

CBRN Detection and Monitoring

Fixed Chemical Detector – Type ChemFx1



European EMC Products

Technical Datasheet



The ChemFx1 is a permanently mounted gas and vapor detector that provides continuous 24 hour 7 day a week protection of fixed infrastructure from the threat of Chemical Warfare Agents (CWAs) & selected Toxic Industrial Chemicals (TICs).

It has industry-leading sensitivity and false alarm rejection in the most user friendly and low-maintenance package in its class.

Key Features

- Industry leading sensitivity & false alarm rejection
- Robust design - indoor & outdoor applications
- Simple maintenance – low lifecycle costs
- Continuous use 24/7/365
- Easy integration to 3rd party systems
- Extensive and customizable TIC detection

Applications

- Fixed and mobile detection systems
- Shipboard applications
- Critical Infrastructure Protection
- Subway security systems
- VIP protection solutions
- Area monitoring systems
- Industrial chemical vapour monitoring



Multi Threat Capability

Effective critical infrastructure protection calls for innovative and sophisticated solutions. The security systems must have the capability of coping with multi-threat scenarios.

The ChemFx1 has been designed to handle these demanding requirements. It can be used in a wide range of applications ranging from buildings, area-monitoring solutions to shipboard installations.

Orthogonal Detector

The ChemFx1 draws in air samples using a continuous pump and then uses an array of detection technologies to detect, classify and measure gases and vapours.

A truly orthogonal detector that uses an array of sensing technologies, the heart of the ChemFx1 is a proven and unique open-loop Ion Mobility Spectroscopy (IMS) sensor.



For Further Information Visit: www.euro-emc.co.uk

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Life-Cycle Costs and Logistics

The ChemFx1 doesn't have to purify or chemically modify the sample with sieves or dopants, unlike traditional closed-loop IMS.

Because of this the ChemFx1i has no expendables and is designed for low life cycle and operating costs.

Predictable Maintenance

The ChemFx1 built-in self-diagnostics technology monitors device status ensuring correct operation of the unit at all times.

This feature allows managers to schedule maintenance rather than just responding to failing CWA monitors.



Mounting and Interface

The small size and innocuous housing of the ChemFx1 allows for easy installation in structures, subways and outdoors.

ChemFx1 supports Ethernet connection and RS485 bus. It also provides relay outputs for "Alarm" and for "Service/Maintenance/Fault" that can be used for triggering local or remote alarms or controlling ventilation systems.

Flexible Multi Library Operation

The standard ChemFx1 comes loaded with a list of chemicals (called a "library") that includes all CWAs and wide range of TICs.

However, custom libraries can be created for various threat scenarios and for industrial applications where 24x7 monitoring of a specific TIC or list of TICs may be required.

Technical Data

Size	Approx. 270x360x110mm (10.7"H x 14.2"W x 4.4"D)
Weight	Approx. 8.3 kg/18.3 lbs (7.0kg/15.4 lbs w/o back-up battery)
Detectors	Orthogonal detection using: Open-loop (aspirated) IMS cell Temperature, humidity, pressure and mass flow sensors
Detection	CWA/TIC library as standard
Power	85-264 VAC (50-60Hz) with battery backup or 10-40VDC

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Sampling	Approx. 1,3 LPM with long lifetime built-in pump unit
Calibration	No calibration is required, but a simple confidence check as needed
Data Interfaces	RS485-Bus Current Loop input for external devices Relay output for Alarm Relay output for Service/Maintenance/Fault Ethernet (Optional)
Temperature (Operating)	-22°F -131°F (-30°C to 55°C)
Temperature (Storage)	-40°F -160°F (-40°C to 71°C)
Humidity	0-95% non-condensing
Dust & water resistance	IP65: (Totally protected against dust and protected against low pressure water jets)

About Us

Established in 1996, European EMC Products (EEP) are an established British company whose experience and understanding of the science of shielding makes it an ideal partner in whom you can place your trust with confidence. The purpose of installing EEP shielding systems is to protect people and equipment against the threats posed by electromagnetic and radio frequency (RF) interference, radiation, magnetic fields and electromagnetic pulses. Our diverse range of turnkey products and services, including design, project management, testing and consultancy are delivered across multiple sectors to an international client base.

Quality

European EMC Products Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901. Registered Scope: The design, assembly, installation, servicing and testing of RF Shielded Structures and equipment including EMI Shielding, Blast Doors, Gas Tight Doors and specialised mobile Electromagnetic Pulse Protection (EMPP) containers.

Radio Frequency, Magnetic Shielding and Quench systems for MRI (Magnetic Resonance Imaging) scanners. The design, assembly and installation of Ionising Radiation Protection facilities.

The design, manufacture and installation of LED lighting systems for medical applications.

EEP Filters Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.

Registered Scope: The design, manufacture, management of installation and testing of high performance EMC and EMP Power and Data Line Filters.

Disclaimer

NB: All the information provided within this datasheet is for reference only. Product specifications are subject to change without notice.