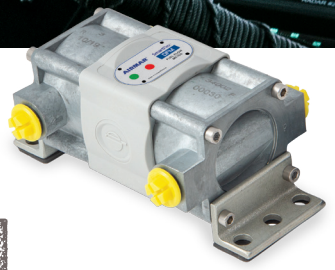

GEMECO
MARINE ELECTRONICS
SPECIALISTS
INLAND MARINE EXPO
IMX2025



WHEN MANAGING FUEL CONSUMPTION ACCURACY MATTERS

Airmar SmartFlex™ Diesel Flow Meters (DFMs)

- Unmatched accuracy in monitoring and managing diesel fuel consumption
- Digital Sensors – no specialized wiring required
- Available in single and dual chamber models (flow rate requirements ranging from .2 to 1100 gallons/hour)
- Built-in battery keeps registering data to the internal memory
- Anti-tamper modes available with larger models
- Reduces installation time and footprint
- Cost savings on product, installation, and maintenance
- Extends the service life of the fuel system through preventative maintenance

Airmar DFMs connect to the award-winning Airmar SmartBoat Module (ASM) through a digital interface. The collected data is effortlessly accessible on the NMEA 2000® network, allowing integration with various devices, including NMEA 2000 multifunction displays (MFDs).

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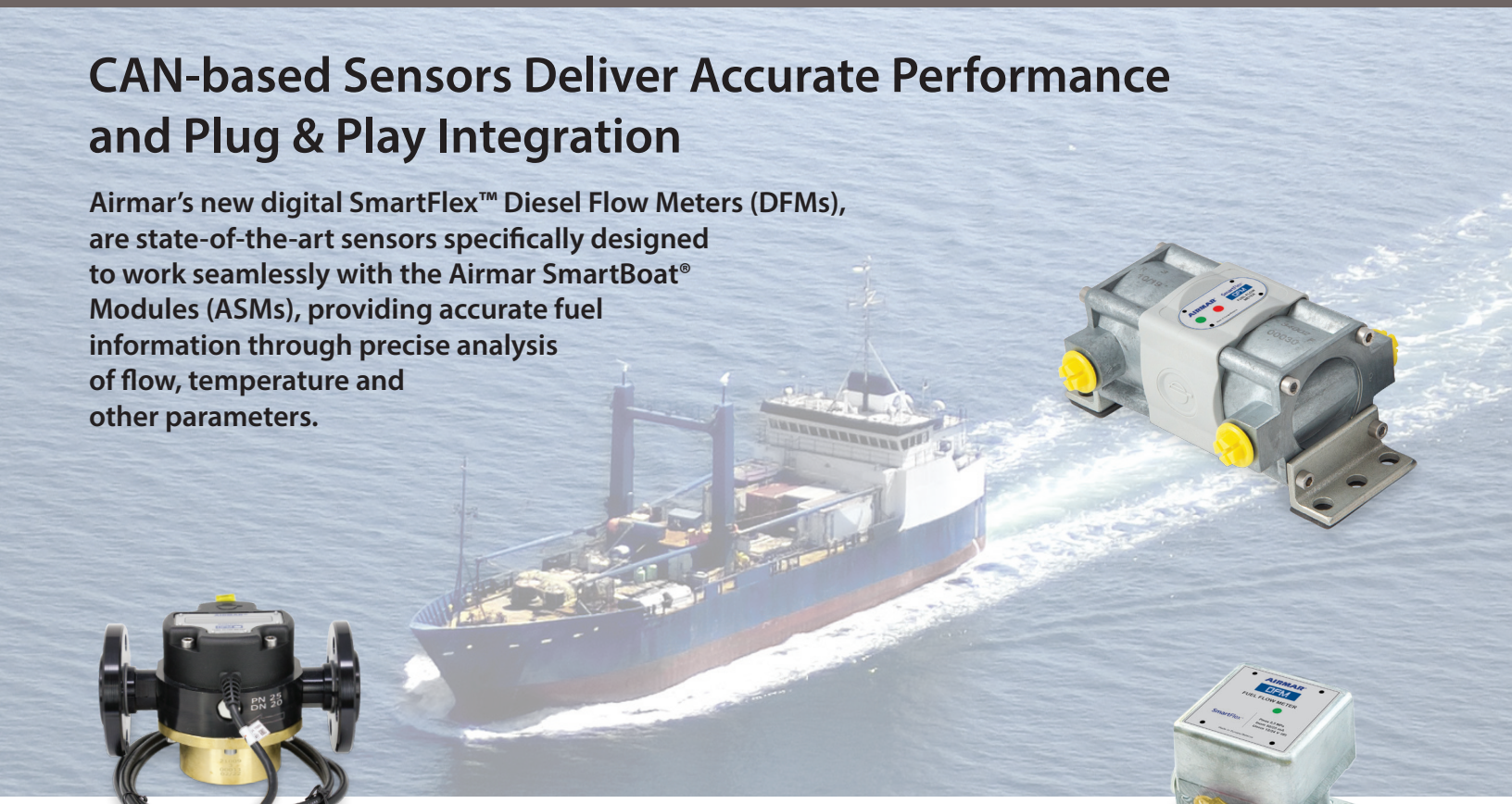
AIRMAR®
TECHNOLOGY CORPORATION
AIRMAR.COM

Introducing AIRMAR's New Diesel Flow Meters

AIRMAR® TECHNOLOGY CORPORATION

CAN-based Sensors Deliver Accurate Performance and Plug & Play Integration

Airmar's new digital SmartFlex™ Diesel Flow Meters (DFMs), are state-of-the-art sensors specifically designed to work seamlessly with the Airmar SmartBoat® Modules (ASMs), providing accurate fuel information through precise analysis of flow, temperature and other parameters.



The Benefits of Airmar's DFMs:

- Easy monitoring and management of every aspect of fuel consumption for diesel engine systems with flow rate requirements of .2 to 1,100 GPH.
- Airmar's DFMs deliver data for instant and total fuel consumption, hourly fuel consumption in forward and return line, total fuel consumption in idling and optimal mode of engine operation, and total fuel consumption in overload and negative mode of flow meter operation (return exceeds supply).
- Access to the collected data via CAN/NMEA 2000® for system-wide monitoring and control.
- DFMs are available in single- or dual-chamber models. The dual-chamber (differential) model uniquely combines measuring chambers for both supply and return fuel lines in a single housing, reducing installation time and footprint, and eliminating separate senders for feed and return lines.
- An onboard battery ensures continuous measurement of fuel even during power interruptions or unavailability.

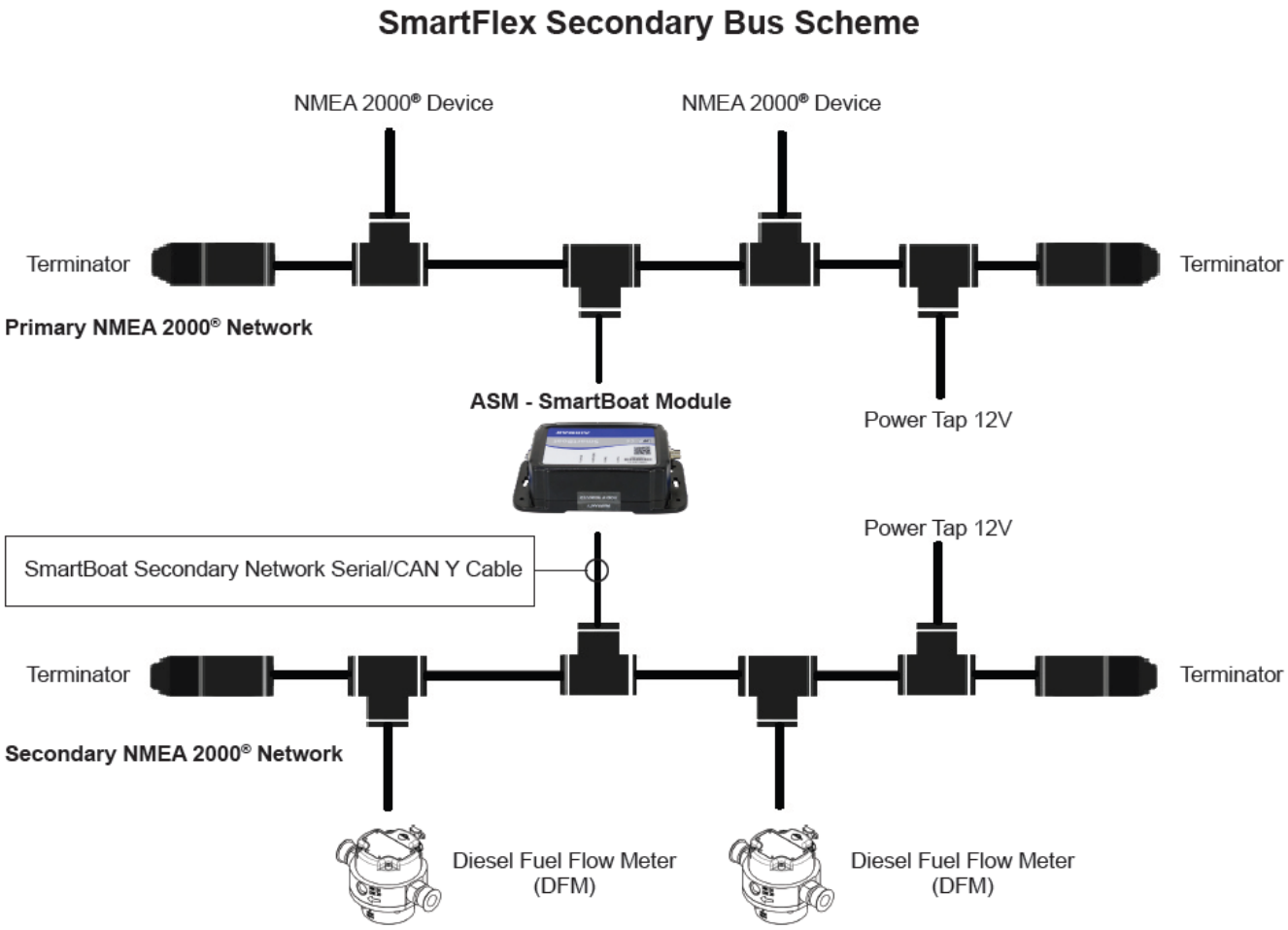
Diesel Flow Meters

SPECIFICATION AND INSTALLATION DETAILS

AIRMAR® TECHNOLOGY CORPORATION

Electrical Connection

- **Sensor Connections should be made to the secondary bus of the ASM as dictated by the ASM Installation guide for Digital Sensors.**



ASM Diesel Flow (DFM) Sensor *must* be connected to a dedicated CANBUS network, via the SmartBoat® Secondary Network Serial CAN Y-cable.

Part no. **ASM-SERCAN-YCBL**.

The Y-cable connects to the ASM module ***Secondary Serial/CAN input*** as illustrated above.

The secondary network provides DC power to the DFM and Devicenet connectivity from the DFM to the ASM module.

Actisense' **Self-contained Boat Network** (PN: A2K-SBN-*n*) is ideal for this purpose. Alternatively, the technician can construct a simple CANBUS network from discrete components, ensuring that it is terminated per CANBUS specifications.

Diesel Flow Meter

SPECIFICATION AND INSTALLATION DETAILS

AIRMAR® TECHNOLOGY CORPORATION

SmartFlex™

NEW Airmar SmartFlex™ Diesel Flow Meters

Airmar's innovative SmartFlex™ Diesel Flow Meters (DFMs), is a groundbreaking solution that has redefined the way diesel fuel is monitored and managed in the marine industry. These cutting-edge sensors seamlessly integrate with the award-winning Airmar SmartBoat Modules (ASMs) through a digital interface, offering unmatched precision and efficiency. With models catering to various flow rate requirements (1 to 4000 liters/hour), our DFMs are setting new standards in accuracy, ease of installation, cost-effectiveness, and fuel system longevity.

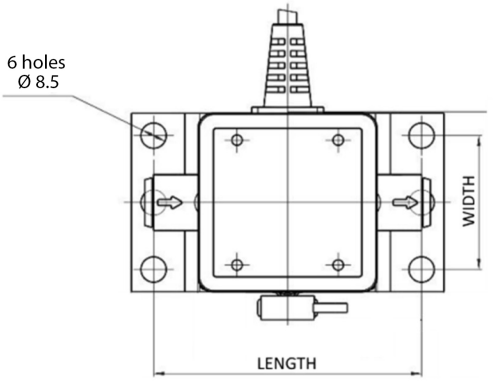
Part Numbers and Specifications

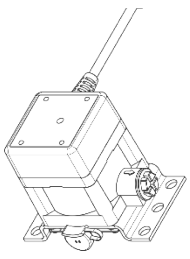
Part Number	Variations	Chambers	Working Range	Weight	Mounting L x W	Thread Type
DFM-50-SA	-L	Single	1 – 50 LPH ±1% (.2 – 2 GPH ±1%)	0.96 kg (2.11 lbs)	90 x 70 mm (3.54" X 2.75")	M14 x 1.5
DFM-100-SA	-L	Single	2 – 100 LPH ±1% (.5 – 26 GPH ±1%)	0.96 kg (2.11 lbs)	90 x 70 mm (3.54" X 2.75")	M14 x 1.5
DFM-250-SA	-L	Single	5 – 250 LPH ±1% (1 – 66 GPH ±1%)	1.30 kg (2.86 lbs)	90 x 70 mm (3.54" X 2.75")	M14 x 1.5
DFM-500-SA		Single	10 – 500 LPH ±1% (2 – 132 GPH ±1%)	1.29 kg (2.84 lbs)	90 x 70 mm (3.54" X 2.75")	M16 x 1.5
DFM-1000-SA-L	F, -SB	Single	20 – 1000 LPH ±1% (5 – 264 GPH ±1%)	2.90 kg (6.39 lbs)	42 x 32 mm (1.65" X 1.25")	3/4" BSP
DFM-2000-SA-L	F, -SB	Single	40 – 2000 LPH ±1% (10 – 528 GPH ±1%)	3.12 kg (6.87 lbs)	42 x 16 mm (1.65" X .62")	1" BSP
DFM-4000-SA-L	F, -SB	Single	80 – 4000 LPH ±1% (21 – 1056 GPH ±1%)	5.64 kg (12.43 lbs)	52 x 20 mm (2.04" X .78")	1 1/4" BSP
DFM-100-DA		Dual	10 – 100 LPH ±1..3% (.5 – 26 GPH ±1%)	1.50 kg (3.30 lbs)	135.8 x 45 mm (5.34" X 1.77")	M14 x 1.5
DFM-300-DA		Dual	50 – 300 LPH ±1..3% (13 – 79 GPH ±1%)	2.16 kg (4.76 lbs)	152.8 x 45 mm (6.01" X 1.77")	M14 x 1.5
DFM-600-DA		Dual	100 – 600 LPH ±1..3% (26 – 158 GPH ±1%)	2.07 kg (4.56 lbs)	155.8 x 45 mm (6.13" X 1.77")	M16 x 1.5

Variations available by special order: F (Flange mount) / -L (LCD display) / -SB (Brass housing)
Specifications in this table are for versions with threaded connection versions with alloy housings
Accuracy can vary according to ratio of feed chamber and reverse chamber flow rate

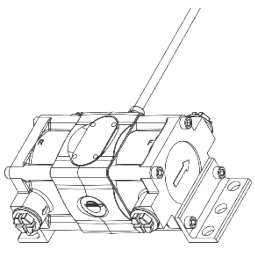
Common Specifications

Parameter	Value
Maximum Pressure	25 bar
Kinematic Viscosity	1.5 – 6.0 mm^2/s (cSt) (.059" – .23" $^2/s$ (cSt))
Maximum size of inclusions	0.08 mm (.003")
Max Pressure drop at max flow	0.2 bar
Supply voltage range	10 – 16 VDC
Operating ambient temperature	-40 – 85 °C (-40 – 185 °F)
Water ingress protection	IP54

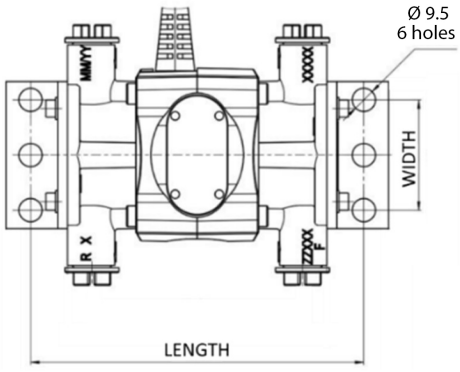




Single-Chamber DFM



Dual-Chamber DFM



The SmartBoat® Solution

Unique. Powerful. Universal. Expandable.

SmartBoat provides a simple and cost-effective way to connect and manage a variety of analog and digital sensors and devices to the NMEA 2000® network – regardless of their protocols. This results in the creation of an intelligent and capable NMEA 2000 network where all data is readily accessible on your MFD.

Monitor Vital Parameters:
- Battery voltage
- Bilge pumps
- Diesel fuel flow
- Engine J1939/J1708/J1587
- NMEA 0183
- Fuel consumption
- Temperatures
- Tank levels
- Weather conditions
- Voltage

  and much more

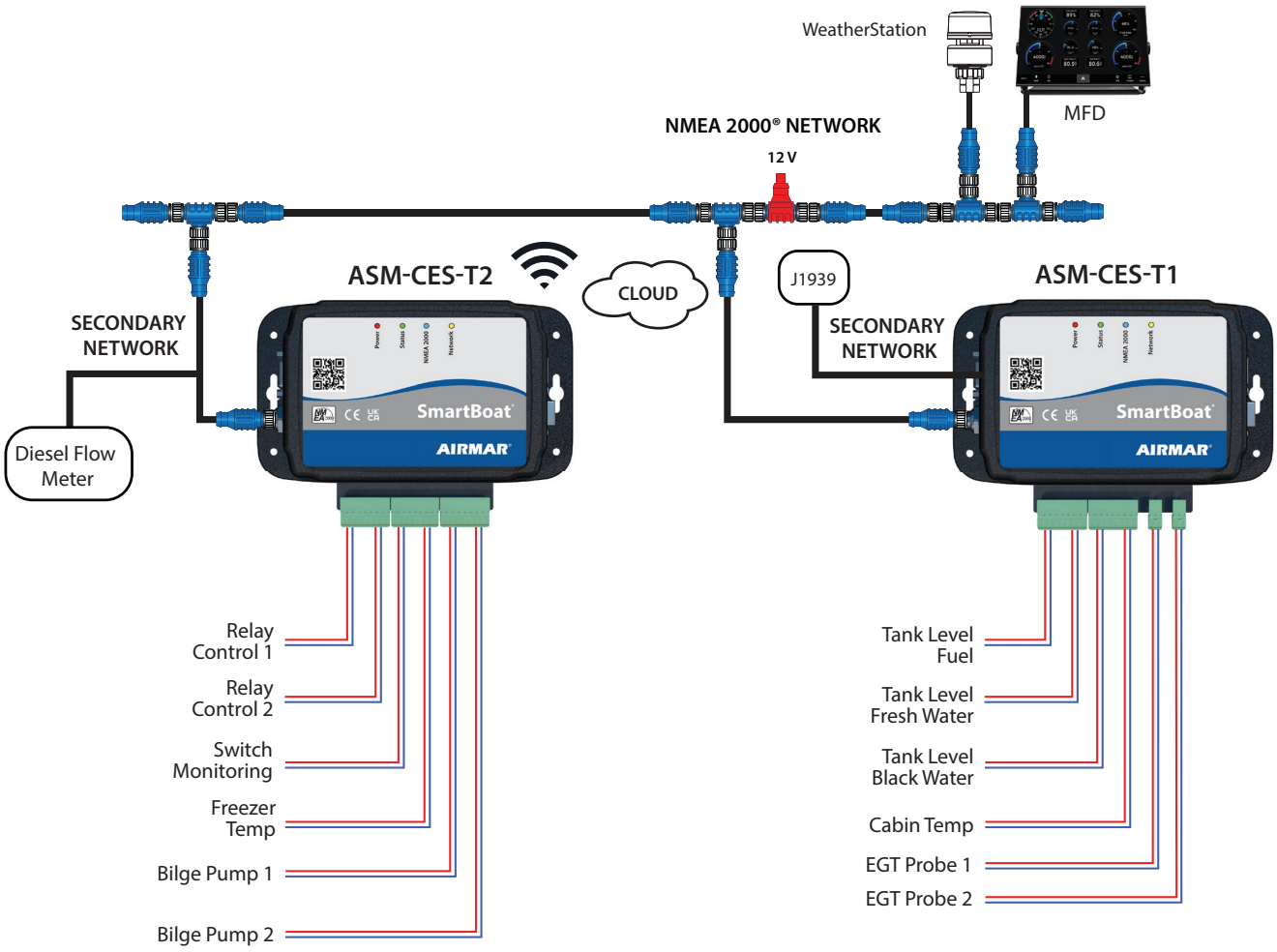
Digital Switching & Automation:
- Alerting & automation
- Custom alarms & notifications
- Timers & counters
- Fully programmable actions
- Relay control

Network Bridging & Filtering

Diagnostics:
- BUS traffic and PGNs in human readable format
- Vessel data recorder
- PGN value logging
- Searchable network traffic
- NMEA 2000 traffic replay

NEW - Cloud Services (email and SMS notifications)

Basic NMEA 2000® Network for a Mid-size Vessel *with SmartBoat*

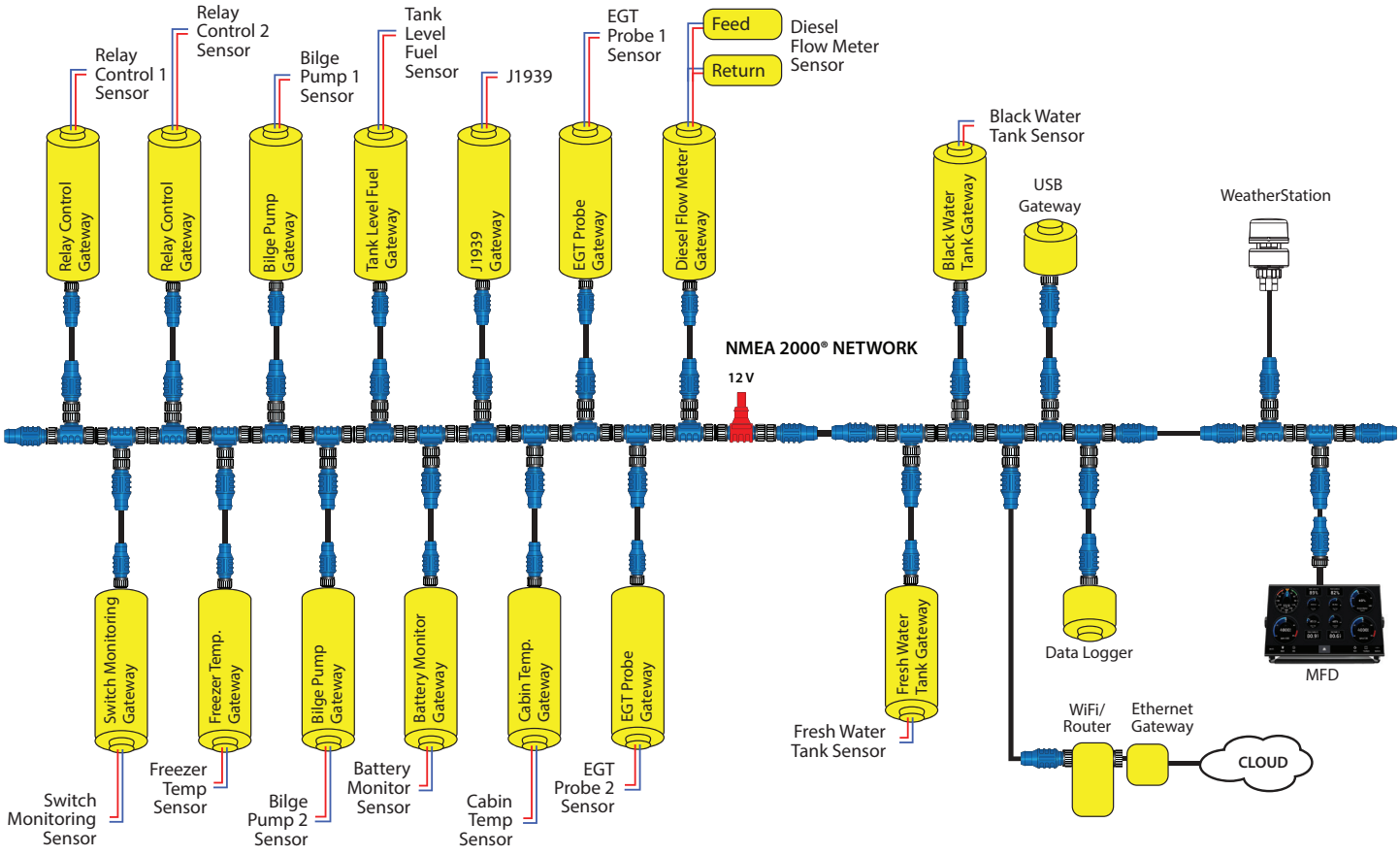


Save up to 68% on a typical retrofit. Each SmartBoat Module is less than $1,400 (including built-in configuration software and diagnostics). N2K cabling is reduced by 80%.

What Makes SmartBoat Unique?

- The only solution with NMEA OneNet, NMEA 2000, NMEA 0183, J1939, and J1587 support in a single module
- The only solution for fully customizable MFD alerts
- The only solution with Ethernet bridging
- Advanced logging features including the ability to "replay" saved logs
- Savings of up to 68% for a typical retrofit
- 80% reduction of N2K cabling in a typical retrofit

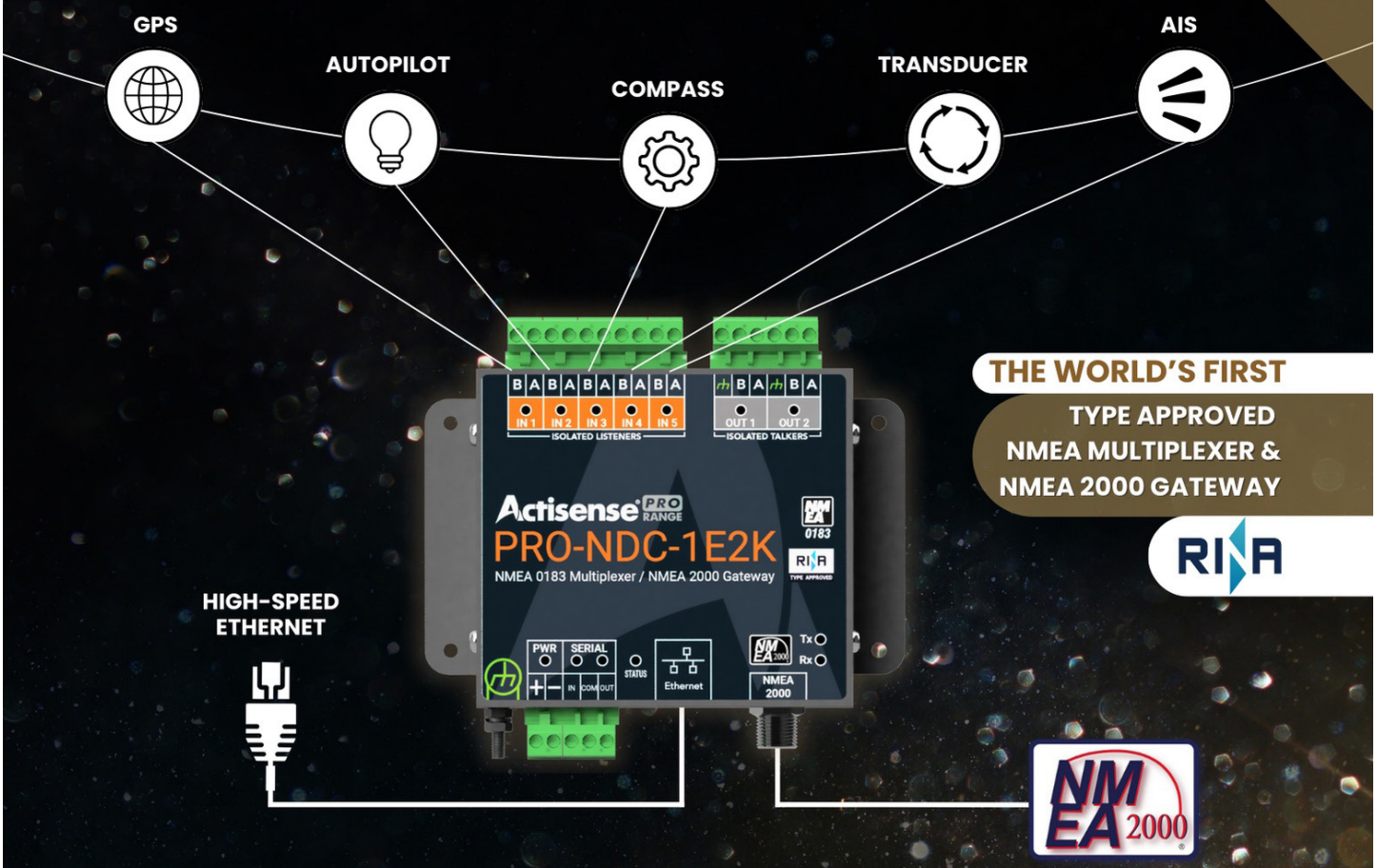
Competitors' Basic NMEA 2000® Network for a Mid-size Vessel



The cost of each gateway is up to $400. Additional N2K cabling and a separate configuration software are also required resulting in an additional $2,000 investment. A separate dedicated display may be necessary for sensor configuration.

SHARE NMEA DATA INSTANTLY
WITHOUT THE HASSLE

NEW



THE WORLD'S FIRST

TYPE APPROVED NMEA MULTIPLEXER & NMEA 2000 GATEWAY

COMMUNICATION PROBLEMS..?

Built for the commercial marine market, the next generation multiplexer from Actisense neatly ties all NMEA data together, in real time, with simplicity at its core.

Connect multiple new and legacy devices seamlessly, with NMEA 2000 conversion built in, and stream all data over high speed ethernet.

Take advantage of the advanced data routing and filtering, with ***Actisense-i***, our new network diagnostics suite of tools.

803-693-0777

sales@gemeco.com

Actisense®

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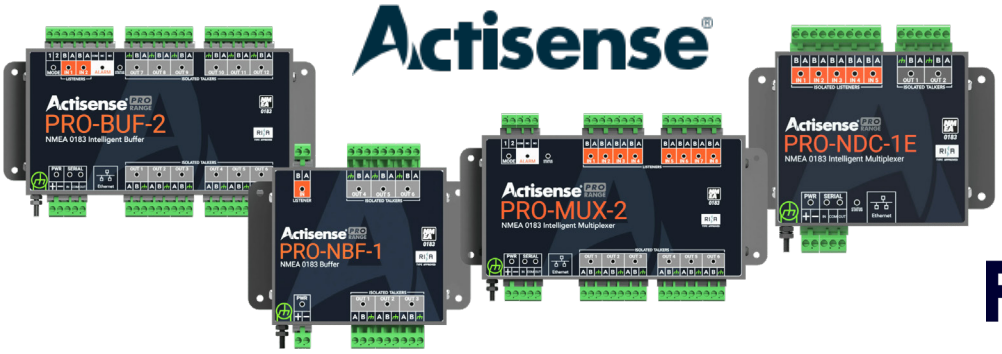
MARINE ELECTRONICS SPECIALISTS

Actisense®

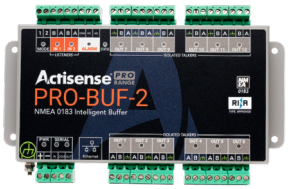


RINA

PRO RANGE – Type Approved Commercial Marine NMEA 0183 products

The Actisense PRO range of products is built to withstand the tough and harsh conditions in the commercial marine environment. Larger vessels that require added functionality and flexibility will benefit directly from these industry-leading buffers and multiplexers.

The Actisense NMEA 0183 Professional Range products are built to last, with high quality robust and intelligent designs that surpass the NMEA 0183 specifications.



PRO-BUF-2 Intelligent Type Approved NMEA Buffer

Two OPTO-isolated NMEA 0183 inputs, twelve NMEA 0183 ISO-Drive™isolated outputs and a high-speed ethernet port offers device protection and excellent flexibility, all in one product with a rugged stainless steel housing. PRO-BUF-2 is a perfect solution for larger leisure vessels, commercial shipping and is a great addition for systems that require type-approved devices.

PRO-NBF-1 Type Approved NMEA Buffer

Safely connect one Talker to six Listeners with full isolation.
PRO-NBF-1 Buffer isolates and buffers NMEA 0183 data, with the power to drive multiple devices.

Able to distribute up to six identical, amplified streams of data from one source the NMEA signals are buffered to ensure that each Listener receives the data at the required voltage levels, providing consistent data quality.

Isolation on the input and outputs ensures the protection of the source Talker device and Listener devices.

PRO-NDC-1E Type Approved Intelligent NMEA 0183 Multiplexer

5 OPTO-Isolated NMEA 0183 inputs and 2 ISO-Drive NMEA 0183 outputs provide protection for all connected instruments. Auto-switching between inputs to allow for a primary, secondary, tertiary priority input.

Configurable baud rates to allow 38400 and 4800 baud devices to operate through the same multiplexer.

Advanced sentence filtering to block unwanted sentences from specific outputs helps to limit bandwidth consumption.

Easy to configure using the web based UI, no need to manually enter and edit strings of text.

PRO-MUX-2 Type Approved Professional NMEA 0183 Intelligent Multiplexer

Eight NMEA 0183 OPTO-isolated inputs and six NMEA 0183 ISO-Drive™isolated outputs, a bi-directional serial port and an Ethernet port, the PRO-MUX-2 is a perfect solution for larger leisure vessels, commercial shipping and is a great addition for systems that require type-approved devices.

Offering device protection and excellent flexibility, all in one product.

GEMECO
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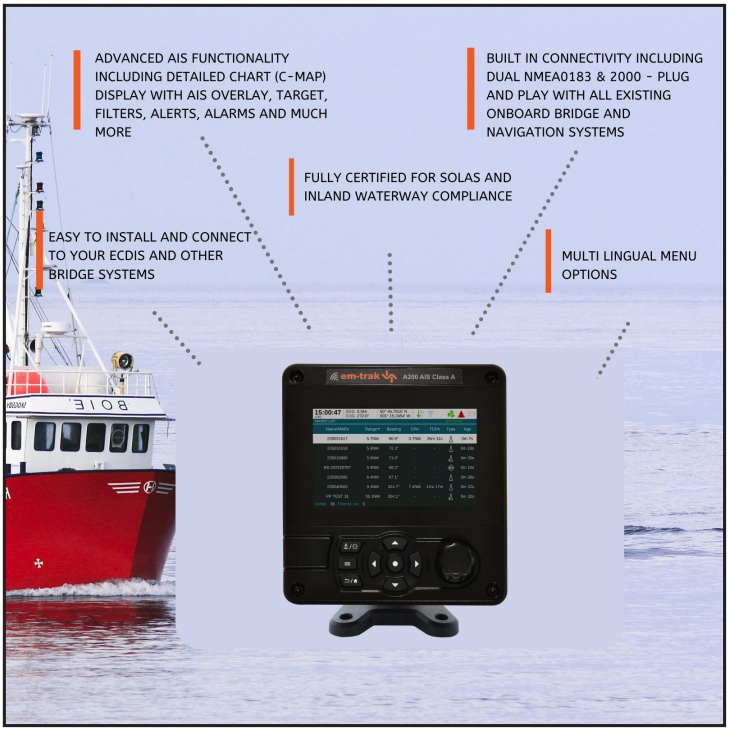
em-trak A200 SERIES

High Performance Class A AIS

The A200 Class A is both SOLAS and Inland Water-way certified and offers superior performance through its advanced, next-gen technology.

It is engineered for even the harshest marine to ensure it is waterproof and unaffected by extreme temperatures, shock and vibration.

The A200 is easy to install and will seamlessly connect to your ECDIS and other bridge systems. The A200 delivers comprehensive AIS functionality, such as alerts, target filters, vessel information lists, real time weather and more.



With its integrated color display, the A200 plays an important role in tracking, collision avoidance and CPA when vessels are in busy port areas. The combination of ad-vanced performance, trusted reliability and competitive price make the A200 the best value AIS Class A in the market by far.

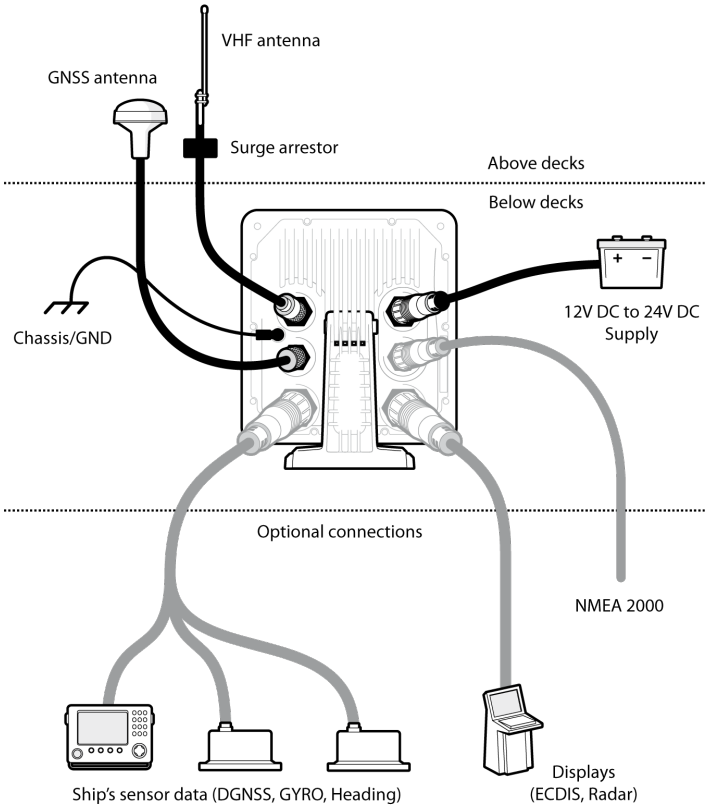
GEMECO
MARINE ELECTRONICS SPECIALISTS

SOLAS & INLAND WATERWAY CERTIFIED
A200 CLASS A Transceiver

em-trak

FEATURES

- IMO SOLAS certified AIS Class A
- EU Inland Waterway certified ruggedized and impervious to extreme environments – water (IPx6, IPx7), damp, shock, vibration and temperatures
- High performance latest generation GPS
- Suitable internal or permanent external installation
- Robust ergonomic button and rotary-knob user interfaces with configurable multi-lingual menu options
- Integrated high definition color display with night mode
- ENC chart (C-Map) with configurable AIS target overlay
- Silent mode – AIS transmissions are stopped, all AIS messages continue to be received
- Integrated WiFi
- Pilot plug cable and junction box accessory options



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MARINE ELECTRONICS
SPECIALISTS

TRANSMIT & RECEIVE | 12W/SO | WIFI | WATERPROOF | NMEA 0183 & 2000

EM-TRAK.COM

AC ANTENNAS

WE CONNECT THE WORLD

New!
Enhanced packaging for faster, more cost-effective antenna shipping.

CX4
Marine and Land Based VHF Antenna
Tx/Rx 150W 0 dBd UHF Female connector

This is not an antenna. It is 20 parts thoroughly put together.

This is not just a regular CX4 antenna, it is 20 individual parts thoroughly put together and assembled to one fully functional antenna.

Furthermore, this CX4 antenna is OUR antenna - it is manufactured in our own factory, and it is thanks to our hardworking and competent engineers that this antenna is so much stronger than the regular CX4.

Before the enhancements OUR CX4-antennas were among the strongest on the market. With the new enhanced CX4 antennas we probably have the strongest VHF antennas in the world. The improvements have resulted in an approval of the antennas for – 55 Degrees Celsius.

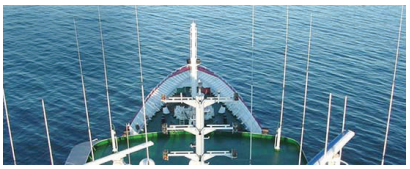
The improvements are:

1. **Stronger glass fiber.**
   The glass fiber radomes on the antennas are much stronger than our old models.
2. **More than 4 times stronger build-up inside the antennas.**
   Today we are using modern assembly techniques such as crimping instead of soldering the radiating elements of the antennas. As a result the antennas are more than 4 times stronger on the inside, making them extremely vibration resistant over the full temperature range.
3. **Stronger paint on the glass fiber.**
   The painting of the glass fiber is much better than on the old antennas.
4. **Stronger chrome layer.**
   The chrome processes are carried out in Germany by one of the best chrome companies in the world. Our need for very high protection towards corrosion is ensured by having our own special Chrome bath process at our supplier –developed for and only used by AC Antennas.
5. **Stronger parts inside the antenna.**
   Many of the parts inside the antenna are stronger today. Every single component has been optimized and been through a professional quality check.

The CX4 product family is CE-approved and comply with the RoHS (2011/65/EF) and the REACH Directive (1907/2006).

We are very proud of presenting this improved antenna portfolio containing some of the strongest antennas in the world, which only brings us one step closer towards our one pure goal: To provide the best antennas in the world. Remember that you can always go to our product sheets to read more about the antennas and the materials used.

Welcome winter
Tested by external test laboratory and approved for -55 degrees Celsius.



Improved HF/SSB antennas now available
OUR new improved KUM-antennas – approved for –55 degrees Celsius - are now available.

Best in test
Our famous AIS antennas, CX4AIS and CX35/8AIS, number 1 & 2 in test.

AC Antenna North American distribution by

GEMECO
MARINE ELECTRONICS SPECIALISTS

Antennas.
They mean everything to us.

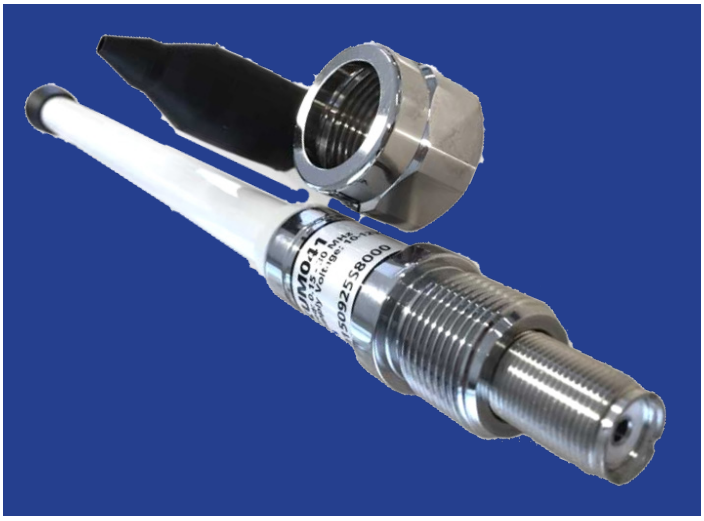
In a world where two-thirds of the globe is covered by water, the demand for marine antennas is big.

AC Antennas has been producing antennas for the maritime market since 1970.

We are known for our relentless commitment in utilizing our more than 40 years of experience towards our one pure goal: To provide the best marine antenna products in the world.

The World's Ultimate Antennas

We have a large portfolio of antennas, antenna mounts and other associated accessories for the maritime segment. All of our marine antennas are designed and manufactured to provide exceptional performance and to withstand punishment from the rigorous marine environment.



AC Antennas meet the requirements from IEC 60945, GOST, IACS E10 and RMRS.

Our antennas are designed and manufactured to provide exceptional performance and to withstand punishment from the rigorous marine environment.

We use the best materials and the latest technology (crimping etc.) to continue pushing the technical performance of our products.

All our antennas (100%) are tested before leaving the factory.

Distributed in North American exclusively by Gemeco Marine Electronics Specialists.

GEMECO
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SPECIALISTS

MARINE-BASED
MOVING VESSEL APPLICATIONS

200WX

200WX WeatherStation® Multisensor

From crew transfer vessels and workboats to commercial fishing and offshore platforms, Airmar's WeatherStation® instruments are engineered for demanding marine environments.

The WX Series delivers real-time, site-specific weather data to enhance safety, efficiency, and operational decision-making. For applications where precise wind data is crucial, the 200WX is the optimal choice, delivering Dynamic True and Apparent wind data for both moving and stationary platforms. It also offers relative humidity, temperature, and calculated metrics like wind chill and heat index. Equipped with a 10Hz GPS, three-axis solid-state compass, rate gyro, and tilt sensors, the 200WX is engineered for accurate, reliable performance.

With configurable NMEA 0183 and NMEA 2000® outputs, the 200WX integrates seamlessly with existing systems, offering best-in-class weather monitoring at a competitive price.

Applications:

- Workboats and crew transfer vessels
- Commercial fishing fleets
- Offshore oil platforms
- Port and harbor operations

Ultrasonic Wind Measurement
Dynamic True and Apparent wind speed and direction with no moving parts

Barometric Pressure
Accurate atmospheric pressure measurement

Air Temperature
With calculated heat index and wind chill

10 Hz GPS
Position, COG,SOG, time stamping

3-Axis Accelerometer
For pitch and roll

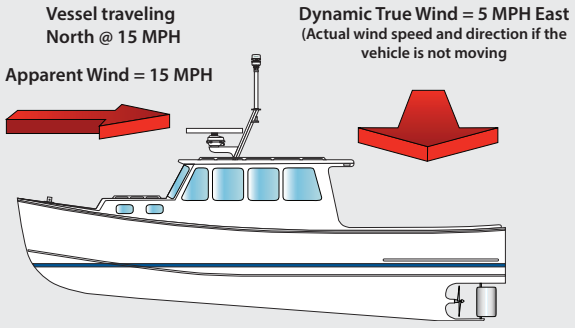
3-Axis Compass
With dynamic stabilization and better than 1° accuracy

3-Axis Rate Gyro
For rate-of-turn data

Relative Humidity (optional)
Field serviceable RH sensor with calculated dew point

Understanding Dynamic True and Apparent Wind

Virtually all anemometers report wind speed and direction. Airmar's WeatherStation Instruments are unique because they calculate both dynamic true and apparent wind speed and direction. When the WeatherStation instrument is mounted on a moving (dynamic) platform, the apparent wind is the wind felt on your hand if you held it out while moving. Dynamic true wind Is the wind relative to North but also corrected for the speed and direction of the vessel. WeatherStation WX instruments integrate a GPS and 3-Axis compass, which allows for the calculation of the dynamic true wind speed and direction based upon the apparent wind, speed of the vehicle, and vehicle heading. Dynamic True wind measurement can be critical for any application where the platform is moving.



Airmar's WX Series products are the only all-in-one unit to offer dynamic true and apparent wind speeds without additional sensors.

SPECIFICATIONS

Wind Speed
- **Range:** 0 to 40 m/s (0 to 89 MPH)
- **Accuracy:** 5% at 10 m/s at 4 angles
- **Resolution:** 0.1 m/s
- **Calculations:** User configurable damping

Wind Direction
- **Range:** 0° to 359.9°
- **Accuracy:** ±3° at 10 m/s
- **Resolution:** 0.1°
- **Calculations:** User configurable damping

Air Temperature
- **Range:** -40° to 80°C (-40 to 176°F)
- **Accuracy:** ±1.1°C at 20°C
- **Resolution:** 0.1°C

Relative Humidity (optional)
- **Range:** 0 to 100% RH
- **Accuracy:** ±5% RH at 0 to 90% RH at 20°C
- **Resolution:** 0.1% RH

Barometric Pressure
- **Range:** 300 to 1100 hPa
- **Accuracy:** ±0.5 hPa at 25°C (or better)
- **Resolution:** 0.1 hPa

Three-axis Compass
- **Range:** 0 to 359.9°
- **Accuracy:** 1° static heading accuracy; 2° dynamic heading accuracy
- **Resolution:** 0.1°

Pitch and Roll
- **Measurement Type:** MEMS
- **Range:** 60°
- **Accuracy:** ±1° in range of ±30°
- **Resolution:** 0.1°

GPS Position Accuracy: 3 m (10') CEP

Operating Temperature Range: -25 to 55°C (-13 to 131°F)

Operating Voltage
- **Supply Voltage:** 9 VDC to 40 VDC
- **Supply Current (at 12 VDC):** <75 mA (<0.9 W)
- **NMEA 2000® Load Equivalency Number (LEN):** 2

Weight
- 300 grams (0.7 lb)

Mounting-thread Size, Base M39: Adapter on cable is standard 1"-14 UNS (3/4" NPT optional)

Certifications and Standards: CE, IPX6 (IPX4 with optional Relative Humidity sensor), RoHS, IEC61000-4-2, IEC60945, IEC60950_1C, IEC60950_22A, EN55022, EN55024, EN14982

COMMUNICATIONS

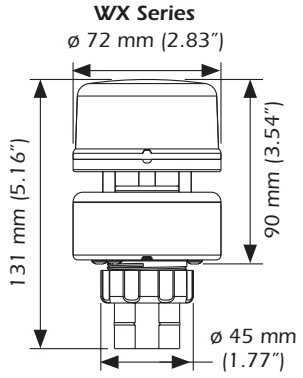
Hardware Interfaces: Serial RS232, Serial RS422, CAN
Data Protocols: Serial – NMEA 0183, CAN – NMEA 2000
Serial Data Transmission Code: ASCII
Serial Output Rate: 1 Hz typical. User selectable. 10 Hz max recommended

PART NUMBERS

200WX: 44-835-1-01, NMEA 0183 (RS422) and NMEA2000® (CAN Bus)
200WX: 44-837-1-01, RH, NMEA 0183 (RS422) and NMEA2000® (CAN Bus)
200WX: 44-846-1-01, NMEA 0183 (RS232) and NMEA2000® (CAN Bus)
200WX: 44-847-1-01, RH, NMEA 0183 (RS232) and NMEA2000® (CAN Bus)

Cables sold separately unless otherwise specified
RH = Relative Humidity

DIMENSIONS



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