

EXPEC 3100 Portable VOC Gas Analyzer

■ Product overview

The EXPEC 3100 portable VOC analyzer meets the technical requirements for total hydrocarbon detection and leak detection, and uses a FID detector for total hydrocarbon detection. The product is suitable for identification and traceability of VOCs, on-site emergency detection of pollution sources, unorganized on-site emergency detection and leak detection of pipeline emissions in chemical enterprises.

It is equipped with both FID and PID, and responds to almost all VOCs and some common inorganic factors. The small size and light weight provide excellent performance and easy operation, meeting the customer's requirements for fast and accurate analysis on site.

The EXPEC 3100I is a hand operator designed specifically for the EXPEC 3100 and works in conjunction with the main unit analyzer for on-site exclusion analysis of VOCs, LDAR on-site archiving, spot detection data recording and instrument control, which greatly improves the efficiency of on-site detection and traceability of VOCs.



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EXPEC 3100I Hand Operator



Backpack for EXPEC 3100

■ Product features

① Explosion-proof design

- The analyzer circuitry is designed to be intrinsically safe and explosion-proof; the core FID detector module adopts flameproof design, and the FID detector and hand controller are designed to be intrinsically safe and explosion-proof to secure the use in explosive hazardous gas locations

② High on-site detection capability

- Equipped with optional dual FID and PID, and with a wide measurement range, it responds to almost all organic and some inorganic gases, with a response time of less than 3.5 seconds, suitable for fast solution and traceability of VOCs
- Thanks to the compact design with lightweight components and composite materials, the main unit weighs only 3.7 kg for portability on industrial sites, ranking the lightest on the market

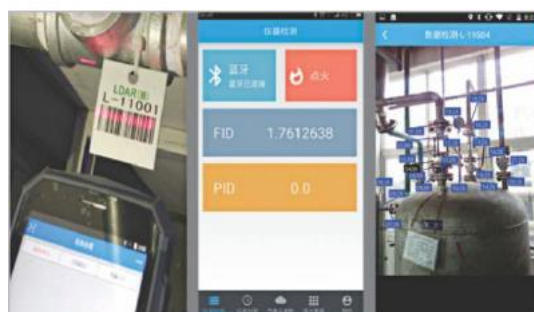
③ New-generation portable on-site solutions

- Suitable for networked applications; uploading the test results to the cloud platform at one click
- The hand-operator more efficiently scans the code to identify and call the picture-based point information
- Wireless connection between the hand operator and the analyzer enables more flexible operations than traditional instrument interfaces
- Compatible with archiving: open communication protocols, compatible with mainstream LDAR analyzer data analysis platforms on the market



④ User-friendly accessory design

- Safe and fast hydrogen charging and discharging module; hydrogen charging within 30s; hydrogen discharging within 1min
- Wireless transmission: use the WIFI (Bluetooth optional) transmission to achieve point-to-point connection between the analyzer and the hand operator
- Newly designed ergonomic carrying system can notably reduce the sense of carrying and fatigue of on-site personnel



■ Technical parameters

Item	Indicator
Detector	FID and PID available
Measurement range	FID 1.0 ~ 50,000ppm methane; PID 0.5 ~ 2,000ppm isobutylene
Limit of detection	FID 0.5ppm methane; PID 0.5ppm isobutene
Repeatability	<2% for FID 500ppm methane; <1% for PID 100ppm isobutene
Response time	The FID is fed with 10,000ppm methane and takes less than 3.5s to reach 90% of the final value; the PID is fed with 500ppm isobutene and takes less than 3.5s to reach 90% of the final value
Continuous operating time	Hydrogen: 15.3MPa (2200psi) for 10 seconds at 25°C, 10+ hours continuous operation when fully charged; battery: Rechargeable battery, >10h continuous operation when fully charged
Sampling	At the inlet of the sampling probe, typically 1L/min
Working temperature	-10~45°C
Explosion-proof	Ex d ia IIC T4Gb
Dimensions	302*245*88mm
Weight	3.7kg