

UV Fluorescent Total Reduced Sulfur Analyzer Model AF22M-CTRS

**Air Quality
monitoring**



3 selectable modes:

- Continuous TRS
- Continuous SO₂
- Cyclic SO₂ / TRS



Remote control using ConTACT™ software

Applications:

- Ambient air monitoring of all sulfur compounds: H₂S, CH₃SH, COS, CS₂, (CH₃)₂S, (CH₃)₂S₂...
- Continuous odour monitoring (waste water treatment plants, chemical industries)
- Indoor / workplaces monitoring
- Stack emission monitoring (using a dilution-based sampling system)

Exclusive features:

- Type approvals: TÜV report n° 936/21206773/C (Germany), US EPA n° EQSA-0802-149 (USA) for AF22M
- Graphic Liquid Crystal Display (LCD)
- Interactive menu driven software with enhanced speed display
- Real-time synoptic flow diagram display
- User programmable ranges and average time
- Auto-ranging
- Temperature and pressure compensation
- Automatic and programmable response time
- Real time calibration graph
- Built-in storage of 2 months 1/4 h average data (up to 1 year with the optional memory extension)
- Built-in double serial interface (RS 232/RS 422) for remote control & maintenance

UV Fluorescent Total Reduced Sulfur / Sulfur Dioxide Analyzer

Specifications:

- Ranges : 0 - 0.10 / 0.25 / 0.50 / 1 ppm TRS
- Duration of cycle mode TRS / SO₂: 2x225 seconds
- Response time:
 - TRS mode: 120 seconds
 - SO₂ / TRS mode: max. 450 seconds
- Zero drift: < 1% / week (with zero cycle on)
- Span drift: < 1% / week
- Linearity: +/- 1% of full scale
- Selective SO₂ scrubber capacity: 500 ppm/h
- TRS / SO₂ converter: Quartz, 870 °C
- Dim. AF22M: 545 x 483 x 133 mm (W x D x H)
- Dim. CTRS: 545 x 378 x 133 mm (W x D x H)
- Weight AF22M: approx. 10 kg
- Weight CTRS: approx. 9 kg
- Operating temperature: +10 °C to + 35 °C
- Serial Communication : 2 x RS 232 or 422

Utilities:

- Power supply: 230 V, 50 Hz or 115 V, 60 Hz
- Consumption:
 - 160VA for CTRS
 - 60 VA for AF22M

Options:

- Permeation bench (built-in AF22M module)
- Special version for measurement in CO₂ sample
- ESTEL electronic board (1 or 2) with:
 - 4 independent analog inputs
 - 4 independent analog outputs
 - 4 remote control inputs
 - 6 dry contacts

Operating principle:

Model AF22M-CTRS consists in two associated modules:

- a TRS → SO₂ converter (CTRS-S2)
- a SO₂ analyzer (AF22M)

In continuous TRS mode, the sample introduced in Model AF22M goes through the TRS converter, where all sulfur dioxide is removed by a SO₂ scrubber. The sample is then oxidized in a high temperature catalytic converter. From that stage, reduced sulfur compounds have been transformed into SO₂ and the sample is then re-injected in the AF22M analyzer. The value displayed on the AF22M corresponds to the TRS concentration in the initial sample.

Model AF22M uses the universally known UV fluorescent principle, consisting in detecting the characteristic fluorescence radiation emitted by SO₂ molecules. In the presence of a specific wavelength of UV light (214 nm), the SO₂ molecules reach a temporary excited electronic state. The subsequent relaxation produces a fluorescence radiation which is measured by a non-cooled photomultiplier tube (PM).

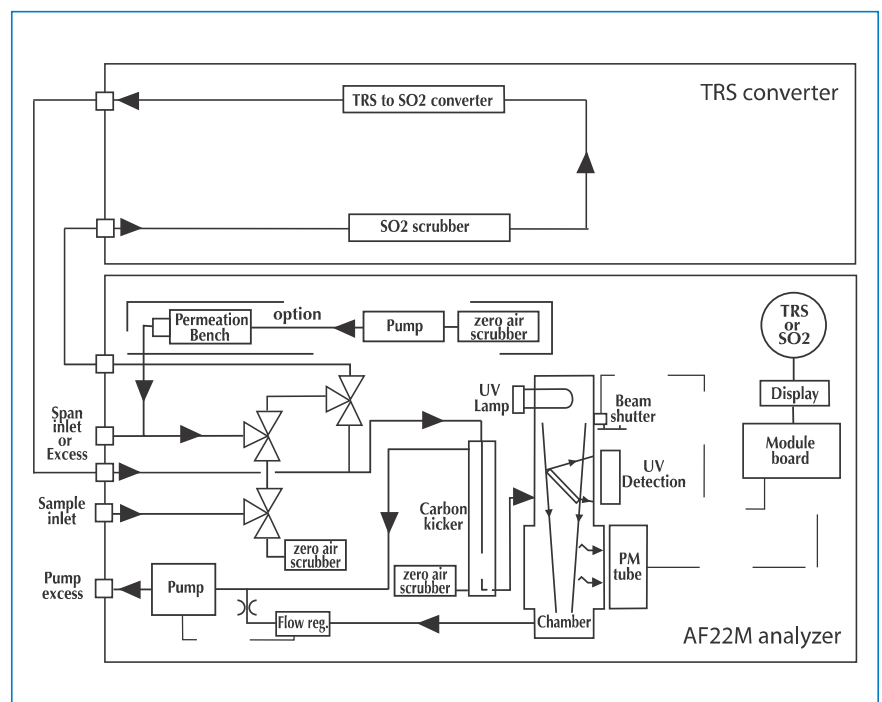
Model AF22M was developed to meet customers' requirement for reduced and easier maintenance. Equipped with an enhanced aromatic hydrocarbon scrubbing system that guarantees complete removal of these interferences, the AF22M also achieves very high sensitivity and stability through the use of an optical shutter to compensate for eventual electronics drifts.

For more information related to Model AF22M, report to AF22M specific brochure.

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Specifications subject to modifications without prior notice - ref.: 1108 - AF22M-CTRS_uk - Gimmick



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