GC4310

Portable explosion-proof VOCs detector

Overview

The GC4310 portable VOCs detector is based on a flame ionisation detector (FID); a photoionisation detector (PID) is optional. The source describes a system with a VOCs detector, point-identification equipment and a sampling-probe kit, supporting point identification, data aggregation and analysis, and automatic reminders.

Features

- Can be configured with FID and PID detectors for a wide measurement range.
- Compact, lightweight and simple to operate.
- Sampling-line materials are described as corrosion-resistant, non-adsorptive and non-reactive with the target pollutants.
- The source describes intrinsically safe circuitry and an explosion-proof detector module. Certification must be verified before hazardous-area use.
- An optional LDAR management platform supports records, data import, inspection, repair, document and basic-information management, third-party inspection management and reports.



Technical specifications

Detection principle	Hydrogen flame ionisation for total hydrocarbon concentration
Detector	FID; PID optional
Measurement ranges	≥0-50000 ppm (FID); ≥0-2000 ppm (PID)
Detection limit	<0.5 ppm
Response time	≤10 s
Continuous operating time	More than 8 h
Indication error	<±10%
8 h drift	<±2% full scale
Instrument weight	<3 kg
Wireless connection	Explosion-proof phone connects to main unit via Bluetooth
Data	Phone displays total hydrocarbon concentration and trend; data export supported
Explosion-protection rating	IIC T4 (technical data); IICT4Gb (configuration list)

Referenced standards

- GB 37822-2019 - Standard for control of fugitive emissions of volatile organic compounds
- HJ 1019-2019 - Technical guidelines for sampling volatile organic compounds in soil and groundwater at sites
- HJ 733-2014 - Requirements of technical guidelines for monitoring volatile organic compounds from leaks and open liquid surfaces
- HJ 38-2017 - Stationary source emissions: determination of total hydrocarbons, methane and non-methane hydrocarbons by gas chromatography
- HJ 1012-2018 - Technical requirements and test methods for portable monitors of total hydrocarbons, methane and non-methane hydrocarbons in ambient air and waste gas

Configuration

Standard

- GC4310 detector, one set: FID 0-50000 ppm, operation and display by explosion-proof phone, internal lithium battery and hydrogen cylinder, transport case.
- Accessory pack, one set: main-unit backpack, lithium-battery charger, explosion-proof phone charger, sampling probe and tubing, hydrogen filling fixture, tool kit, flame arrester, O-rings and filter membrane.

Optional

- PID detector, 0-2000 ppm, one set
- 10 L PTFE gas sampling bag, one set

Applications

- LDAR (leak detection and repair)
- Soil VOCs
- Factory and workshop ambient VOCs
- Emergency monitoring of fugitive emissions
- Rapid monitoring of stationary-source emissions
- VOCs control-facility performance assessment
- VOCs source investigation
- VOCs emissions from wastewater pools
- Vapour-recovery checks at filling stations and fuel depots

Source notes and verification

- The source gives IIC T4 in the technical parameters and IICT4Gb in the configuration list. Neither rating nor certification has been independently verified; use only in environments covered by a current, verified certificate.
- The “≥” symbols attached to 0-50000 ppm and 0-2000 ppm are retained from the technical-parameter text; their intended meaning requires confirmation. The configuration list separately prints 0-50000 ppm and 0-2000 ppm.
- Standards and specifications are translated from the supplied catalogue and have not been independently verified.
- Translation has not been reviewed by a native technical translator.