

Product Specification



Part No.: 1880000

Drawing No.: DC 0010 G 001

Category: Basic Equipment

Description

The DE-tector flex is a trace explosives and narcotics detection instrument.

Sampling

Sample Collector Strips are used to swab a sample from a surface and are then inserted into the DE-tector flex for analysis.

Technology

The DE-tector flex operates on the principle of Ion Mobility Spectrometry (IMS).

Features

A non-radioactive source is used for sample ionisation utilising photoionisation lamps.

The DE-tector flex contains a one tube IMS therefore positive and negative product ions are identified simultaneously.

The DE-tector flex Control software is accessed using an integrated touchscreen and comprehensive easy to operate user and administrator command and menu functions.

An integrated thermal printer supports black and white report printouts.

Different substance libraries facilitate individual adaption to the trace detection task.

The integrated data logger provides all analytical results.

Consumables and Maintenance

The replacement of consumables (e.g. Battery Pack, Dust Filter Pad, and Thermal Paper) is a simple operator task.

No preventive maintenance is required.

Product Specification

Size and Weight

Size (approx.)	L x W x H: 415mm x 335mm x 305mm
Weight (approx.)	10,3kg
Colour Code	Steel blue (RAL 5011), Light grey (RAL 7035), matt with fine structure

General Specifications

Ionisation Source	Non-radioactive ionization source (Photoionization)
Dopant	Ammonium Carbamate ($\text{NH}_4\text{COONH}_2$) Hexachloroethane (C_2Cl_6)

Electrical Interfaces

Power	100V AC to 240V AC 50 Hz to 60 Hz 150 W nominal (250 W maximal) IEC-60320 / C14
ON / OFF Switch	On top of the DE-tector
Data (LAN)	Gigabit LAN RJ45
Data (USB)	2x USB 2.0 Type A / 2x USB 3.0 Type A

Mechanical Interfaces







Sample Inlet	Front side of the instrument
Fittings	none
Transport Handle	Carrying handle fixed on both sides of the instrument.

User Interfaces

Display	10.4" TFT-LCD Touchscreen display located on the top of the DE-tector flex
Printer	Thermal roll printer on the rear side of the DE-tector flex

Product Specification

Modes of Operation

Selftest 	<p>Immediately after switch on DE-tector flex carries out a start-up and instrument selftest procedure automatically.</p>
Ready 	<p>The DE-tector flex is ready for operation. The next sample can be inserted (traffic light is green).</p>
Busy 	<p>A yellow traffic light indicates that the DE-tector flex is conducting a measurement. If the DE-tector flex could not find a substance the Ready indicator will display a negative result. A short self-test getting the instrument ready for the next detection task is subsequently conducted automatically.</p>
Alarm 	<p>The DE-tector flex has a positive detection result. A substance is identified and an alert will be released.</p>
Function Test 	<p>The Function Test (using the Test Marker) checks analytical capability and indicates a positive result by generating an alarm and detection display.</p>
Semi-Quantification 	<p>The bar graph gives an estimate of the quantity of the detected substance.</p>
(Error indication)	<p>Turns off damaged components automatically and displays an error message and /or code.</p>

Product Specification

Performance Data

System Availability	24 hours a day, 7 days a week
Continuous operation	1EA Battery Pack Li-Ion, Rechargeable PN 1849555 Runtime @ +20°C: ~1h (recharging: ~2h) Maximum 2 batteries can be used simultaneously
Detectable Substances (Explosives)	Ammonium Nitrate (NIT), Urea Nitrate (NIT), Nitroglycerine (NG), Pentaerythritol tetranitrate (PETN), Trinitrotoluene (TNT), 2,4-Dinitrotoluene (DNT), Tetryl (TET), Hexogen (RDX), Octogen (HMX), Hexamethylene triperoxide diamine (HMTD), Triacetone triperoxide (TATP), 2,3-dimethyl-2,3-dinitrobutane (DMNB), Black powder (BP) Ethylene glycol dinitrate (EGDN) Erythritol tetranitrate (ETN)
Detectable Substances (Narcotics)	Morphine (MORPH), 3,6-Diacetylmorphine (Heroin) (HER), Cocaine (COC) Cannabinol (CBN), Δ 9-Tetrahydrocannabinol (THC), 6-Acetylmorphine (6-AM), Amphetamine (AMPH), Methamphetamine (METH), 3,4-Methylenedioxyamphetamine (MDA), 3,4-Methylenedioxy-N-ethylamphetamine (MDEA), 3,4-Methylenedioxy-N-methylamphetamine (MDMA), Lysergic acid diethylamide (LSD), Phencyclidine (PCP), Ketamine (KET) Ephedrine (EPH)

Product Specification

Sample pick up	Particle swab samples from surfaces
Ready for Operation	< 10 minutes (20°C ambient temperature)
Processing Time	< 7 seconds for explosives < 7 seconds for narcotics
User administration	Integrated user management, whereby individual user and access rights are installed by the administrator.




Environmental Parameter and Measurements


Storage Temperature	-20 to +60°C
Operating Temperature	-10 to +55°C
Operating Humidity	0 to 95% RH, non-condensing
Ambient Pressure Range	570 to 1050mbar, absolute (1)
Noise level	< 50dB(A) (2)
Environment Measurement Procedures	
IEC 60529 (11/89) IP 20	passed
Electromagnetic Compatibility	
EN 61326-1	passed
Transport Safety	
EN 60068-2	passed
Product Safety	
CE Marking IEC 61010-1, RoHS	passed

1 validation in process 2 at a distance of 1m

Product Specification

System Configuration, Accessories, Consumables and Spares, Training


PN	System Configuration	Picture
1880000	Basic Device DE-tector flex 10.4" TFT Touchscreen Including: 1EA Cordset Continental Europe CEE7 1EA Cordset United Kingdom BS1363 (13A Fuse) 1EA Cordset North America NMEA5 1EA Battery Pack Li-Ion, Rechargeable 72Wh 14,4V Instrument language: German	
1880000FRA	Basic Device DE-tector flex Instrument language: French	
1880000ENG	Basic Device DE-tector flex Instrument language: English	
1880000SPA	Basic Device DE-tector flex Instrument language: Spanish	
1880000CHN	Basic Device DE-tector flex Instrument language: Chinese	
Basic Equipment for DE-tector flex consisting of:		
8702515	Sampling Wand (for detailed specification see Accessories)	
8702660-E	Sample Collector (pack of 120) (for detailed specification see Consumables and Spares)	
1856872	Test Marker ETD (for detailed specification see Consumables and Spares)	


PN	Accessories	Picture
1872213	Transport Container DE-tector flex Storage capability for: Basic Device, Sampling Wand, Empty case for accessories/ consumables	

Product Specification

PN	Accessories – Power Supplies	Picture
1849555	Battery Pack Li-Ion, Rechargeable 72Wh 14,4V 5,0Ah Charge/discharge cycles: ~300 (given normal storage & usage)	
8702515	Sampling Wand Allows sample collection without the risk of probe and material contamination caused by the operator.	
8703384	Telescopic Rod Extension for Sampling Wand Length 0.5 to 2.5m	
PN	Consumables and Spares	Picture
8702660-E	Sample Collector (pack of 120) Sampling Strips for introduction of samples collected in standard operations. Suitable to use with Sampling Wand.	
8273163	Solution Strip (pack of 120) Sampling Strips for introduction of liquid samples and laboratory applications.	
1852371-E	Thermal Paper, DE-tector flex (pack of 5) Roll specification: width 56,5mm / diameter 31,5mm / thickness 55µm / thermal coating outside	
8703439	Nitrile Gloves Size 9 (pack of 100) Powder free, ambidextrous, non-sterile, single use, beaded cuff, 0.12mm thickness	
1856872	Test Marker ETD Confidence sample used to check the analytical capability of the instrument.	
1850971-E	Dust Filter To prevent a contamination of the DE-tector flex with rough and fine dust.	
1852968	Consumables, Set, DE-tector flex One set consisting of: 1x Drying Filter, packed 1x Dopant, DE-tector flex, packed	
1859167	Annual Maintenance, Set, DE-tector flex One set consisting of: 1x Disposable In-Line Adsorber: DIA-MNCC 1x Syringe Filter Ø15mm 1-2µm Retent.range 1x Condensate Trap 50cc	

Product Specification

PN	Documentation - Manuals	Picture
1852973	Operator Manual DE-tector flex Document language: German	
1852974	Operator Manual DE-tector flex Document language: English	
1852970	Administrator Manual DE-tector flex Document language: German	
1852975	Administrator Manual DE-tector flex Document language: English	
1852972	Maintenance Manual DE-tector flex Document language: German	
1852976	Maintenance Manual DE-tector flex Document language: English	
1859471	Manual-deu CONOPS DE-tector flex Document language: German	
1859473	Manual-eng CONOPS DE-tector flex Document language: English	
1839500	Manual-deu Operator DE-Control Center Document language: German	
1840540	Manual-eng Operator DE-Control Center Document language: English	

PN	Software	Picture
1853522	Sw-Pckg DE-tector flex Tools 1.0 Program language: English Software includes: Software CD and licenses key for DE-tector flex Tools required manuals: Administrator	
1853523	Sw-Pckg DE-tector flex 1.0 AdminPRO Program language: German, English, French, Chinese Package includes: Software CD and licenses key for DE-tector flex AdminPro required manuals: Operator and Administrator	
1841100	Sw-Pckg DE-tector Control Center 2.1 Program language: German, English, French Package includes: Software CD and licenses key required manuals: Operator, Administrator, Detector Control Center required software: Sw-Pckg DE-tector 1.0 Administrator PRO	

DE-tector flex (Basic Equipment)



Product Specification

PN	Training
DAL09592	Operator training Detector flex at manufacturer premises. (1 day) Maximum number of participants: 10
DAL09611	Operator training Detector flex at customer site. (1 day) Maximum number of participants: 10
DAL09593	Administrator training Detector flex at manufacturer premises. (1 day) Maximum number of participants: 10
DAL09612	Administrator training Detector flex at customer site. (1 day) Maximum number of participants: 10
DAL09051	Maintenance training Detector flex Level 2 at manufacturer premises. (2 days) Maximum number of participants: 4
DAL09613	Maintenance training Detector flex Level 2 at customer site. (2 days) Maximum number of participants: 3
DAL09052	Maintenance training Detector flex Level 3 at manufacturer premises. (3 days) Maximum number of participants: 4
DAL09614	Maintenance training Detector flex Level 3 at customer site. (3 days) Maximum number of participants: 3

PN	Warranty extension
DAL09599	CBRNE warranty extension Detector flex Warranty extension for 12 months

DE-tector flex (Basic Equipment)



Product Specification

Dimensions DE-tector flex (1880000)

