OBSERVATOR
instruments

Product description

High-wind alarm for port operations

Version: 20200309
Status: Final
Confidentiality: Not confidential
Date: 09 March 2020
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Document history

The Observator range is in continuous development and so specifications may be subject to change without prior notice. When in doubt about the accuracy of this document, contact the Observator Group.

Reference documents

Type of document / tool	Product type and name (incl. url)
Product description	High-wind alarm

Summary

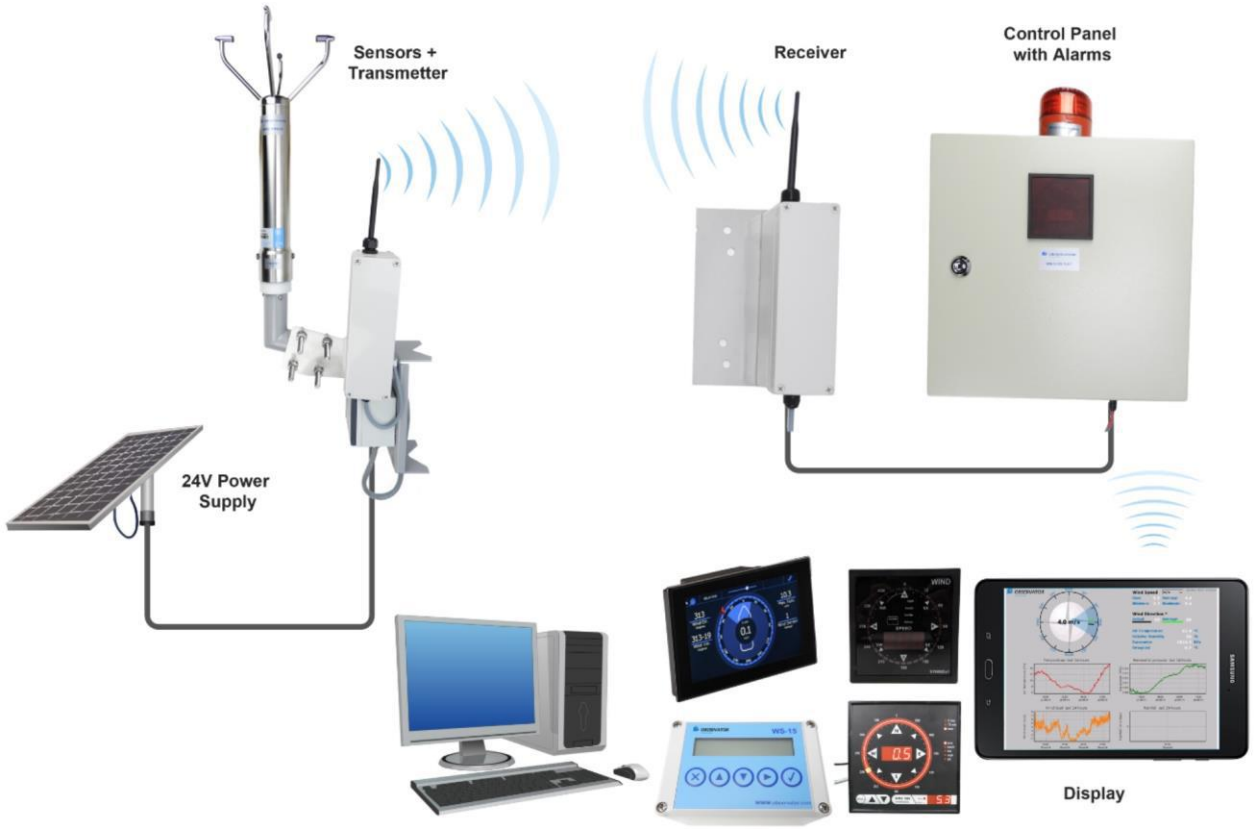
This document is a product description which provides a list of options and capabilities for our high-wind alarm systems.

Observator Instruments has a long history of manufacturing and supplying wind and weather systems to the maritime industry.

Wind alarm systems can be configured many different ways but in most scenarios, we have found that a low voltage wireless system offers the most flexibility and are easy to install by local electrical contractors or the end user.

For safety and mission critical applications, a logger with remote telemetry is advisable for off-site alarms or monitoring.

Please contact Observator Instruments for a complete set of options and available accessories for your system.



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1 Applications

1. Container logistics yards
2. Container off-loading yards
3. Industrial controls
4. Crane operations
5. Chemical and bulk handling
6. Airports
7. Irrigation controls

2 Options & accessories

2.1 Sensor choices

- Compact mechanical (SYN-710)

- Compact ultrasonic (Gill WindSonic)

- High-spec ultrasonic

- Ruggedized mechanical (SYN-706)

- Atex explosion proof (OMC-118)

2.2 Communication choices

- Radio-link – up to ten kilometre (line of sight)
- General Packet Radio Services (GPRS)
- Wi-Fi
- Lan
- Satellite

2.3 Logging choices

- Simple Standard Definition (SD) logger

- Complex GPRS telemetry logger

2.4 Display choices

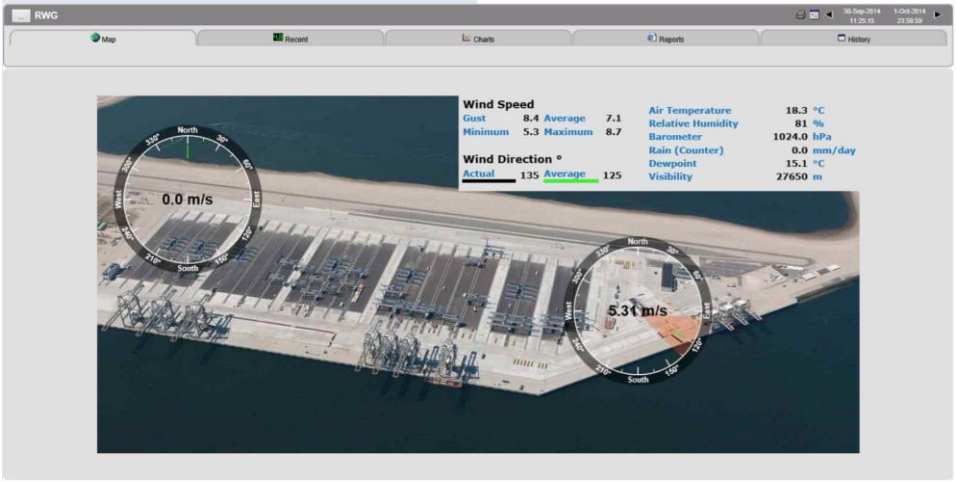
- Liquid Crystal Display (LCD WS-15)

- Light-Emitting Diode (LED) small (SYN-96)

- LED large (OMC-138)

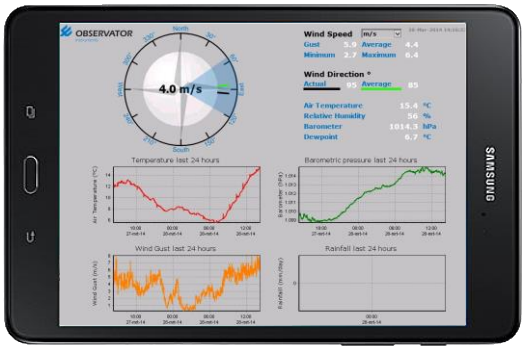
- Local Personal Computer (PC)

- Web visualization



- Touch screen display (OMC-140)

- Tablet/Android application



2.5 Alarm choices

- Visual
- Audible
- Text
- E-mail
- Combination

2.6 Alarm settings

- Wind-speed (m/s, knots, mph, km/h and Beaufort)
- Wind-direction
- Wind-speed & wind-direction (combination)
- Multi-level alarms (low, medium and high)

2.7 Enclosures

- Indoors
- Outdoors
- Custom mounting solutions

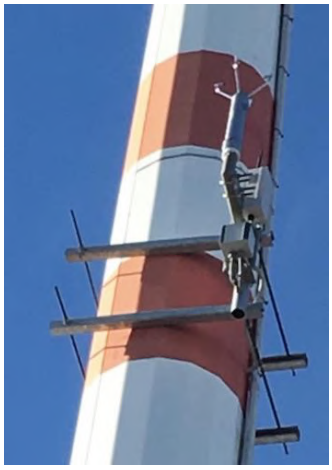
2.8 Power supply

- Mains power
- Battery backup
- Solar recharge

3 Typical system

3.1 A typical system entails the following components

A wind sensor and transmitter radio located remotely in a site location that exhibits high-wind characteristics.



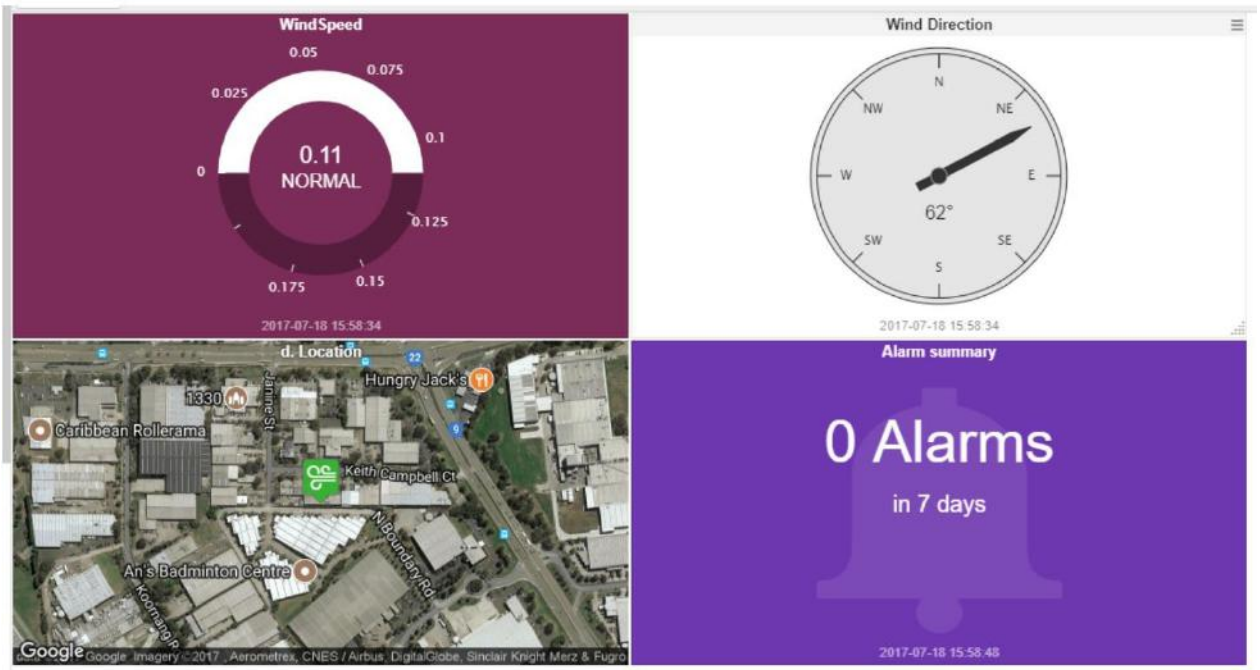
1. The sensor should be mounted with North marking facing North.
2. The radio should be mounted considering line of sight to the receiver radio.
3. The sensor should be mounted at a high point with minimum wind obstruction. If mounted on a light pole, consideration should be taken to place the sensor so obstruction is in the lowest wind direction.
4. A bracket can be fabricated using UNI-STRUT™ to place the mounted assembly away from the pole.
5. A 240V mains to 24V transformer (DIN style) is placed at the base of the pole in an appropriate location.
6. Two element power and ground cable/wire can be routed with conduit up to the terminal box at the sensor for easy connection.

A receiver radio to be mounted in line of sight to the transmitter on the roof of the office that will contain the display enclosure.

1. The receiver radio is supplied with ten meters of cable to reach the enclosure.
2. The receiver radio is supplied with a bracket plate and hardware which can be attached to the pre-fabricated UNI-STRUT™ bracket or a safety rail.
3. Receivers with an RS-422 can accommodate one thousand meters of cable to the enclosure.
4. The receiver radio location must maintain line of sight position to the transmitter.
5. Consideration must be made for temporary obstructions.

An enclosure is supplied containing a visible display of wind speed/direction. It contains a power supply and any other specified options to suit the task. Generally, a visible flashing beacon indicates an alarm condition.

1. The enclosure is supplied with a power point plug so placement considerations have visibility and access to power.
2. Loggers offer access to forensic wind information saved on an SD card. The logger has software supplied to extract SD card.
3. Alarms can be visible and audible in a number of colours. Multiple alarm levels can be requested.
4. Short Message Service (SMS) alarms are limited to 2 phone numbers and require a 3G Subscriber Identity Module (SIM) card.
5. Data can be sent via GPRS to a remote data server for storage or for use with an on-line service for alarms and visualization.



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