

CANARY



Process monitoring made simple and reliable.

The Cerex CANARY is a process analyzer designed to detect part per million (ppm) to percent level concentrations of multiple gases or liquids within a mixture. The CANARY measures ultraviolet or infrared, UV or IR, light absorption through an internal sample cell or fiber coupled in-situ probe directly in a process line.

Common applications for the CANARY include measuring water vapor (H_2O) in Dichloroethane (EDC), Ammonia (NH_3) in water (H_2O), Ammonia (NH_3) gas, Chlorine (Cl_2), Sulfur Dioxide (SO_2), Fluorine (F_2), and Hydrogen Fluoride (HF) amongst many more. While the CANARY is designed for process monitoring, the same hardware is also available in a portable, IP67 harsh environment case.



Detection Method

The CANARY detects gas and liquid concentrations by measuring UV or IR absorption – the drop in the UV or IR intensity within the particular wavelength region where the gas or liquid of interest absorbs. The CANARY compensates for errors resulting from variances in source intensity, fluctuations in ambient temperature, and optical obstructions are eliminated by taking differential measurements between the source output at different wavelengths. The differential absorption measurement, combined with temperature and pressure sensors in the measurement cell, allow the CANARY to achieve accurate and precise results with minimal maintenance.

Concentration Reporting

Concentrations are calculated with an onboard computer by comparing measurement values to calibrated, gas or liquid specific, library spectra with temperature and pressure compensation. The CANARY reports real-time data on the front panel display or remotely through Virtual Network Computing, VNC, or optional onboard server software. Additionally, concentration data is available through serial transmission, 4-20mA output, and 0-5VDC analog voltage.

Software Control

All Cerex analyzers come with proprietary Continuous Monitoring Software, CMS, for data collection, analysis, and charting. CMS provides operators with stand alone process monitoring and control with sample specific integrated programmable relays and analog outputs. For quality assurance, control, and calibration checks, the user friendly interface features real-time charting of all analyzer functions and stores all raw sensor data for records or later analysis.

Unmatched simplicity and ease of installation

Specifications

Parameter	
Input Voltage	100VAC to 240VAC , Single Phase 47-63Hz
Input Current	5A Max
Operating Ambient Temperature	0 to +45°C
Storage Temperature	-10 to 60 °C
Operating and Storage Humidity	Below 80% (Non-condensing)
Dimensions	610 x 305 x 152mm
Spectral Range	185nm to 18µm
Sample Cell Material ¹	316SS, PVDF, or PTFE
Sample Cell Operating Temperature*	0 to 200 °C
Sample Line Fittings ¹	Customer specified
Available In-Situ Probe Spectral Range ²	200nm to 18µm
Standard In-Situ Probe Operating Temperature ²	0 to 140 °C
Fiber Ports ²	SMA
Wetted Materials ²	Titanium, Hastelloy, PEEK or 316SS

*Optional feature. ¹ Extractive option. ² In-Situ option.

Quality Assurance

Cerex places customer service and support as its highest priority. We encourage the customer to be informed upfront of the pros and cons of each system and competing technologies. Cerex is committed to long standing relationships with their customers that do not end after the sale of an analyzer. This commitment to customer satisfaction combined with our rugged and reliable analyzers is unmatched. Additionally, due to the high level of skilled handwork in the production of our analyzers, Cerex offers custom designed and built analyzers to its customers at no additional charge. Combined with our manufacturing efficiency, Cerex provides ideal analyzers for your application quickly and at reasonable cost.

