

Product Specification



Part No.: 1840100

Drawing No.: TM 0100 G 501

Category: Basic Device

Description

TIMON NR (Toxic Industrial **MON**itor **Non-R**adioactive) is an analytical instrument designed for continuous air monitoring duties. The system is configured to detect both Chemical Warfare Agents (CWAs) and Toxic Industrial Chemicals (TICs) and upon detection to provide a rapid alarm and identification of the substance. Additionally during the detection and identification process, the TIMON NR also quantifies the concentration of the substance that has been detected.

Sampling

TIMON NR contains an integrated sampling system that draws an air sample into the instrument to give response speed in the order of just a few seconds.

Technology

TIMON NR uses a Bruker-developed state-of-the art sensor for chemical detection. The sensor operates on the principle of Ion Mobility Spectrometry (IMS) and gives fast substance detection at concentrations down to the low parts per billion range.

Features

TIMON NR has been designed for the detection of toxic substances in air. Measurements are matched with data in an instrument-specific library to identify the detected substances and to establish their concentration. Detection and Alarm data is provided to the operator over the integrated WEB interface.

Applications

TIMON NR is intended for use in public or employee health or safety monitoring systems in all infrastructure, railway stations, airports, transport and surveillance systems. The instrument can either be operated as a single device or within a network.

Installation and Maintenance

Installation of TIMON NR has been greatly simplified by design. The enclosure is designed to be wall mounted. Power connection is by means of a standard captive cordset. All data generated by TIMON NR, including Analysis Data and Instrument States is output over a standard Ethernet connection; each device having a dedicated IP address.

Designed for 24/7 operation, maintenance checks may only be required after 18 months of operation; this is identified over the WEB Interface. When it is necessary to replace consumables, this can be done without calling for the Manufacturer's Service Engineer, although where required, Service Contracts are available. No preventive maintenance is required. No calibration or calibration gases are required at any time during the life of the system.

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Size and Weight

Size (approx.)	L x W x T: 500 mm x 600 mm x 150 mm
Weight (approx.)	22 kg
Colour Code	RAL 7035 – light grey

General Specifications

Ionisation Source	Non-radioactive ionization source (Photoionization)
Dopant	Ammonium Hydroxide (NH ₄ OH)

Electrical Interfaces

Power Supply	100 to 240 VAC / 150W / 50 to 60 Hz (Connector type: IEC60320 C14)
Data	Ethernet 10/100 Base-T (Connector type: IEEE 802.3 Standard / RJ45)
Data RS232 (maintenance purposes)	Industrial standard serial interface RS232
Floating Contacts	Indication of Operation Modes: - Measurement - Stand-by (Backflush) - Alarm - Error (I _{max} = 2 A @ 30 VDC / I _{max} = 0,5 A @ 60 VDC) (Connector type: VG95328C14-19PN N)

Mechanical Interfaces

Air inlet	On right instrument side / upper position (Standard Swagelok® NPT ¼" for tubes and hoses)
Air outlet	On right instrument side / lower position (Standard Swagelok® NPT ¼" for tubes and hoses)
Fasten mounting brackets	4 brackets for wall mounting (Clearance from wall to back of case = 10mm)

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User Interfaces

WEB Interface	All data generated by TIMON NR, including Analysis Data and Instrument State is handled by the WEB interface and is output over a standard Ethernet connection. To use the WEB interface a standard browser, such as Microsoft® Internet Explorer is required.
ICD (Interface Control Document)	The Interface Control Document details the electronic configuration of the TIMON NR detector interface, and documents the remote control function of TIMON NR, referred to as the Web Interface.

Modes of Operation

Selftest	When switched on TIMON NR carries out a start up and instrument self-test automatically. This procedure continues until the instrument successfully passes it's built in analytical test.
Measurement	TIMON NR starts sampling and measuring on completion of a successful self-test.
Stand-by (Backflush)	The Backflush mode puts the system in standby. This mode can be used by the operator for: - air pollution protection or, - surface cleaning of all internal pneumatic components.
Service	The TIMON NR can be programmed to switch automatically to Stand-by mode by use of a timer for cleaning, protective or servicing tasks.
Alarm	TIMON NR displays all alarm information using a WEB interface. For covert installations, there are no standard visual or audio alarm signals fitted to the instrument.
(Error)	In the unlikely event that an error occurs, the unit automatically disables damaged components and displays an appropriate message on the WEB interface.

Performance Data

Air flow rates	~ 45 l/h (in all operation modes)
Substance Library	GB, GD, GF, GA, VX, GSI, ACK, HD, L, HN, CLX, ETO, CL2, SO2, HSI, TDI

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Environmental Parameters and Measurements

Storage Temperature	-20 °C to +60 °C
Operating Temperature	-10°C to +50 °C
Operating Humidity	5% to 95 % RH, non condensing
Ambient Pressure Range	Not intended for use in an altitude higher than 2000m
Environmental Tests	
IEC 60529 (11/89) IP 42	Degree of Protection
Product Safety and CE	
IEC 61010-1 CE in accordance to • Low Voltage Directive 2014/35/EU • EMC Directive 2014/30/EU • RoHS Directive 2011/65/EU	Product Safety CE
Electromagnetic Compatibility	
EN 61326-1 • EN 55011 • EN 61000 (3-2/3-3/4.2/4-3/4-4/4-5/4-6/4-8/4-11)	Electromagnetic compatibility

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System Configuration, Accessories, Consumables, Training

PN	System Configuration	Picture
1840100	Basic Device TIMON NR 1EA Cordset continental Europe included (PN 8271861) 1EA Cordset North America included (PN 8022363) 1EA Cordset UK included (PN 8022364) 2EA Dust Filter included (PN 8065502) 1EA Connector plug 19 pin for floating contacts (PN 1856900) 1EA Shrink fit cover for Connector plug 19 pin (PN 8001637) 1EA Ethernet cable (crossed) included	
1840900	Manual Operator TIMON NR Document language: English Software CD RAID Log File Converter included	
1840902	Manual Maintenance TIMON NR Document language: English	
1840901	Manual Installation TIMON NR Document language: English	
1819874	Interface Control Document TIMON Based on HTTP format, the ICD details the configuration and functionality of the TIMON data interface. Document language: English	

PN	Accessories	Picture
1815954	Installation Set Dust Filter For sampling point extension / includes 1EA Filter holder, 1EA Filter Membrane PTFE 0.45µm, 5m PTFE tube for individual length adaptation, Cutting Ring Couplers for connection to Air Inlet or Air Outlet	
1868933	Cable, Floating Contacts, TIMON, 2,5m (connection cable for floating contacts with open end)	

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PN	Consumables and Spares	Picture
8282240	Backflush Filter TIMON	
8282230	Drying Filter TIMON 2EA needed for replacement	
8701960	Dopant TIMON	
8210851	Confidence Sample H	
8210852	Confidence Sample G	
8065502	Dust Filter (200 x 1400 mesh) Connected directly to Air Inlet and Air Outlet For dust protection during operation	
1823829	Filter Membrane PTFE 0.45um Ø47mm (10Pk) Spare part membranes for Installation Set Dust Filter	
8261380	Protective Cap To close Air Inlet and Air Outlet during storage	
PN	Equipment for service tasks	Picture
1821423	Software Package Toolbox 2.0 Needed for replacement of Drying Filters and Dopant, Maintenance manual required	
1823334	Cable, Data, RS232, TIMON, 2.5m Link cable	
8276743	Converter, serial RS232-USB2.0, packed	

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PN	Training
DAL099591	Operator training TIMON at manufacturer premises. (1 day) Maximum number of participants: 6
DAL099603	Operator training TIMON at customer site. (1 day) Maximum number of participants: 4
DAL09059	Maintenance training TIMON Level 2 at manufacturer premises. (2 days) Maximum number of participants: 4
DAL099604	Maintenance training TIMON Level 2 at customer site. (2 days) Maximum number of participants: 3
DAL09060	Maintenance training TIMON Level 2+ at manufacturer premises. (3 days) Maximum number of participants: 4
DAL099605	Maintenance training TIMON Level 2+ at customer site. (3 days) Maximum number of participants: 3

PN	Warranty extension
DAL099610	CBRNE warranty extension TIMON Warranty extension for 12 months

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Dimensions TIMON NR

