sm	10
Alarm indication	Visual and audible
Dimensions, mm	310 x 190 x 90
VD mass (incl. rechargeable battery), kg	1.8
Power source	DC 7.2V rechargeable battery / AC (190-242)V 50 Hz
Battery life at least, hours	4
Operating conditions:	
- temperature, °C	from + 5 up to + 40
- humidity at 25 °C, %	up to 90

The list of substances which could be detected by Pilot-M1

Nitroglycerine (NG), EGDN, trinitrotoluene (tol, trotyl, TNT), PENT (tetranitrapentaerythrit, pentaerythrittetranitrate, Pentrit, PETN), hexogen (RDX), oktogen (HMX), tetryl (Tetryl), threeacetoneethreeperoxide (Cycloethreacetoneethreeperoxide, TATP) and nitrocellulose powders, engaging mixing explosives on their ground: Semtex and other plastic and elastic explosives on the basis of RDX, PENT or their mixture, B-type compositions (TT-20, TT-40, TT-60, TT-80, MC, ТТАФ)*, C-type (C1, C2, C3, C4, ПБВ-4*, ПБВ-5А*, ПБВ-7*, ПБВ-12М*, ЭБВ-11*, ЭБВ-32* and etc), H-6, HBX, Minol-2, Amatol (ammatal, ammonite, 6-ЖВ*), Primacord, Primasheet, Tetritol, Tritonal, Cordit N, A-IX-1, A-IX-2, A-IX-20, octols*, ocfol*s* and some other mixing explosives.

* - explosives of Russian origin

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Pilot-M1 Premium

The Premium model distinguishes with color LCD monitor to display ionogram using which the operator is able to identify type of explosive detected



Opportunities and advantages

Gas analyser of explosives Pilot-M1 Premium is intended for detection of explosives in non-tight volumes and traces of explosives on a surface of surveyed objects. Detection is carried out by sampling air from internal volumes of surveyed objects or from their surfaces and the analysis of tests on contents of characteristic components of explosive vapor.

Signal level and ionogram of the test are displayed on the color graphic display of the device. Position of the 'peak' of the ionogram makes it possible to draw a preliminary conclusion regarding detected explosive. Device's memory stores information about more than million ionograms.

Technical characteristics

Explosives substances under identification	NG, TNT, EGDN, RDX, PENT and etc.
TNT Threshold Sensitivity (under +20°C, 80% humidity)	not less 10-13 g/cm ³
Warm-up time	no more 10 sec.
Analysis time	no more 1 sec.
Indication	Audio & LCD
Power Supply:	
- AC (via 12V adapter - supplied)	100...240V / 50...60 Hz
- DC (1 rechargeable batteries - supplied)	7.2V 31.7 Wh
One battery pack continuous operation time	
- in «SEARCH» mode	not less 5 h
- using sample heater	not less 3 h
Operation conditions:	
- Temperature	+5°C...+40°C
- Relative humidity	up to 90% (under +25°C)
Survive after strong environment effect:	
- Temperature	-50°C...+50°C
- Relative humidity	98% (under +25°C)
Storage conditions:	
- Temperature	+5°C...+35°C
- Relative humidity	80% (under +25°C)
Main Unit:	
- Dimensions	300x180x90 mm
- Weight (with battery)	1.8 kg
Total weight in carrying case	no more 7.5 kg

Delivery set:

- Pilot-M1 Premium
- Test unit (Imitator)
- Sample Heater
- Self-contained Gauze Sampler Pump
- Metallic Gauze Sampler - 3 pcs.
- Special Swab Sampler - 30 pcs.
- Power cable for the Charger
- Charger
- Rechargeable Battery - 2 pcs.
- Tweezers
- AC / DC Adapter
- USB cable
- User's Manual
- Carrying case
- 15. Software