

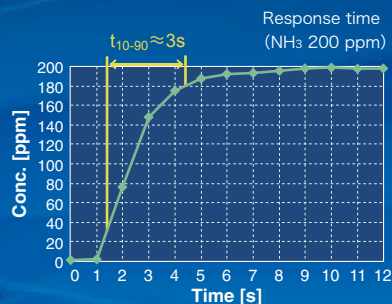
## Simultaneous Measurement of Multiple Components for the Emission Regulations

The MEXA-ONE-FT Series simultaneously measures concentrations of several constituents including NH<sub>3</sub>, N<sub>2</sub>O, CH<sub>4</sub>, CO and CO<sub>2</sub> in un-diluted exhaust gas using the Fourier transform infrared (FTIR) method in combination with a multi-variate analysis algorithm. It incorporates HORIBA's proprietary, compact interferometer which yields superior performance and high accuracy. In addition, usability, expandability and flexibility are realized by "HORIBA ONE PLATFORM". The system complies with NH<sub>3</sub> testing requirements of Euro VI, the EU regulation for heavy duty emissions testing.

### Applications

- **Euro VI compliance "MEXA-ONE-FT-E"**

NH<sub>3</sub> response time ( $t_{10-90}$ )  
: 5 seconds or less  
Sampling temperature : 191°C



- **Simultaneous and continuous measurement of up to 28 components such as NO, NO<sub>2</sub>, N<sub>2</sub>O, NH<sub>3</sub>**

- Research of alcohol fuel
- Development of after-treatment systems
- Measurement of greenhouse gas

- **Tools for certification tests and R&D**

Combined with the MEXA-ONE series, which is used for emission certification test, the MEXA-ONE-FT simultaneously measures NH<sub>3</sub> along with various regulated and unregulated components. Options for THC and O<sub>2</sub> measurement are available.



### Integrated Operating Platform



#### HORIBA ONE PLATFORM

The HORIBA ONE Series of measurement devices employs the common software platform HORIBA ONE PLATFORM which integrates the test devices in an emission laboratory into a single user interface, increasing efficiency and optimizing user control over the entire testing process.



# Specifications

## Outline

Model	Standard type : MEXA-ONE-FT / Euro VI compliance type : MEXA-ONE-FT-E
Conformed standards	CE, FCC, KC
Target components and ranges <sup>1</sup>	Maximum 28 components    Standard component set: for gasoline/diesel vehicle (18 components and "NO+NO <sub>2</sub> ") Optional component set: for CNG-fueled vehicle (16 components and "NO+NO <sub>2</sub> ")
Applications	Emissions performance tests of various engines & evaluation of diesel NOx after-treatment system
Principle	Fourier transform infrared spectroscopy (FTIR)
Outputs / Inputs	Monitoring on 17-inch LCD
Sample line temperature	MEXA-ONE-FT : 113 ± 6°C    MEXA-ONE-FT-E : 191 ± 6°C
Sample gas flow rate	MEXA-ONE-FT : 4.0 ± 0.5 L/min    MEXA-ONE-FT-E : 14 ± 1 L/min
Operating environment	Ambient temperature : 15 to 35°C    Ambient humidity : less than 80% relative humidity

\*1 : To be specified when ordering.

## System Configuration

Liquid nitrogen	Replenishing amount: approx. 500 ml (including evaporation) Duration: 10 hours or more (The dewar vacuum must be renewed annually)
Power supply voltage	Any of the following voltage and frequency (to be specified when ordering) <ul style="list-style-type: none"> <li>• 100 ± 10 V AC, 50/60 ± 1 Hz, single phase</li> <li>• 110 ± 11 V AC, 50/60 ± 1 Hz, single phase</li> <li>• 115 ± 11.5 V AC, 50/60 ± 1 Hz, single phase</li> <li>• 120 ± 12 V AC, 60 ± 1 Hz, single phase</li> <li>• 200 ± 20 V AC, 50/60 ± 1 Hz, single phase</li> <li>• 220 ± 22 V AC, 50 ± 1 Hz, single phase</li> <li>• 230 (207~250) V AC, 50 ± 1 Hz, single phase</li> <li>• 240 (216~250) V AC, 50 ± 1 Hz, single phase</li> </ul>
Power requirements	Approx. 4.0 kVA as maximum, approx. 3.0 kVA at stable state
Dimensions	655 (W) x 855 (D) x 1970 (H) mm (excluding protruding objects)
Mass	Approx. 460 kg

## Performance

Zero noise <sup>2</sup>	Less than 1.0% of full scale (depending on measurement components)
Response time <sup>3</sup> (t <sub>10-90</sub> )	MEXA-ONE-FT : 5 seconds or less when switching from N <sub>2</sub> to 200 ppm CO. MEXA-ONE-FT-E : 5 seconds or less when switching from N <sub>2</sub> to 200 ppm NH <sub>3</sub> .
Repeatability <sup>4,5</sup>	Within ±1.0% of full scale
Zero drift/span drift <sup>4,5</sup>	Within ±1.0% of full scale/8 hours
Warm-up time	Less than 2 hours after turning on the main power

\*2 : The zero noise is defined as the standard deviation of the concentration reading multiplied by 2.

\*3 : Using a sample Probe (0.3 m), a heating filter and a heating pipe (10 m) without obvious dirt in a sample line.

\*4 : Confirmed with 200 ppm CO, 500 ppm CH<sub>4</sub> and 200 ppm C<sub>2</sub>H<sub>6</sub>.

\*5 : Span gas with more than 80% of the full scale concentration shall be used.

## Options

Sample line selector	8 lines
Analog output board	Analog output: 0-10V    Max. 16 channels (Output components are selectable) A connection cable (Max. 15m)
Host communication cable	LAN cable
NH <sub>3</sub> filter element	Silica fiber (φ19.6 mm x L90 mm)
THC measurement	Principle : Heated flame ionization detection (HFID) Measurement range : from 0-10 ppmC to 0-60000 ppmC
O <sub>2</sub> measurement	Principle : Magnetopneumatic Detector (MPD)    Measurement range : from 0-1 vol% to 0-25 vol%
Automatic replenishing device for liquid nitrogen	Maximum storage amount : Approx. 12 L    Duration : 120 hours or more (depending on the vacuum degree of dewar) For more details, please contact HORIBA.



Please read the operation manual before using this product to assure safe and proper handling of the product.

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