

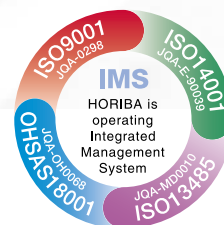
Real-time measurement of Total-S, SO₂ and TRS *1



Motor Exhaust Gas Sulfur Analyzer **MEXA-1170SX**

Target components

The MEXA-1170SX is a continuous gas analyzer for sulfur compounds existing in engine emissions. It can measure concentrations of SO₂ and total reduced sulfur compounds (TRS), such as H₂S, separately. It can also measure the total sulfur compounds (TS) that contains both gaseous compounds and liquid compounds in PM, such as SO₃.



Development concept

- Measurable compounds: SO₂, TRS*1, Both SO₂ and TRS simultaneously and Total-S
- High sensitivity, wide range and fast response
- Compact and low power consumption products
- The instrument is equipped with a heated sampling pump so it can measure engine exhaust gases without an additional sampling system. As an optional function, the MEXA-1170SX can be operated from the main control unit (MCU) of a HORIBA MEXA-7000 series, as well as from the control panel on the MEXA-1170SX.

Application

- SO₂ and TRS measurement
To enhance after-treatment system research and development to evaluate sulfur poisoning in de-NO_x system, such as LNT(Lean NO_x Trap) and Four Way Catalyst(NO_x and PM reduction system simultaneously).
- Total sulfur measurement
“Lubricant Oil Consumption” using the sulfur trace method

*1:Total reduced sulfur

Specifications

Response time of calibration line	From ZERO/SPAN inlet, at flow rate of 5.0 L/min \pm 0.2 L/min, by switching N ₂ to SO ₂ ,
SO ₂ , SUM *2, TRS mode	SO ₂ , SUM: within 4.5 s as T90 *3
TS mode	TS: within 4.5 s as T90
Response time of sample line	From inlet of sample probe, at following flow rate by switching N ₂ to SO ₂ ,
SO ₂ , SUM, TRS mode	SO ₂ , SUM: within 4.5 s as T90 within 5.0 s as Td 5.0 L/min \pm 0.2 L/min
TS mode	TS: within 4.5 s as T90 within 5.0 s as Td 4.0 L/min \pm 0.2 L/min
Zero noise	As peak-to-peak width in 5 minutes,
SO ₂ , SUM, TRS mode	SO ₂ : less than 0.5 % of full scale SUM: less than 0.5 % of full scale
TS mode	TS: less than 1.0 % of full scale
Measuring range	
SO ₂ , SUM, TRS mode	SO ₂ : 0-20 to 100 ppm / 0-200 to 2000 ppm SUM: 0-20 to 100 ppm / 0-200 to 2000 ppm TRS: 0-20 to 100 ppm / 0-200 to 2000 ppm (Ranges for SO ₂ , SUM and TRS are changed synchronously)
TS mode	TS(standard): 0-10 to 100 ppm / 0-200 to 2000 ppm TS(option): 0-5 to 25 ppm / 0-50 to 100 ppm *4
Repeatability	
SO ₂ , SUM, TRS mode	SO ₂ : within \pm 1.0 % of full scale SUM: within \pm 1.0 % of full scale
TS mode	TS: within \pm 1.0 % of full scale Linearity
Linearity	
SO ₂ , SUM, TRS mode	SO ₂ : within \pm 1.0 % of full scale SUM: within \pm 1.0 % of full scale
TS mode	TS: within \pm 1.0 % of full scale
Power capacity	Approx. 3.0 kVA as maximum (approx. 2.0 kVA at stable state)
Dimensions	(W)570 x (D)850 x (H)1190 mm
Mass	Approx. 200 kg

*2 : SUM = SO₂ + TRS *3 : T90 means the time interval from 0.5% response to 90% response.

*4 : The specification of low range is available only for SO₂/TS switching type.



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

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