

Transportable Multi-gas Process Analyzer System

Product Description

The Transportable Analyzer System is designed to monitor a gas process for gas composition, temperature and pressure. The system includes electrically powered equipment to sample toxic, flammable, possibly explosive gases and uses high-pressure gas cylinders for calibration. The system is housed within two NEMA 4 electrical enclosures that are permanently mounted on a four-wheel cart. The heart of the system is ARI's Laser Gas Analyzer (LGA), which is a self-contained gas sampler/analyzer that uses the principles of Raman spectroscopy to simultaneously identify and quantify eight (8) gaseous compounds. The system connects the analyzer to eight (8) gas-sampling ports via a unique valve manifold. Sample scheduling, which is user configurable, generally cycles continuously through the eight ports, one after another. Sample time at each port is typically 10 to 15 seconds.

The system includes ARI's multi-port-purge system that uses an auxiliary pump to simultaneously pre-purge one or more sample lines while simultaneously analyzing gas in a specified line. This shortens the time between port-gas measurements by keeping the sample lines filled with fresh sample gas. The system also includes ARI's nitrogen back flush system. Should any of the eight sampling lines become restricted or plugged, pressurized nitrogen can be forced backwards down the line to clean it.

The transportable unit includes on-board calibration gases for daily calibration. The system also optionally includes temperature and pressure monitoring. The sample site may be at the same location as the gas measurement or at a different location.

Application Areas

Heat treating of metals
Glass manufacturing
Metal refining
Food processing
Petrochemical processes
Semiconductor production
Bio-pharma fermentation
Natural gas combustion
Fuel cell manufacturing
Fertilizer production



***“Optimize energy use,
product quality, and
environmental emissions”***



General Specifications

| | | |
|-----------------------|-----------------|---|
| Physical Dimensions | 8 port analyzer | Two NEMA 4 enclosure on cart 52" x 46" x 26" |
| Power | | 120/230v , 7/3.5 amp, 50/60 Hz , 1 phase |
| Gas sensor | | Raman scattering Inter-cavity Spectroscopy using a Helium-Neon laser |
| Standard gases | | O ₂ , CO ₂ , H ₂ , N ₂ , NH ₃ , H ₂ O, C _x H _y , CH ₃ OH (over 100 additional gases available) |
| Detection range | | 0-100% |
| Typical resolution | | 0.1% of full scale |
| Typical accuracy | | +/-0.25% of full scale |
| Sample flow rate | | 200-800 ml/min |
| Typical response time | | 1-15 sec (distance dependant) |
| Control computer | | Windows based PC |
| Interfaces available | | Keyboard, mouse, printer, RS232 (2), USB, 10/100 MPS network |
| Sampling system | | Integrated 8 port multiplexed valving system with pre-purge and back flush |
| Options | | 8-16 points pressure monitoring 8-32 points temperature monitoring Analog output (0-5v, 4-20ma) |

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