



SAFETY & SECURITY

Critical Infrastructure Protection

Toxic Gas Threat Mitigation – Bruker **TIMON**

Innovation with Integrity

Choose Innovation – Choose Bruker

Bruker is recognised as the leading authority on the use of detection and identification technologies to mitigate the threat from the accidental or deliberate release of toxic gases, explosives and radioactive materials that could kill and injure civilians.

We offer the world's most comprehensive range of threat detection and identification solutions and can help you to assess how these can be best employed to protect people and property.

We develop, manufacture and supply technology worldwide for a range of customers and end users that need to protect people and property.

These include, but are not limited to governments, commercial enterprises and multi-national corporations who need to protect their employees and clients from the ever-increasing threat from terrorism.

Bruker is strongly committed to meeting its customers' needs by continuing to revolutionise the design, manufacture and distribution of detection tools based on our core technologies; by providing solutions that are regarded as the 'Gold Standard' by threat mitigation experts.



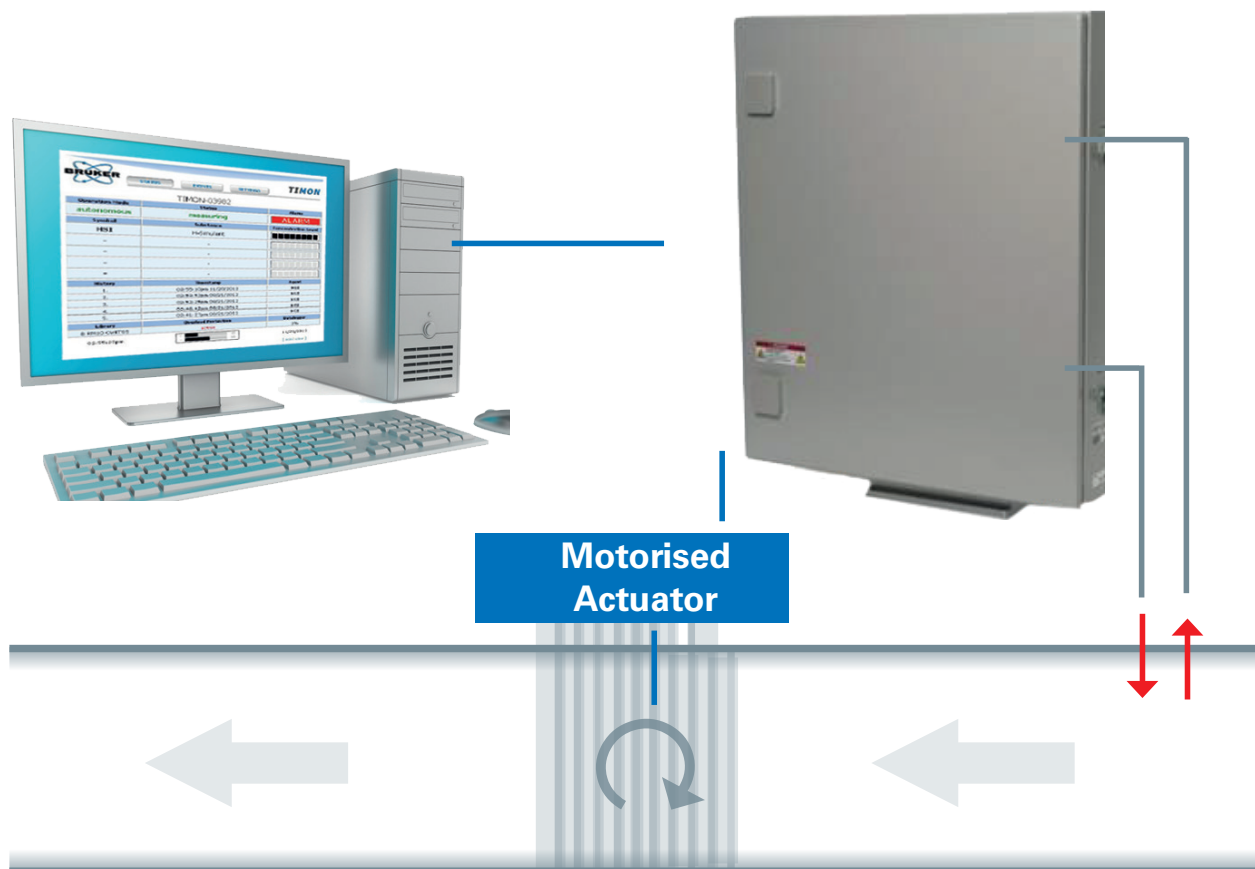
Bruker TIMON

Protection Critical Infrastructure

Many countries have, or are working towards, a strategy for the protection of their critical infrastructure. Critical infrastructure includes, but is not limited to airports, power plants, banking and finance centres, water supply systems, governmental institutions, transportation and health services. These facilities, services and institutions require an appropriate level of protection. Incidents directed at Critical Infrastructure such as a terrorist attack or a natural disaster could have a major impact on the civil population, on health and safety, on the economy and potentially on the smooth running of government.

The Bruker TIMON (**T**oxic **I**ndustrial **M**onitor) is an installed air monitoring system designed specifically to help protect people from the threat of death or injury by providing an early warning of the release of toxic chemicals; either accidentally or deliberately. TIMON is configured to detect all Chemical Warfare Agents (CWA) and several Toxic Industrial Chemicals (TIC) at ultra-low levels, and to provide a rapid alarm and identification of the threat within seconds. During this detection and identification phase, TIMON also quantifies the concentration of the substance that has been detected; so the threat level can be judged.

TIMON can be configured to either produce alarms or, more importantly, to take corrective action by, for example, interfacing with the air intakes of the facility (HVAC inlets). Operating in an autonomous mode, TIMON can initiate closing the air intake(s), shutting down the HVAC system, or diverting the airflow when a chemical threat is detected at the intake.



Applications





- Detecting air-borne chemical threats in underground railways
- Monitoring air supplied to office blocks and banks
- Atmosphere monitoring in emergency evacuation shelters (ColPro)
- Protecting Parliament/Assembly Halls and other Government buildings
- VIP and delegate protection at high profile events

For installations such as underground rail systems, where members of the public move freely, TIMON has been designed for covert installation. Externally designed as an innocuous piece of electrical switchgear; it has no obvious function and does not display status lights or alarms. This approach ensures the product function is not readily identified and therefore does not attract unwanted attention. When local regulations require TIMON to be secured out of sight, a sample line can be run from the installation to a sampling point up to 15 metres away by using the Bruker Air Sampling Unit (ASU).

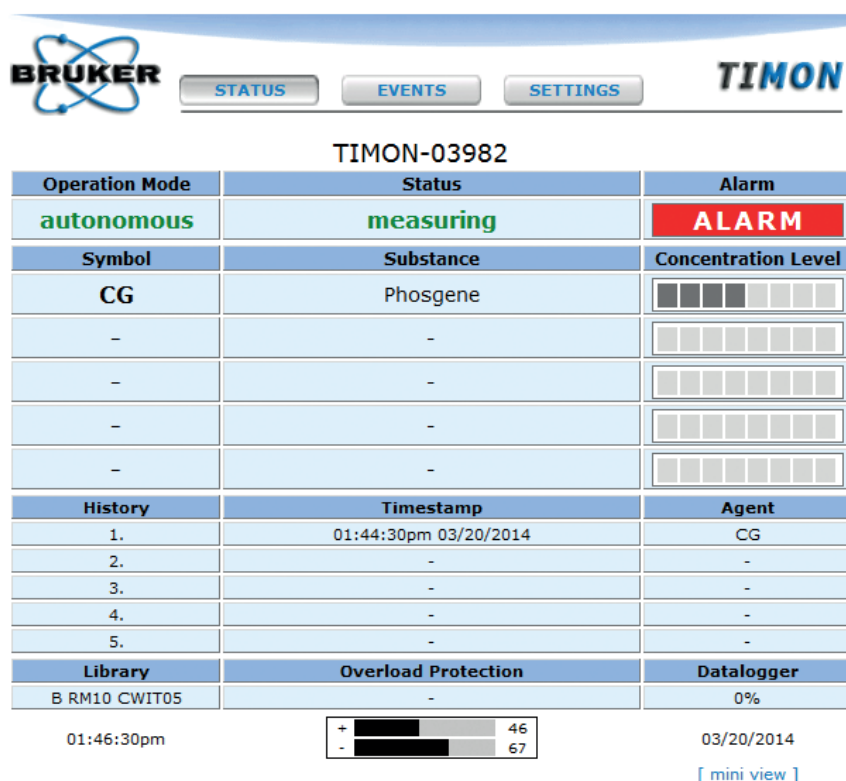
User Interface

FLEXIBLE INTERCONNECTIVITY

The standard TIMON configuration includes a web server that transmits all relevant data to a remote computer in the client control room. Specialist software is not required; the data is displayed in a web browser as shown below. At a glance, the display shows detection status (identified substance, concentration and time) as well as the instrument status and condition. Where screen space is limited, a 'mini view' pop-up display can be used which shows green when no alarms exist, and which changes to red under alarm conditions.

The webserver interface is used with the TIMON system to facilitate access by different users, such as operators, supervisors and maintenance personnel. Each level of user can be furnished with their own log-in name and password to ensure compliance with security standards.

In addition to the standard web interface, TIMON is also equipped with floating contacts. These can be connected to external annunciators or indicator lamps as supplemental alarms to those that are shown on the control room display. Alternatively, these floating contacts can be used to trigger actuators that initiate ventilation protocols, or change the flow patterns of HVAC systems to reduce the concentration of the chemical threat.



User interface for TIMON showing the detection of a toxic gas. Phosgene was first used as a chemical weapon in World War I, but now is used commercially in the manufacture of polymers, pesticides and pharmaceuticals

TIMON Expansion Module

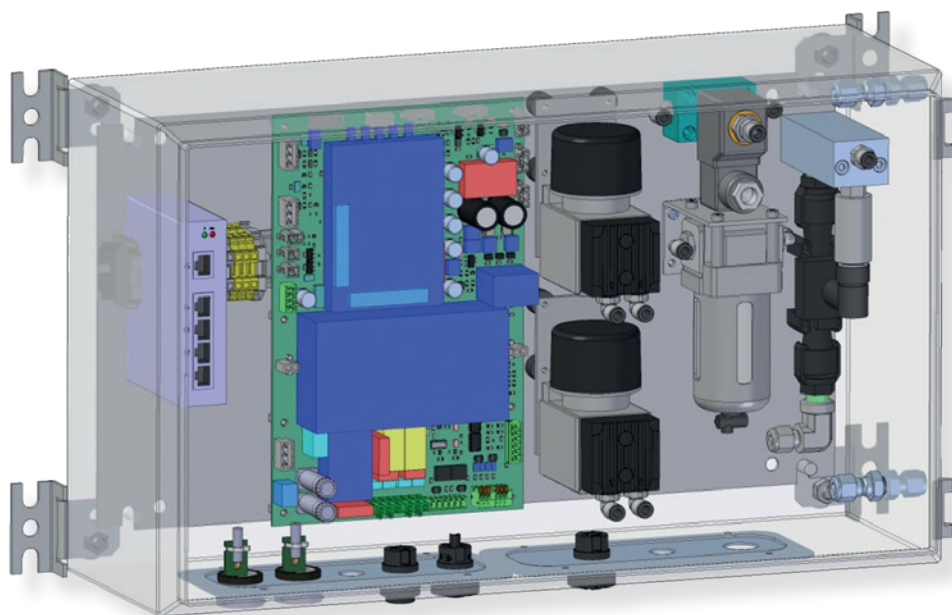
ASU: AIR SAMPLING UNIT

The Bruker ASU (Air Sampling Unit) is an adjunct to the TIMON. It converts TIMON from a local point detector to a remote point detector by providing the capability to extend the sampling point by up to 15 metres.

In addition, the ASU is capable of providing supplemental power to allow the use of heated sample lines, where either the location or the application requires this capability.

The ASU interfaces with the standard web server of the TIMON such that its inclusion does not require additional complex software. . Only a current web browser is required to display data. Further, to ensure high reliability the ASU adds redundant sample pumps to the system, along with flow sensors and pressure sensors to monitor the whole sample system 24/7.

Full technical details of both TIMON and the ASU are shown in the related Product Specification Sheets, copies of which are available on request.



A schematic of the Bruker ASU. The width of the case of the ASU matches that of the TIMON to permit seamless system integration.

Global Resources – Local Focus



Bruker has support centres of technical expertise in every major area of the world providing sales, applications and engineering support for our complete product range. With more than 6,000 employees at 90 locations worldwide you can be confident that the support team fronts a uniquely integrated global resource. Research and development specialists, applications professionals and highly trained engineers in every field are dedicated to your investment in our equipment.

Superior Detector Performance

For highly sensitive detection, identification and quantification of chemical, biological, explosive and radiation threats. Superior performance and high reliability comes as standard.

Applications Support

Systems are configured to meet your needs and result from our detailed evaluation of your requirements.

Standards & Compliance

All our systems are manufactured in ISO9001 compliant factories; so you can be assured of superior quality and performance.

Software & Data Systems

Designed to industry standards on the Microsoft® platform, our software can be integrated with your security management software.

Training

User Training and User-Level Maintenance is part of our standard Scope of Supply. Our goal is simple; to minimise your cost of ownership.

Low Maintenance

All our systems are designed for extended maintenance periods and reduce the through-life-costs of your investment.

Bruker Optics is continually improving its products and reserves the right to change specifications without notice.
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ISO 14001 and ISO 50001 certified.**

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