

# MicroFID™

Photovac is **MORE**  
than instruments.



Photovac delivers  
**PROVEN** solutions.



FLAME IONIZATION MONITOR

# SUPERIOR VOC

Detection



For accurate, reliable detection of VOCs, the Photovac MicroFID is the right choice in flame ionization detection. At just 8.1 lb. (3.7 kg.), the MicroFID is the smallest and lightest datalogging Flame Ionization Detector (FID) available.

## Easy to learn and use

The MicroFID is easy to use. One tutor key prompts you through basic operations. Critical data is displayed and logged in less than 3 seconds within the concentration range of 0.5 -50,000 PPM. A simple two-step calibration holds for a full workday.

## Designed for field use

The MicroFID is completely self-contained in a single hand-held package, so transportation and operation are simplified. The MicroFID's ergonomic design includes a built-in handle and a rubberized keypad that can be used while wearing protective equipment.

The MicroFID has an integrated, refillable fuel gas (hydrogen) mini-cylinder to allow up to 12 hours of field operation. The sample air serves as the oxygen source to start the flame. Replaceable and rechargeable battery packs operate for 15 hours.

## Dependable results

With a wide linear range, the MicroFID responds to almost all VOCs. The flame ionization detector is stable and virtually immune to possible interferences such as water vapor.

## Datalogging flexibility

Monitor fugitive emissions with ease and confidence with the MicroFID. Using the built-in datalogger, sample points can be recorded. In Interval Mode, the MicroFID records the date, time and minimum, average and maximum readings during user-selectable intervals. Or use the datalogger in U.S. EPA Method 21 Mode with Background, Sample and Difference readings. The data can then be down-loaded to a PC using Windows HyperTerminal and any Windows-based software package can be used for data management.

## Intrinsically Safe

The MicroFID is classified as Intrinsically Safe in both North America [Class I, Division 1, Groups A, B, C, and D] and Europe [Ex nA II T5] for potentially hazardous environments.

## Rely on results that measure up

For trouble-free measurement of soil gases where the response factor consistency of a FID is mandatory, or where methane must be included in the total reading, the MicroFID has no equal. Make EPA Method 21 Fugitive Emissions Monitoring easy with the smallest and lightest FID, the MicroFID.

**Detect up to 50,000 PPM VOCs including methane  
CONFIDENTLY AND RELIABLY**

# MicroFID

## Solutions



- Leak Detection and Repair (U.S. EPA Method 21)
- Landfill monitoring
- Natural gas leak detection
- Petroleum products tank entry
- Emergency response
- Soil headspace screening
- Hazardous waste site delineation
- Solvent storage and piping
- Confined space pre-entry
- Underground storage tanks (UST)
- Transportation vessels
- Storage tank maintenance
- OSHA Compliance
- EPA Compliance
- Remediation efficiency

## INDUSTRIES &



## Applications

### Natural Gas Pipeline Leak Detection

In North America, Natural Gas is composed almost entirely of Methane. The MicroFID is the detector of choice for this application. The MAX feature combined with the user adjustable, audible alarm make it easy to pinpoint leaks. Automated datalogging with selectable recording intervals make record keeping simple.

### Arson Investigations (Accelerants)

Quite simply, the MicroFID is the detector to use for this application because anything that will burn will be detected. MicroFID's optional 6' telescoping extension wand allows the user to reach into areas that otherwise would be inaccessible.

### Tank Entry Petroleum Products

Since Petroleum products are mixtures of Aromatics, Alkenes and Alkanes, either detector would be suitable. The MicroFID will respond almost equally to the short chain Alkanes and the more toxic Aromatics.

### Soil/Water Jar Headspace Screening

The range of the MicroFID is from 0.5 to 50,000 PPM with manual datalogging capacity to allow independent storage of the Background, Sample, and calculated Difference from each jar. This convenient feature condenses the data to one line per jar sample.

### Fugitive Emissions/EPA Method 21

When calibration to methane is a must and detection levels range to 10,000 PPM or more, the MicroFID is the right choice in Method 21 compliance. The MicroFID meets or exceeds all Method 21 instrument requirements while giving the convenience of the smallest and lightest datalogging FID.

### Landfill Monitoring

In landfill monitoring, the detection of methane may be required, or exclusion of methane from the readings may be required. The MicroFID does respond well to methane, and when equipped with a charcoal filter can be used to obtain non-methane Total VOC. The manual datalogging mode does this calculation for the user. The filter is placed on the MicroFID and a background reading is taken. The filter is then removed and a sample reading is taken. The MicroFID automatically subtracts the background from the sample and records the Difference, or the non-methane VOC reading.

### Emergency Response -- HAZMAT

In HazMat applications, it is possible that the spilled material may not be known. Since the MicroFID responds relatively equally to a wide variety of compounds, it is suitable to situations that can be quite different.

# MicroFID



## MicroFID

### Detectable Compounds

**Saturated Hydrocarbons** - Methane, Ethane, Propane, n-Hexane

**Aromatics** - Benzene, Toluene, Naphthalene

**Unsaturated Hydrocarbons** -Acetylene, Ethylene, 1,3-Butadiene

**Chlorinated Hydrocarbons**- Vinyl Chloride, Chloroform, Trichloroethylene, Methylene Chloride

**Ketones** - Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone

**Alcohols** - Methanol, Ethanol, Isopropanol, n-Butanol

Please note: This list provides examples of the types of compounds detectable by the MicroFID. Please contact Photovac Technical Support for details on specific compound detection.

For further information on Photovac products, or to arrange a product demonstration, please contact a Photovac representative near you, email us at [admin@photovac.com](mailto:admin@photovac.com) or contact Photovac, Inc.

## Specifications

**Size**  
43.4 cm (17.1") long, 9.8 cm (3.85") wide, 18.8 cm (7.4") high

**Weight**  
8.1 lb (3.7 kg)

**Keypad**  
16-key, fixed function

**Display**  
2-line, 16-character LCD with alphanumeric readout

**Hydrogen Cylinder Discharge**  
Greater than 12 hours

**Hydrogen Cylinder Capacity**  
9.2 liters

**Battery Capacity**  
15 hours (snap-on replacement)

**Serial Output**  
RS – 232, 1200-19200 baud with no parity, for tabular and graphic printouts and connection to a Windows® compatible computer.

**Audio Output**  
On Alarm, LoBatt and NoFlm

**Analog Output**  
0 to 1 volt full scale

**Operating Temperature Range**  
41°F to 105°F (5°C to 45°C)

**Operating Humidity**  
0-100% Relative Humidity (non-condensing)

**Operating Concentration Range**  
0.5 PPM to 2000 PPM methane equivalent (Low Range)  
10 PPM to 50,000 PPM methane equivalent (High Range)

**Detection Limit**  
0.5 PPM methane

**Accuracy**  
Methane (after calibration with zero air and 500 PPM methane gas): within ± 0.5 PPM or ± 10% of actual methane concentration (0.5 PPM to 2000 PPM range).

**Response Time**  
Less than 3 seconds

**Intrinsic Safety**  
Class I, Division 1, Groups A, B, C, & D  
CENELEC Certified according to EN50021, EEx nA II T5, Demko No. 00Y127355X



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