



Advanced Test Equipment Corp.  
www.atecorp.com 800-404-ATEC (2832)

## SF6 LASERCHECK P3:FH

CONTAINMENT TEST SYSTEM



TRACER GAS CONTAINMENT TESTING  
WITH WORLD LEADING FEATURES

[ionscience.com/usa](http://ionscience.com/usa)

Unrivaled Gas Detection.





# FUME HOOD TRACER GAS CONTAINMENT TESTING WITH WORLD-LEADING PPB SENSITIVITY AND DATA LOGGING

## Features

- Ultra-high sensitivity with a detection limit of 6 ppb (0.006 ppm) with SF6 as a tracer gas
- No radioactive source
- Pure Argon not required
- Measurement results independent of temperature and moisture
- Permanent self-diagnostics
- Fully automated measurement and data storage according to ASHRAE 110-2016 and DIN EN 14175
- Portable with rugged case
- No regular maintenance required

## Applications

The SF6 LASERCHECK P3:FH is ideal for laboratory settings containing fume hoods, such as university chemical labs and industrial labs. This device traces contained gas in the fume hood with world-leading ppb sensitivity and data logging according to ASHRAE 110-2016 / DIN EN 14175

## Product Contents

1 pcs.	SF6 LASERCHECK P3:FH
1 pcs.	Operating and Evaluation Software
1 pcs.	Internal Vacuum Pump
1 pcs.	Control Computer

**Delivery Time**  
3 to 4 weeks

**Warranty**  
12 months

## Principle of Detection

SF6 LASERCHECK P3:FH uses an advanced principle of photoacoustic gas detection (patent pending), reaching a detection threshold as low as 6 ppb (parts per billion) at extremely low cross sensitivity and excellent long-term stability.

A gas sample is transferred into the instrument's measuring chamber, where it is exposed to the pulsed beam of a wavelength-optimized CO2 laser. The laser light is partially absorbed by the SF6 molecules, turning part of its energy into heat. Due to the pulsation of the beam, a cyclic expansion of the gas can be observed in the presence of SF6 molecules, which is detected as sound waves by highly sensitive microphones. The intensity of these sound waves is in a fixed ratio with the SF6 concentration contained in the sample gas.

Unlike conventional absorption spectroscopy, the advanced principle used in SF6 LASERCHECK P3:FH makes it possible to determine, and compensate for, a beginning contamination of the internal measuring chamber. This ability accounts for its excellent long-term stability of measurement.

## System Characteristics

SF6 LASERCHECK P3:FH is composed of a base unit, comprising the measuring cell, laser, vacuum pump, and a controller. A WIN PC (Win 7.8.20) running a custom control software serves as the man-machine interface. This software controls the measuring process, visualizes its results, and processes user inputs such as parameter settings. It also stores resulting data for evaluation.





# Technical Specifications

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## Detection Cell

- Photoacoustic

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## Measuring Speed

- 7 seconds

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## Compressed Air Supply

- 5 to 8 bar
- Dry
- Clean
- Free of oil

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## Measuring Range

- 6 ppb or 30 ppm SF6

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## Laser Class

- 1; no protective measures required

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## Temperature Range

- 15 °C to 35 °C for operation
- 0 °C to 45 °C for storage

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## Resolution

- 1.5 ppb

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## Self Diagnostics

- Continuous

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## Dimensions

- 19" x 6 HE x 520 mm

## Manufactured by:

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