

**Thermo Scientific
TVA1000B
Toxic Vapor Analyzer**



The Only Portable Intrinsically Safe Dual PID/FID Analyzer



Portable Toxic Vapor Analyzer

The Thermo Scientific TVA1000B is the only over-the-shoulder portable vapor analyzer that offers both PID (Photo Ionization Detection) and FID (Flame Ionization Detection) in a single, easy-to-use instrument. The ability to utilize both technologies in this field proven instrument provides benefits in reduced weight and a single user interface. The user can easily monitor and log inorganic and organic vapors simultaneously.

FID Detection

Users can measure a wide variety of organic vapors over an impressive dynamic range (0-50,000 ppm), monitoring some compounds that the PID will not detect. The flame ionization detector operates by breaking hydrocarbon bonds and is not limited by a low ionization potential of the molecule.

Simultaneous FID/PID Detection

No other instrument offers both Photo Ionization and Flame Ionization Detection operating simultaneously in a single portable vapor analyzer. Dual detection eliminates the time, expense and trouble of purchasing and maintaining two separate analyzers.

With PID detection, the user has not only the ability to monitor for organic compounds, but also can detect many inorganic compounds. Some compounds detected by PID and not FID are ammonia, carbon disulfide, carbon tetrachloride, formaldehyde, and hydrogen sulfide. The PID also has the advantage of not requiring fuel or air to operate. In anaerobic environments, the TVA1000B PID can be used.



Key Features

- Simultaneous FID/PID or Single FID detector(s)
- Portable and lightweight
- Multiple response factors and curves
- Multi-point calibration
- On-board datalogging
- 8 hour battery life

Probe Options

Standard Probe

Display measurement values on a 4-character LCD, with measurement units displayed on %, ppm, or ppb. Additionally, a bar graph indicator provides an indication of concentration level. Function keys allow selection of analyzer functions.

Enhanced Probe

Originally designed for Fugitive Emissions monitoring, the enhanced probe has a larger display area than the basic probe. This provides a display of up to 6 lines x 20 characters, plus a double height concentration value. It displays all the same information as the standard probe and has menu-driven access to many of the analyzer functions, allowing them to be easily initiated and/or changed at the probe.



TVA1000B Data Manager Accessory: Route Management Probe

Powerful field capabilities

The TVA1000B Data Manager allows users to modify or create route data in the field, eliminating the need for manual recording of data. This helps you comply with the electronic data storage requirements within most consent decrees. The probe has a highly visible 360 degree LED with a pulsed rate linked to concentration.

The DataManager provides access to all of the features previously available only through the sidepack. Users can also easily search and navigate between tags in a route by simply entering the desired tag identifier.

Flexibility and control

The DataManager allows control of how data is viewed and accessed in the field. This allows the user to customize the view to best meet the monitoring needs at your facility, as each route may have different fields and screen displays. Fields may be designated as non-editable to enhance data integrity and database security.

An optional comment field allows the user to make electronic notes about each tag monitored. An alpha-numeric keypad makes data entry a snap.

Key Features for the DataManager

- Custom field labels for more clearly identified route information
- Definable screen layouts optimize user efficiency
- Pick lists lead to consistent data entry and minimize chance of data entry errors
- One button selections to access most commonly used functions
- New sample probe provides 360 degree visual indicator of concentration level
- Cable management system eliminates snagging sample line and electronic cable
- Existing TVA1000 units may be upgraded
- Enhanced filtering system removes dirt and water more efficiently.



Analyzer bag protects TVA1000 and may be used with standard shoulder strap or optional framed backpack

ThermoConnect Software

ThermoConnect enables users of the TVA1000B to transfer, display, analyze, and configure data from the instrument using a computer. ThermoConnect is Windows® based and facilitates the importing of data into other Windows® based applications making it easier to retrieve logged data.

Added capability to maximize the TVA DataManager's features

ThermoConnect has been updated with a powerful new utility to create new route database template files. This utility allows you to easily build your own route database and design the screen appearance through a four-step process. Also, any existing route files in the old file format are still recognized by the TVA and may be upgraded to the new format.

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Complete DataManager System

Applications

Fugitive Emissions Monitoring

The unique dual detector FID/PID design can handle a wide range of compound vapors present at processing plants. The TVA1000B permits monitoring at lower ppm levels.

Emergency Response

For reliable measurements of hazardous spills or emissions, the TVA1000B responds quickly in an emergency. The ability to quickly detect the presence of "hot spots" is key to locating the source of the hazard.

Hazardous Waste Site Evaluation

The TVA1000B allows quick and easy identification of the hazard location and quantifies the level of contamination.

Underground Storage Tanks

The TVA1000B is a primary tool for determining if a UST is leaking and the extent of the contamination.

Industrial Hygiene

The TVA1000B can help you maximize the effectiveness of your plant ventilation system, and identifies trouble spots. Use it to survey ambient vapor levels in specific breathing zones or in general plant environments, and log for further follow-up action.

Natural Gas Leak Detection

The TVA1000B enables quick and easy detection of natural gas leaks.

The Thermo Scientific **TVA1000B** is a benchmark for experience and reliability in Fugitive Emissions Monitoring

Thermo Scientific TVA1000B Specifications

Safety certifications	FM (Class 1, Div. 1, Groups A,B,C&D Hazardous Location, Temp. Class T4)
Datalogging	Onboard
Readout	Bar graph & 4- digit LCD
Dynamic Range	0.5-2,000 ppm (PID) isobutylene; 0.5-50,000 ppm (FID) methane
Linear Range	0.5-500 ppm (PID) isobutylene; 0.5-10,000 ppm (FID) methane
Response Time	3.5 seconds
Minimum Detectable Limit	100 ppb benzene (PID); 300 ppb hexane (FID) (laboratory conditions)
Alarms	Low, high, STEL
Sample Flow Rate	1,000 cc/min nominal
Power	Rechargeable NiCd Battery
Logging Capacity	900-18,000 points mode specific
Temperature Range	0-40°C (32°F - 104°F)
Fuel	None required (PID); 99.995% hydrogen (FID)
Portable Operation Time	8 hours (with reference operating conditions)
Approximate Mass	5.8 kg (13 pounds)
Nominal Dimensions	13.5 x 10.3 x 3.2 inches (343 x 262 x 81 mm)
Analog Output	0-2V dc (non-calibrated)
Repeatability	+/- 1% (PID); +/- 2% (FID)
Autoranging	Yes
Diagnostics	Yes
Other Available Options:	
Carrying Case	P/N CR012XL
Charcoal Filter	P/N 510095-1
FID Calibration Kit	P/N CR009UY
PID/FID Calibration Kit	P/N CR012UH

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