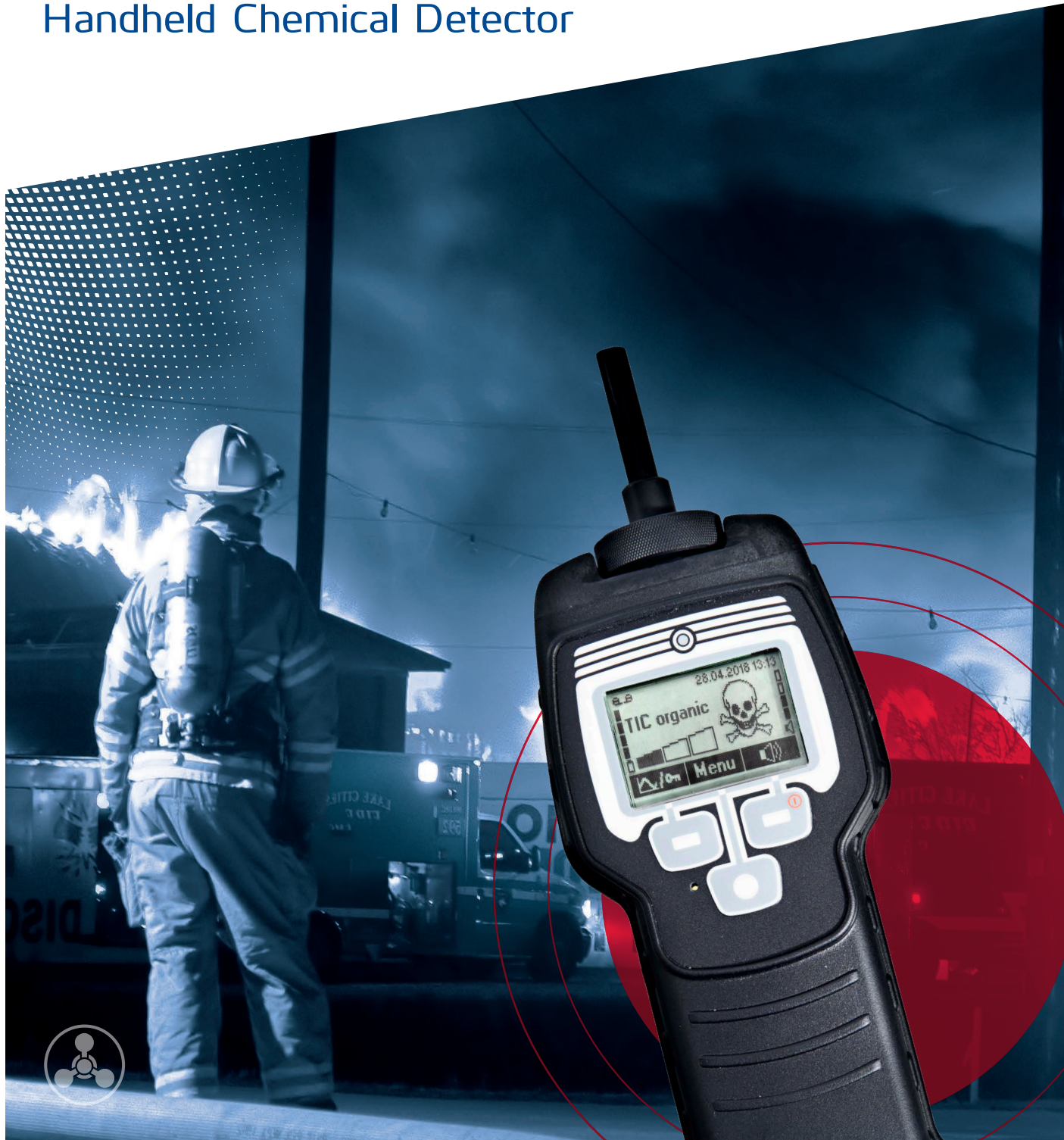# ChemPro100i

Handheld Chemical Detector

- Industry leading TIC and CWA detection
- Improved selectivity and sensitivity
- Unique trend display

Environics

For your SAFETY

ChemPro100i

Handheld Chemical Detector

The ChemPro100i is a handheld detector for field detection and classification of selected Toxic Industrial Chemicals (TICs) and Chemical Warfare Agents (CWAs). It provides industry–leading sensitivity and false alarm rejection in the most user friendly and low–maintenance package in its class.

Instead of conventional chemical warfare the defence and security organizations are facing new threat scenarios. Chemical accidents, terrorism or criminal activities are the actual challenges soldiers and first responders have to prepare for on a daily basis. Today's operating environment requires new versatile response tactics incorporating innovative detection equipment.

KEY FEATURES

- Widest range of detectable chemicals
- Simple maintenance
- Easy to operate
- Versatility (CWA/TIC)
- Minimal false alarm rate
- Low life-cycle costs
- Radiological and Biological detection with add-on modules

APPLICATIONS

- Locating leaks and faulty containers
- Monitoring of industrial sites
- Chemical safety of harbors and railways
- Customs and border control
- Monitoring of mass events and high security meetings
- Law enforcement agencies

Multisensor Detection

The ChemPro100i uses an array of detection technologies to detect, classify and measure chemicals enabling simultaneous detection of the widest range of chemicals. The ChemPro100i is a truly orthogonal detector, it's heart remaining the Environics' unique open-loop Ion Mobility Spectrometry (IMS) sensor. The performance is improved with additional sensors that provide a wider range of detectable TICs and improve false alarm rejection.

Why Survey Sensors are needed?

In order to protect themselves and other citizens first responders needs tools to quickly detect if there are some toxic or chemicals in the air. Compared to traditional CSE detectors survey sensors, like ChemPro100i, can quickly tell where the gas or vapor is coming from and gives an idea how much there is. With ChemPro100i first responders achieves better detection capability and receives more information than just with Photoionization detectors (PIDs).

Unique Trend Display

Trend display shows the total output from all of the seven sensors and enables to see concentrations below alarm levels. The trend display is extremely useful for locating leaks and chemical sources and it also gives you information regarding the vapour pressure.

Easy to Use

The ChemPro100i features an intuitive, graphical user interface with large menu buttons which are easy to use even when wearing protective equipment with heavy gloves. Interchangeable Li-Ion batteries can be quickly swapped out with a 6-AA battery pack without the use of any tools.

Add–On Modules

The ChemPro100i capabilities can be easily expanded to a full CBRN detection system by utilizing unique cost effective external plug-and-play add-on modules.

The ChemPro100 Radiation Detection Module enables the ChemPro100i to detect traces of gamma and X-ray radiation. The current dose rate, the accumulated dose reading and alarms are indicated on the display of ChemPro100i.

The ChemPro Reader Module adds new functionality in the form of handheld biological detection. It is intended for reading Envi Assay System lateral flow immunoassay tests. The Reader Module stores the test data for evaluation after the mission.

ChemPro100i and Accessories

1. ChemPro100i Chemical Detector
2. Test Tube
3. Filter Set (incl. 3 filters)
4. Field Monitoring Cap
5. Li-ion Battery
6. Alkaline Battery Pack
7. Mains power Supply
8. Carrying Pouch
9. Transit Case
10. User Manual
11. Quick Reference Guide
12. Battery Charger
13. ChemPro100 Earphone
14. ChemPro100 Radiation Detector Module
15. ChemPro Reader Module
16. Environics USB Cable (optional)
17. Power/Data Adapter (optional)

ChemPro100i SAK (Standard accessories kit) includes accessories 1-4, 5 or 6 and 7-11.
Accessories 1-15 are included in ChemPro100i CBRN kit

Technical Data

Size	Approx. 230 x 101 x 57 mm (9"L x 4"W x 2"H)
Weight	Approx. 880 g (31 oz.) (w/Li-Ion battery)
Sensors	Orthogonal detection using: • Open-loop (aspirated) IMS cell • Multiple semiconductor sensors • Temperature, humidity, pressure and mass flow sensors
Detection Libraries	Multiple TIC and CWA Libraries available
Battery	Easily interchangeable Li-Ion rechargeable and alkaline (6xAA) packs
Operating Hours	Approx. 8 hours continuous use on rechargeable Li-Ion Up to 12 hours continuous use on AA-batteries
Battery Recharge Time	Approx. 5 hours using the standard power supplies Unit will run and charge simultaneously
Power	110 – 250 VAC, 50 – 60 Hz ChemPro100 Mains Power Supply (standard) 9.5 – 32 VDC ChemPro100 Vehicle Power Supply (optional)
User interface	Graphical LCD display with white backlight and 3 operation keys
Sampling	1,3 LPM internal pump with continuous airflow
Calibration	No calibration is required, but a simple confidence check is recommended before use
Alarm Modes	Audible (adjustable up to 85dB) and visual alarms
Temperature (Operating)	-30 °C to 55 °C (-22 °F -131 °F) up to 80 °C (175 °F) temporarily
Temperature (Storage)	-40°C to 71 °C (-40 °F -160 °F)
Humidity	0-95% non-condensing

Dust & Water Resistance	IP67: Dust tight (resists blowing sand MILSTD-810F) and protected against water immersion when inlet is closed
Shock & Vibration Resistance	High impact composite case passes vibration & drop tests (MIL-STD-810E)
EMI/RFI Interference	Highly resistant to electromagnetic & radio interference and doesn't generate disturbing electromagnetic interference
Other Features	RS-232 / USB communication port User adjustable data logging. Optional User Interface Program needed for downloading the data to a computer.
Warranty	1-year standard warranty 2, 3, 4 and 5 year warranties available

Optional Accessories

Radiation Detector Module

Size	Approx. 103 x 74 x 43 mm
Weight	Approx. 150g
Detected Radiation	Gamma and X-ray radiation
Dose Rate	0.04 μSv/h to 100 mSv/h
Energy Range	From 50 keV to 1.3 MeV
Response Time	Fast mode 2,5 seconds Normal mode 3 min. at ambient radiation levels

ChemPro Reader Module

Size	Approx. 120 x 55 x 60 mm
Weight	Approx. 245g
Memory	100 test results

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