



SULPHUR DIOXIDE GAS ANALYSER

FLUOSULF™ FS Series

TYPICAL APPLICATIONS

- Air quality monitoring.
- Stack gas monitoring.
- Alimentary CO₂ monitoring.
- Many others where SO₂ is present.

SPECIAL FEATURES

- Wide Rangeability.
- Full digital system.
- Short Response Time.
- No zero / span drift.
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- 4-20mA and RS 232/485 outputs.
- Advanced communications, remote control.



OPERATING PRINCIPLE

A monochromatic energetic source energizes the SO₂ molecules, and the electrons in fundamental status are excited. The electrons are then in an unstable status before returning to the fundamental status. This electronic fall creates an energy dissipation and an electromagnetic emission of photons.

The number of SO₂ molecules is proportional to the number of resulting photons. A photomultiplier detects these photons and converts the resulting signal into an indication of SO₂ concentration.

Exceptional stability is achieved with the use of an optical shutter to compensate for PMT drift and a reference detector to correct any changes in UV lamp intensity. A hydrocarbon “kicker” and advanced optical design combine to prevent inaccuracies due to interferences. The multi-tasking software gives real time indication of a large number of operational parameters and provides automatic alarms if diagnostic limits are exceeded.

AVAILABLE MODELS

- ⇒ **FLUOSULF™ FS 1000** : Panel mounting general purpose.
- ⇒ **FLUOSULF™ FS 2000** : 19” rack mounting, general purpose.
- ⇒ **FLUOSULF™ FS 4000** : Panel mounting Ex proof ATEX certified.

OPTIONS

- ◆ In situ dilution probe.
- ◆ Automatic dual range change.
- ◆ Sampling system.
- ◆ Automatic calibration system.
- ◆ Ethernet capability
- ◆ For other options, consult factory.

STANDARD SPECIFICATIONS

- *Measuring principles* : Ultra Violet Fluorescence (U.V.F.).
- *Detector* : U.V. lamp/photomultiplier (P.M.T.).
- *Electronics* : Fully microprocessed.
- *Range units* : PPB, PPM, microgram/m³ selectable.
- *Measuring rangeability* : 0-50 PPB up to 20 PPM.
- *Minimum detectable* : 0.4 PPB on 50 PPB range
- *Response time* : 120s full scale
- *Linearity* : ± 1% of the calibration full scale (2 λ)
- *Repeatability* : ± 1% of the calibration full scale (2 λ)
- *Accuracy* : ± 1% of the calibration full scale (2 λ)
- *Zero drift* : Automatically compensated.
- *Span drift* : Automatically compensated.
- *Calibration* : Manual or automatic with built in permeation tube (optional).
- *Process Alarm* : 1 programmable, potential free relay contact 5A, 220V in normally open status (normally closed on request). Relay coil normally not energised or energised. To be stated.

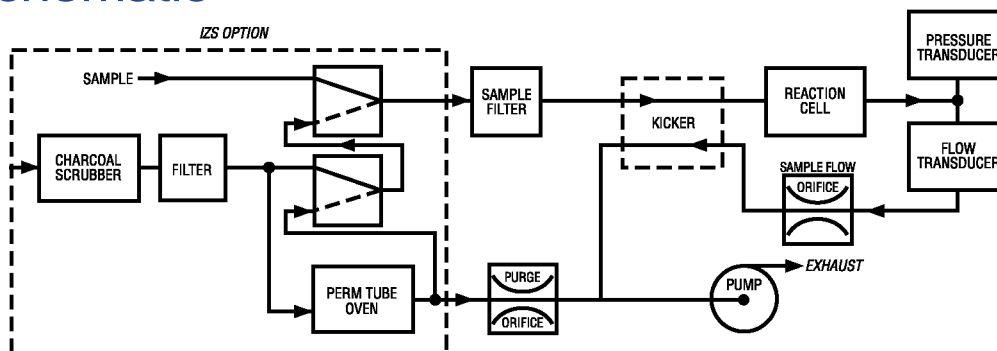
- *Fail Alarm* : 1 programmable, potential free relay contact 5A, 220V in normally open status (normally closed on request). Relay coil normally energised (as standard).

- *Power supply* : 110/240 VAC ±10 % - 50/60 Hz. To be stated.
- *Power consumption* : 300 VA on 230 VAC.
- *RFI protection* : IEC 8013 Level 3 (CE Mark).
- *Analog output* : 4-20 mA, self powered, isolated, 600 Ohms maximum load.
- *Digital output* : RS 232 or RS 485. To be stated.
- *Communication link* : Ethernet with embedded software (optional).
- *Sample inlet pressure* : 1 – 3 barg.
- *Sample flowrate* : 500 up to 700 ml/min.
- *Ambient working temp.* : +5°C up to +40°C. ±2°C stability required for optimal performances. (0.1% drift per °C).

- *Storage temperature* : -10°C up to +55°C, 0 - 95 % R.H non condensing.
- *Material* : Stainless steel, Teflon. All components in contact with the sample are compatible with sulphur.


- *Fluidic connections* : 1/4" NPT Female bulkhead unions.

Schematic



H₂S OPTION

In our continuing research and development, we reserve the right to make any model revisions and specification changes without prior notice.

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