## HORIBA

# XS



#### Model XS multi-gas CEMS instrument

The Model XS is a new breed of instrument designed specifically for Continuous Emissions *Monitoring (CEM)* Systems. This single instrument provides highly accurate measurement of up to five components simultaneously, yet requires no routine maintenance. Reliability is designed into every component of the instrument, from built-in self diagnostics to measurement technology that has been proven in thousands of installations.

### features

- No routine maintenance or optical alignment ever required.
- Cross-flow modulated non-dispersive infrared (NDIR) analysis (for NO<sub>x</sub>, SO<sub>2</sub>, CO, and CO<sub>2</sub>) provides reliable, accurate measurement with virtually no zero drift.
- Magnetopneumatic technology (for oxygen measurement) offers fast response and high accuracy.
- Easy operation via userfriendly display with front panel keys.
- Flexibility is provided by the modular design: add analyzer modules in minutes to meet future requirements.
- Measurement ranges can be easily changed in the field.
- Uptime is maximized through self-diagnostics.
- Solenoid valves to flow calibration gas and blowback air to the probe can be controlled by the Model XS instrument.
- Calibration is initiated automatically at userdetermined times.



- Output contacts are provided for remote monitoring of alarms.
- Messages displayed on the front panel and contact outputs provide early warning of problems.
- Contacts are available to indicate analyzer malfunction, power failure, maintenance in progress, calibration in progress, blowback in progress, and calibration fault and range indication by channel.
- Requires minimum rack space for mounting (just 5<sup>1</sup>/<sub>4</sub> inches high).
- Averaged and diluentcorrected values can be displayed or output to an external device allowing easy programming of reports.
- Manufactured under strict ISO 9001 certification.



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#### Model XS multi-gas **CEMS** instrument

The Model XS Multi-Gas CEMS Instrument incorporates measurement of up to five gases plus system control in a single compact case. The instrument eliminates redundant components that are usually included in CEM systems, resulting in reduced maintenance and fewer spare parts.

The easy-to-read display can show concentrations for any of up to five gases, or display averages or diluent-corrected values. The front panel keys allow the user to easily set calibration timing and probe blowback timing and duration.

A micro-processor provides true computerized control plus self-diagnostics that allow the user to easily determine the source of an alarm or caution signal displayed on the front panel.

Proven technology is used for all of the gas measurements: non-dispersive infrared and magnetopneumatic technology have been proven in thousands of installations.

The instrument requires no routine maintenance. Horiba@unique cross-flow modulated non-dispersive infrared (NDIR) technology eliminates the requirement for an optical chopper to modulate the detector output. This results in improved signal-to-noise ratio and eliminates the need for optical alignment. Zero drift is negligible because compensation for source drift, window fogging, or deposits on the cell walls are always automatic and complete. Optical alignment is never required.

Sensitivity is enhanced because of the improved signal-to-noise ratio, allowing cell lengths to be shorter than ever before. Even though analyzer modules are smaller, technological advancements now allow the ratio between high and low analyzer ranges to be extended to 20:1 for  $NO_x$ ,  $SO_2$ , and CO.

Built-in flexibility is provided by the modular design of the instrument, allowing rapid field replacement or upgrade of analyzer modules. In addition, ranges can be easily changed in the field using the front panel keys.

specifications

XS

One to five of the following gases:  $NO_{\chi}$ ,  $SO_{2}$ , CO,  $CO_{2}$ , and  $O_{2}$ 

0-100 / 5,000 ppm 0-50 / 5,000 ppm, standard or 0-10 / 1,000 ppm,optional 0-50 / 5,000 ppm 0-5 / 50% 0-10 / 25%

 $\pm$  0.5% of full scale ± 1.0% of full scale

15 seconds for 90% response 30 seconds for 90% response

For ambient temperature within  $\pm 10\%$ F (5%C):

 $\pm$  2.0% of full scale / 7 days

 $<\pm$  2.0% of full scale for standard

± 1.0% of full scale

115 V ac, 50/60 Hz

300 VA

0.5 <pm

sample gas composition

4.9 kPa (500 mmAq) ± 0.5%

0-16 mA or 4-20 mA and 0-1 V dc isolated output for up to 10 channels and 16 discrete outputs

available rated 1A, 250 V ac or

125 V dc resistive load.

304 stainless steel, Teflon<sup>™</sup>,

polypropylene, fluororubber, PVC, and glass

Zero Drift: Ranges > 200 ppm  $\pm$  1.0% of full scale / 7 days Ranges < 200 ppm ± 2.0% full scale / 7 days

Span Drift: Linearity:

**Measured Components:** 

Ranges  $\geq$  200 ppm: Ranges " 200 ppm and O<sub>2</sub> analyzer:

Response Time: NO, CO, and CO<sub>2</sub>: SO<sub>2</sub> and O<sub>2</sub>:

Ranges Available: NO<sub>x</sub>:

CO:

SO<sub>2</sub>: CO<sub>2</sub>:

02:

Repeatability

Drift:

Interference:

**Power Requirements:** 

**Power Consumption:** 

Sample Gas Flow Rate:

Sample Gas Pressure:

**Outputs:** 

Materials Exposed to Sample Gas:

Dimension Height: Width: Length:

Weight:

Approx. 34 lb (15.4 kg)

5 1/4 in (134 mm) 19 in (483 mm) 20 in (508 mm)

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