DEIF

-power in control

MARINE BRIDGE INSTRUMENTATION

Wind Sensor Static, WSS

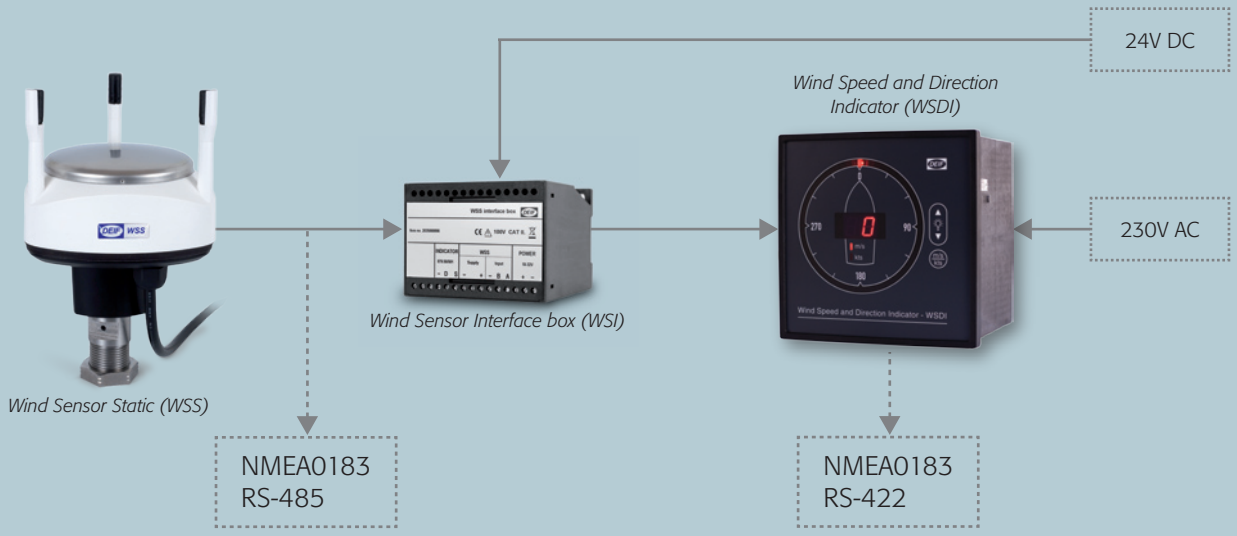
- Extended three-year warranty
- No moving parts – no wear-out
- IP66 water-proof housing
- Well-proven and robust technology
- Extensive field testing

MARINE

Complete wind system

Robust wind measuring at sea

DEIF's new static wind sensor, the WSS, is based on ultrasonic wind measurement. Combined with our interface box and display unit it is a literally maintenance-free system designed to operate in the harsh marine environment.



Display unit

DEIF's display unit, the WSDI, provides indication of relative wind direction and speed. Moreover, it has push-buttons for mode change (m/s or knots) and for dimming of the illumination. The display can also be delivered with a remote dimmer.

Interface box

The interface box, the WSI, makes it possible to upgrade an existing DEIF wind measuring system to our new static sensor without having to replace neither the display unit nor the cabling to the sensor. The box can be placed inside the bridge panel or at an arbitrary location inside the bridge.

Ultrasonic wind measuring eliminates traditional wear-out problems and thus provides extreme reliability and durability.

'Three winter hurricanes and immense temperature variations in the wavy waters of the North Atlantic proved 'no problem' to DEIF's new static wind sensor system, the WSS.'

The statement comes from Steen Lom, captain of the M/S Mary Arctica in the wake of having tested DEIF's new wind system during the 2006-2007 winter.

According to Mr Lom, the North Atlantic is an extremely hostile and aggressive environment during the winter. 'Storms and extreme temperature variations are widespread phenomena. On our current journey we have seen three hurricanes and the new equipment has operated smoothly and reliably', he continues.

The M/S "Mary Arctica" is a 572 TEU container carrier in regular service between Aalborg, Denmark, and Greenland.

Royal Arctic Line

Wind Sensor Static

Ultrasonic wind measuring with WSS

The measuring principle of DEIF's new static wind sensor is based on three ultrasonic transducers placed in a triangle at equal distance to each other. The transducers send and receive signals in a fixed pattern controlled by the integrated microprocessor and software. As the impulse spread is affected by the wind, the transmitter sending impulses in tail wind will reach the receiving transmitter faster than the one sending in headwind. When comparing all measurements, the microprocessor can determine wind direction and speed with very high accuracy.

WSS – Wind Sensor Static

The WSS is suitable for all main applications and installations. The IP66-approved sensor is available in two versions; an unheated and an electrically heated (to avoid icing up). The very robust mechanics and static (ultrasonic) measuring principle, provide a long-lasting solution that will not wear out. Under normal marine operation, you will not require service and maintenance. As a result, the WSS is optimal for the rough marine environment on-board commercial ocean going vessels, regardless of where they go.

WSS provides a direct NMEA 0183 output and can be combined with our wind display or can be directly connected to the NMEA bus to send signals to other systems.

Eliminate earth faults

The casing of the WSS is made of high-quality plastic. As a result of being a non-conductive material, the plastic casing eliminates the earth faults often caused by metal-cased wind sensors with heating.

The intelligent heating system of the WMS prevents icing-up of the wind sensor.

Upgrade from dynamic to static now

DEIF has developed a sensor upgrade kit containing the WSS sensor, an interface box and an installation manual to facilitate smooth conversion to the new sensor. The upgrade kit enables you to re-use the cable running from sensor to display unit.

Over the years, the sheer travelling speed of the M/S Mai Mols ferry, 45 knots, has worn out an average of 1 dynamic wind sensor a year. DEIF's new static wind sensor has no moving parts and is therefore not subjected to any of the traditional wear-out problems.

The traditional 3-cup rotating sensors were not designed for use onboard fast ferries in the first place. They simply wear out too fast, thus resulting in frequent wear out inaccuracies requiring sensor replacements.

For ships like the Mai Mols, the static-sensor technology is an obvious choice to save maintenance cost.

Mols-Linien's fast ferry "Mai Mols"

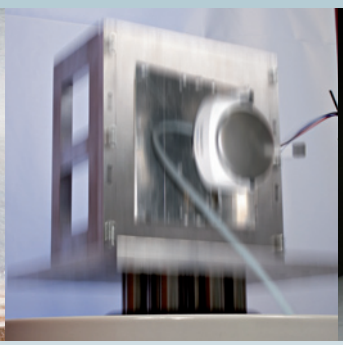
Wind Sensor Static

Type test

Many tend to compare products on technical specifications and price alone. We believe that durability, future-proofing and hassle-free performance are ever more important features. So, we never compromise on quality.

That is the very reason why all DEIF marine products undergo strict internal testing procedures. And one of the results is that we offer a three-year warranty on our static wind sensors.

Water protection test



Vibration test

Ice test

Classification approvals

Wind measuring system are not required to be approved by classification societies. Nonetheless, we have chosen to obtain classification approval for our sensor – simply in order to ensure that nothing is left undone to guarantee our customers reliable and stable performance.

We can carry out all relevant measurements in relation to classification approvals, CE marking and MED approvals in our test centre. In addition, we cooperate closely with the classification societies and they regularly visit DEIF to audit our measuring results and methods on site before issuing product certificates.

Sensor testing

Extensive field testing in rough waters has been undertaken to prove the WSS suitable for the real marine environment. The field testing has been supplemented with laboratory testing of extreme icing conditions, water resistance, vibration and shock.

The intense mechanical forces arising when a relatively small ship manoeuvres through rough seas require frequent maintenance of traditional wind sensors on ships like the Esvagt Gamma. At the same time, the ship is totally dependent on its dynamic positioning system. So malfunctioning equipment is completely unacceptable.

The Esvagt Gamma supply and rescue vessel often operates in the heavy swells of the Atlantic when servicing the Danish oil fields or when engaged in rescue operations. As a result, the equipment on board must be able to withstand the severe impacts subjected to.

Esvagt "Gamma"

Founded in 1933, DEIF has more than 70 years of experience. Today, we are active on the international markets for engine & gen-set controls, marine bridge instrumentation, switchboard instrumentation and renewable energy controls.

It is our ambition to maintain and expand our position as one of the most trusted suppliers within our fields of operation. This goal will be reached by ensuring that DEIF continues to offer real competitive advantages to our customers by supplying superior product quality, the best and most flexible features and competitive pricing.

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DEIF A/S · Frisenborgvej 33 · DK-7800 Skive · Tel.: +45 9614 9614 · Fax: +45 9614 9615 · info@deif.com · www.deif.com

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