

Measuring system MEA 3000 / 3300 for exhaust gas cleaning systems (scrubbers)



The complete system for continuous maritime emission measurement as per MARPOL regulations

- Continuous measurement of SO₂, CO₂ and NO_x (option) with a single measuring system
- Proven NDIR technology for reliable and accurate measurements
- Low-maintenance due to internal calibration and innovative filter technology
- Worldwide service
- Confirmation of Compliance as per MEPC.184(59)



Application On January 1, 2015, new limit values for SO₂ and NO_x went into effect to reduce air pollution caused by ships. The International Maritime Organization (IMO) has specified these new limit values in MARPOL Annex VI. If a vessel uses an exhaust gas cleaning system – a so-called scrubber – for compliance with the limit values, this system must be continuously monitored by means of an emission measurement system.

MEA 3000 / 3300 measures the SO₂ and CO₂ limit values upstream or downstream of the scrubber and transfers them to the vessel's main control system. Compliance or non-compliance with the specified limit values can be proven and documented this way. The measured ratio of SO₂ and CO₂ can be used to control the scrubber. Optionally, the measuring system can also measure and document the NO_x values and other components.

Description The MEA 3000 / 3300 measuring system for continuous emission monitoring (CEMS) from AFRISO is based on proven NDIR measurement technology. This measurement technology allows for reliable measuring and monitoring of the limit values for SO₂, CO₂ and NO_x (optional) specified by the IMO. The accurate complete system allows for simultaneous monitoring of multiple measuring points and different measured values. The system's space-saving and robust design make it easy to install or retrofit on site. Due to the innovative filter technology, a practical calibration system and a self-cleaning probe, the system requires very little maintenance.

Technical specifications

Measuring range

Exhaust gas temperature: 0/500 °C
 SO₂: 0/250 to 0/500 ppm
 CO₂: 0/20 % by volume
 Enquire for other gases

Measuring principle

NDIR measuring technology
 (non-dispersive infrared)
 Extractive measurement (cold/dry)

Operating temperature range

Operation: 5/35 °C, with fan
 5/45 °C, with air conditioning system
 Storage: 2/60 °C

Supply voltage

AC 100–240 V (+/- 15 %)
 50–60 Hz (+/- 3 HZ)

Power input

Approx. 1,200 VA without heated line
 Additionally 100 W/m for the heated line

Analogue output

2 x 4–20 mA

Switching outputs

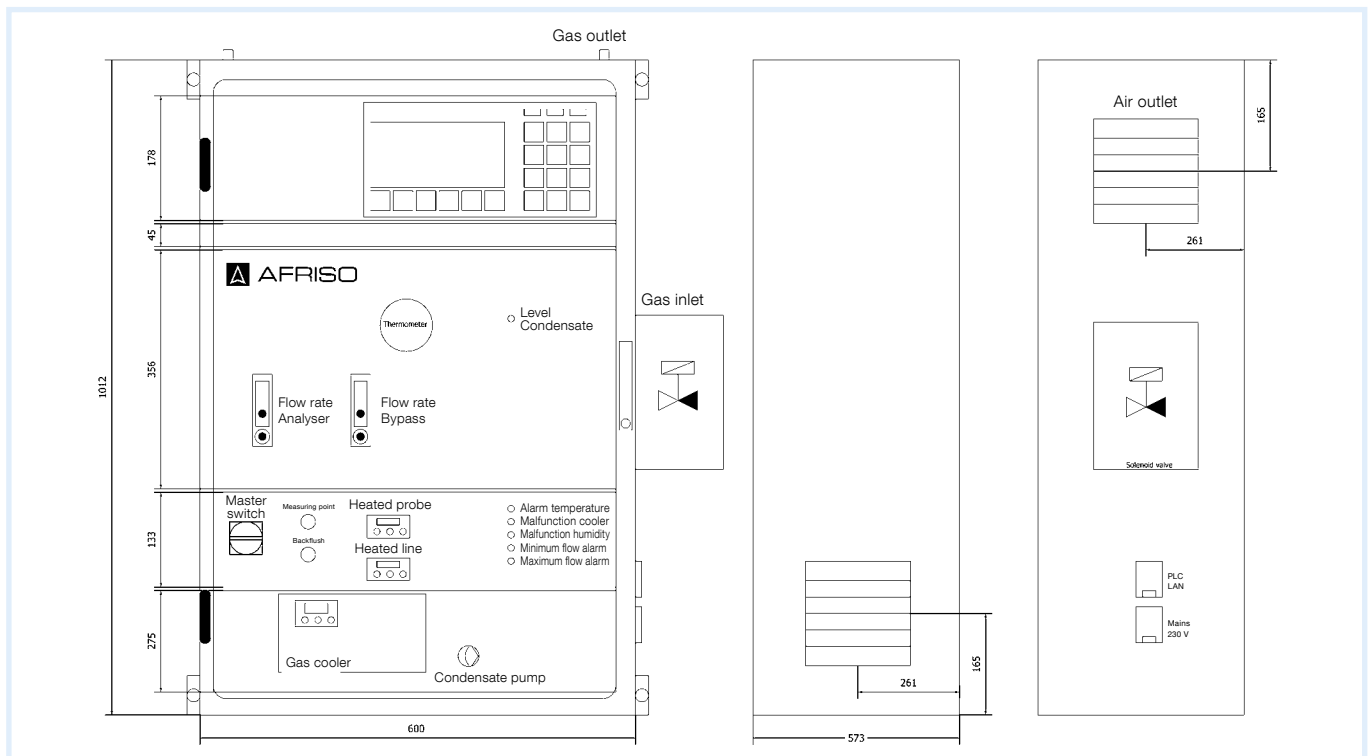
4 voltage-free contacts for status signals

Enclosure

Robust, metal analyser control cabinet
 W x D x H: Approx. 750 x 640 x 1,100 mm
 Weight: Approx. 110 kg
 Degree of protection: IP 54 (EN 60529)

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Dimensions (mm)



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| | Part no. | Price € |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------|
| Measuring system MEA 3000 , CO ₂ and SO ₂ measurement downstream of scrubber | 61090 | On request |
| Measuring system MEA 3300 , CO ₂ measurement upstream and SO ₂ measurement downstream of scrubber/CO ₂ measurement and SO ₂ measurement downstream of scrubber for 2 lines | 61091 | On request |
| Air conditioning system , 500 W | 50000 | On request |
| Gas sampling probe AFE 3000 , with 2 2/2-way valves for automatic backflushing | 61093 | On request |

Blue part no. = in-stock items