

Insight into air pollution from shipping

Datasheet

Sentinel Air Quality (SAQ) station Marine

The Sentinel station for ports, harbours, and marine-related locations is a robust and reliable monitoring solution designed specifically for maritime environments. Equipped with advanced sensors, it accurately measures pollutants such as particulate matter, sulphur dioxide, nitrogen oxides, and volatile organic compounds, providing real-time data to ensure compliance with environmental regulations.

Its durable, weather-resistant construction ensures consistent performance in harsh marine conditions, while the user-friendly interface facilitates easy data access and analysis. This station plays a crucial role in safeguarding air quality, promoting sustainable operations, and protecting the health of workers and nearby communities.

The Observator Sentinel station can be optionally equipped with radar for vehicle tracking and classification, noise and

vibration sensor and full meteorological solutions from the Observator Instruments portfolio.

Features

- Marine grade Stainless Steel 316L enclosure
- Air sample conditioning
- Gas and PM sampling systems
- Climate controlled enclosure
- Controlled and measured air flow volume
- Particulate matter measurement: PM₁, PM_{2.5}, PM₄, PM₁₀, and TSP
- 4 gas measurements included as standard: NO, NO₂, CO₂, SO₂
- Up to 7 gas measurements per station
- Optional gases to select: NO_x, O₃, CH₄, CO, H₂S, NH₃, HCl, TVOC
- All integrated into 1 enclosure

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General

Observator Sentinel stations are equipped to measure PM₁, PM_{2,5}, PM₄, PM₁₀, and TSP, and gases such as NO, NO₂, NO_x, O₃, CH₄, CO, H₂S, NH₃, HCl, CO₂, SO₂, and TVOC, all integrated into a single enclosure. Each station can measure up to seven gases and features a marine-grade stainless steel 316L enclosure with air sample conditioning, gas and PM sampling systems, and climate control. The controlled and measured air flow volume ensures accuracy, while the design allows easy access for maintenance and servicing. Installation is straightforward, with all necessary mounting elements included.

The Observator Sentinel stations come with comprehensive software support, including a Windows-based application for detailed data analysis and management. Additionally, mobile apps for both Android and Apple devices provide on-the-go access to real-time data and notifications. For those seeking enhanced accessibility and data security, optional cloud hosting and browser access are available, allowing users to monitor and manage air quality data from anywhere with an internet connection. This versatile software suite ensures that users can stay informed and maintain control over their air quality monitoring operations with ease.

Specifications

Particulate Matter:

- Principle – Optical Particle Counter
- Classification – PM₁, PM_{2,5}, PM₄, PM₁₀, TSP
- Measurement range (size) – 0,35 – 40 µm
- Measurement range (mass) – 0 – 2 mg/m³
- Size channels – 24

Gases:

- Principle – Electrochemical
- Gases included as standard – NO, NO₂, CO₂, SO₂
- Optional gases: NO_x, O₃, CH₄, CO, H₂S, NH₃, HCl, TVOC
- Max amount per station – 7 gases
- Typical lifetime – 24 months

Power requirements:

- Power supply – 110/220Vac
- Power consumption – max 200W

Communication and data collection:

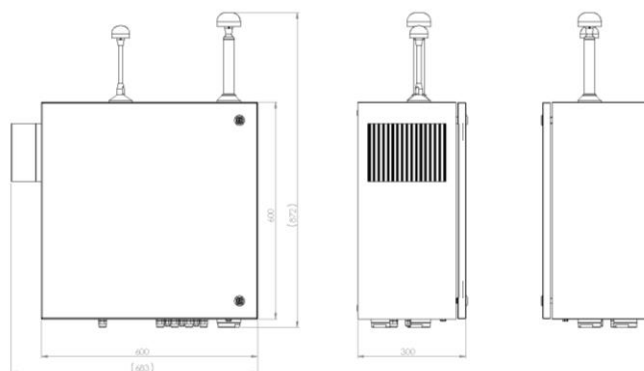
- WiFi, Ethernet LAN, GSM 3G, GSM 4G LTE, LoRaWAN, GPS, USB, SD card, Bluetooth

Environmental:

- Enclosure – Stainless Steel 316L
- Operating temperature – -35°C to +60°C
- Dimensions – 600x600x300mm (without collectors)
- Weight – 45 kg
- Protection – IP65

Optional equipment:

- Class 1 Urban Noise Monitoring Terminal
- Side-fire dual-beam ITS radar sensor
- Meteorological sensors



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Thanks to our integrated vision on sustainable business operations, we – from Observator – have evolved to be a trend-setting developer and supplier in a wide variety of industries.

Originating from the Netherlands, Observator has grown into an internationally oriented company with a worldwide distribution network and offices in Australia, Germany, the Netherlands, Poland, Singapore and the United Kingdom.



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