

# HORIBA

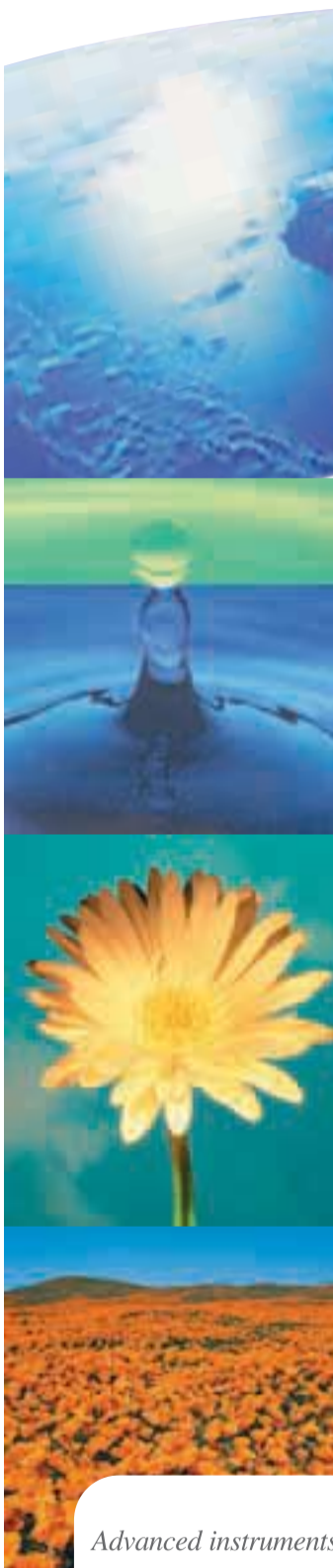
# XS

## 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

- ⑤ No routine maintenance or optical alignment ever required.
- ⑤ 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.
- ⑤ Magnetopneumatic technology (for oxygen measurement) offers fast response and high accuracy.
- ⑤ Easy operation via user-friendly display with front panel keys.
- ⑤ Flexibility is provided by the modular design: add analyzer modules in minutes to meet future requirements.
- ⑤ Measurement ranges can be easily changed in the field.
- ⑤ Uptime is maximized through self-diagnostics.
- ⑤ Solenoid valves to flow calibration gas and blowback air to the probe can be controlled by the Model XS instrument.
- ⑤ Calibration is initiated automatically at user-determined times.
- ⑤ Output contacts are provided for remote monitoring of alarms.
- ⑤ Messages displayed on the front panel and contact outputs provide early warning of problems.
- ⑤ 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.
- ⑤ Requires minimum rack space for mounting (just 5 1/4 inches high).
- ⑤ Averaged and diluent-corrected values can be displayed or output to an external device allowing easy programming of reports.
- ⑤ Manufactured under strict ISO 9001 certification.



*Advanced instruments*

*to foster a cleaner  
environment for  
future generations.*

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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's 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<sub>x</sub>, SO<sub>2</sub>, 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.

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Bulletin XSDS5M6-01, Printed in U.S.A.



Printed on recycled paper.

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<b>Measured Components:</b>	One to five of the following gases: NO <sub>x</sub> , SO <sub>2</sub> , CO, CO <sub>2</sub> , and O <sub>2</sub>
<b>Ranges Available:</b>	
NO <sub>x</sub> :	0-100 / 5,000 ppm
CO:	0-50 / 5,000 ppm, standard or 0-10 / 1,000 ppm, optional
SO <sub>2</sub> :	0-50 / 5,000 ppm
CO <sub>2</sub> :	0-5 / 50%
O <sub>2</sub> :	0-10 / 25%
<b>Repeatability:</b>	
Ranges <sup>3</sup> 200 ppm:	± 0.5% of full scale
Ranges <sup>2</sup> 200 ppm and O <sub>2</sub> analyzer:	± 1.0% of full scale
<b>Response Time:</b>	
NO, CO, and CO <sub>2</sub> :	15 seconds for 90% response
SO <sub>2</sub> and O <sub>2</sub> :	30 seconds for 90% response
<b>Drift:</b>	For ambient temperature within ±10¼F (5¼C):
Zero Drift:	
Ranges > 200 ppm	± 1.0% of full scale / 7 days
Ranges < 200 ppm	± 2.0% full scale / 7 days
Span Drift:	± 2.0% of full scale / 7 days
<b>Linearity:</b>	± 1.0% of full scale
<b>Interference:</b>	<± 2.0% of full scale for standard sample gas composition
<b>Power Requirements:</b>	115 V ac, 50/60 Hz
<b>Power Consumption:</b>	300 VA
<b>Sample Gas Flow Rate:</b>	0.5 cpm
<b>Sample Gas Pressure:</b>	4.9 kPa (500 mmAq) ± 0.5%
<b>Outputs:</b>	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.
<b>Materials Exposed to Sample Gas:</b>	304 stainless steel, Teflon™, polypropylene, fluororubber, PVC, and glass
<b>Dimensions:</b>	
Height:	5 1/4 in (134 mm)
Width:	19 in (483 mm)
Length:	20 in (508 mm)
<b>Weight:</b>	Approx. 34 lb (15.4 kg)

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