CEREX AIR SENTRY FTIR Analyzer

Gas analyzer that uses FTIR technology to detect more than 385 compounds in a unified, simplified package. 20-year proven track record of detecting hundreds of HAP's and VOC's, including Alkanes, TVOC's, and BTEX. Wide gamut of detectable gases, parts per billion detection limits, and reliable hardware. Trusted internationally by some of the world's largest oil refineries, tank farms, and government agencies.

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CEREX
MONITORING SOLUTIONS, LLC.

General Specifications

Analyzer	Open path analyzer
Measuring Technology	Fourier-Transform InfraRed (FTIR) Spectroscopy
Measuring Principle	Beer–Lambert Law
Measuring Technique	Classical Least Squares (CLS) regression analysis; optional Partial Least Squares (PLS)
Multi-gas Capability	Standard configuration is up to 5 compounds; capable of simultaneous analysis of up to 50 compounds
Response Time	T90, Typically < 30s, depending on the gas flow rate and measurement time
Minimum Detection Limit	Gas-specific, typical parts per billion
Enclosure Specs	**Dimensions** 42.1″ x 21.9″ x 23.3″ (107cm x 55.7cm x 59.1cm) **Weight** 85 lbs (38.6kg) **Material**
Applications	Fenceline Monitoring System (FLMS), Brownfield Remediation, Chemical Depot Monitoring, Manufactured Gas Plant Remediation (MGP), Perimeter Ambient Monitoring System (PAMS), Superfund Site Remediation, Tank Farm Monitoring
Method Compliance	✓40 CFR 63.658 (MACT) ✓BAAQMD Rule 12-15 ✓NIOSH Method 3800 ✓EPA Method 15, 318, 320, 321, 325 and TO-16 ✓ASTM Method D6348-03

System Specifications

Power Supply	120 or 240VAC, Single Phase 50-60Hz , 11A Max
Power Consumption	700W max (standard model)
Real Time Analysis Software	Cerex Monitoring Software (CMS) Windows® 10, 11 Operating System
Data Connection	USB, Ethernet, Bluetooth, WiFi Access Point and WiFi Station. Remote operable.
Spectrometer	**Spectral Range** 2 – 14 µm (microns) **Resolution** User configurable: $1cm^{-1}$, $2cm^{-1}$, $4cm^{-1}$, $8cm^{-1}$, $16cm^{-1}$, $32cm^{-1}$ Best resolution $0.5cm^{-1}$ **Scan frequency** 6 scans/s @ $32\ cm^{-1}$ **Detector** Cryocooled MCT Photodetector **Source** SiC, 1550K **Beamsplitter** ZnSe **Window Material** ZnSe **Wavelength range** $600\text{-}4200\ cm^{-1}$

Operating Conditions

Operating Humidity	0 - 100% non-condensing
Operating Temperature	0C° to 55C° (Air Cooled Model), or -40C° to 55C° (Thermoelectric AC Cooled)
Storage Conditions	-40C° to 60C°
HMI	External touchscreen (standard model)
Digital Interface	MODBUS, VNC, and remote desktop. Spectral data may be stored locally, on a NAS, or disabled. Industrial external wireless option available. USB-C for data retrieval and peripheral accessories. Cellular capable for full remote access and control from any PC, anywhere.
Integrated Computer	Embedded industrial PC

Maintenance

IR Source	3 years
Cryocooler MTTF	20,000 Hours

Options

Integrated Wind Mapping	Three dimensional ultrasonic anemometer with temperature measurement. Data integrated into CMS data tables and available via MODBUS.
Integrated Data Acquisition	Optional external ports with data integration for particulate or ancillary co-located analyzers (TDLAS laser, electrochemical, etc.).
Data Output	MODBUS over TCP-IP is standard. MODBUS over RS-232, RS-485.
Analog Output	8 channel configurable 0-24mA (4-20mA with extended range)
Alarms	User configurable concentration and TLV average

Performance Specifications

Zero-point drift?	
Sensitivity drift?	
Linearity deviation?	< 2%, Self-Compensating
Temperature drift?	
Pressure influence?	
Background measurement interval?	< 2% FS / 24hr, Self-Compensating