

Ambient Air Quality Monitoring System

AQMS-600 Nitrogen Oxides Analyzer

FPI AQMS-600 nitrogen oxides (NO-NO₂-NO_x) analyzer utilizes chemiluminescence technology indicated by US EPA as federal reference method for monitoring on multiple forms of nitrogen oxides.



Key Features

- ❖ Permeation dryer on Ozone generator
- ❖ Catalytic Ozone scrubber
- ❖ Independent ranges for NO_x, NO and NO₂
- ❖ Compliance with US EPA reference method
- ❖ Various outputs include ethernet and RS232
- ❖ User friendly interface with large screen
- ❖ Continuous system diagnosis with alarm
- ❖ Multi-tasking software allows viewing test variables while operating
- ❖ Temperature and pressure compensation
- ❖ Internal data logging with 1 min to 365 day multiple averages

Principle

Nitrogen oxides in ambient are measured indirectly by photometrically measuring the light intensity, resulting from the chemiluminescent reaction of nitric oxide (NO) with ozone (O₃).

NO₂ is first quantitatively reduced to NO by means of a converter. NO, which commonly exists in ambient air together with NO₂, passes through the converter unchanged causing a resultant total NO_x concentration equal to NO + NO₂.

PMT

The optical filter(660nm) attached on PMT provides reliable measurement, and temperature are controlled between 6~8°C with only 0.1°C fluctuation by a thermoelectric cooler, ensure the measurement stability.

Ozone generation

Permeation dryer are introduced in ozone generation to provide long system durability without any replacement.

An catalytic ozone scrubber is standard for maximum safety and pump life before exhaust.

Technical Data

Standard Range	Min: 0~100 ppb F.S. Max: 0~20 ppm F.S. (Selectable)
Zero Noise	< 0.4 ppb (RMS)
Span Noise	< 2.5 ppb
Lower Detectable limit	< 0.4 ppb
Zero Drift (24 hours)	< 0.4 ppb
Span Drift	< 1% F.S.
Response Time	< 40s (T_{90})
Precision	< 1%
Linearity	< 1% F.S.
Sample Flow Rate	500 cc/min \pm 10%
Operating Temperature	20~30°C range (per US EPA guidelines). Instrument may be safely operated over the range of 5~40°C
Power Requirement	100~240 VAC, Converter applicable
Dimensions and Weight	178mm(H) x 432mm(W) x 609mm(D), 22kg

System Drawing

