DX900+ MultiLog Sensor for Racing and Sailing

Industry's First Bluetooth® Enabled, Multifunctional Sensor

Features

- Measures transverse and longitudinal speed to instantaneously calculate leeway angle and speed-through-water with no latency or additional input
- Outputs dual axis speed, depth, water temperature, and hull attitude with no moving parts
- Lightweight alternative to installing multiple sensors
- Connects wirelessly to AIRMAR CAST™ App for easy speed calibration and configuration
- Stores configuration within the device and delivers calibrated data to the NMEA network
- Outputs heel and trim in addition to leeway

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DX900+ Electromagnetic Multilog Sensor – Features and Benefits

- A single, multi-functional sensor measuring forward and transverse speed with immediate leeway data, water temperature and depth

- Ideal solution for performance sailors and long distance cruisers where knowing leeward travel could save time or improve hull speed

- Measures reverse speed and side speed (which can be helpful for very light wind conditions and quick maneuvers on powerboats like docking)

- Depth element operates at 360 kHz to avoid interference with other transducers on board

- Retrofitting is easy – retractable insert fits most existing 51 mm (2") P617V AIRMAR thru-hull housings

- Low profile housing has minimal drag

- No paddlewheel to clean or maintain. No moving parts to break or wear out.

- Depth/speed/temp and speed/temp models available

- NMEA 0183 and NMEA 2000® output models

## Electromagnetic Speed – How it Works

A small electromagnetic charge is generated between the four metal posts on the face of the DX900+. As water passes between the posts, it creates voltage which can be measured and converted to speed. The speed is calculated regardless of the direction of the water flow allowing for the accurate measurement in 360 degrees.

Electromagnetic measurement of water flow in 360° immediately calculates speed and leeway
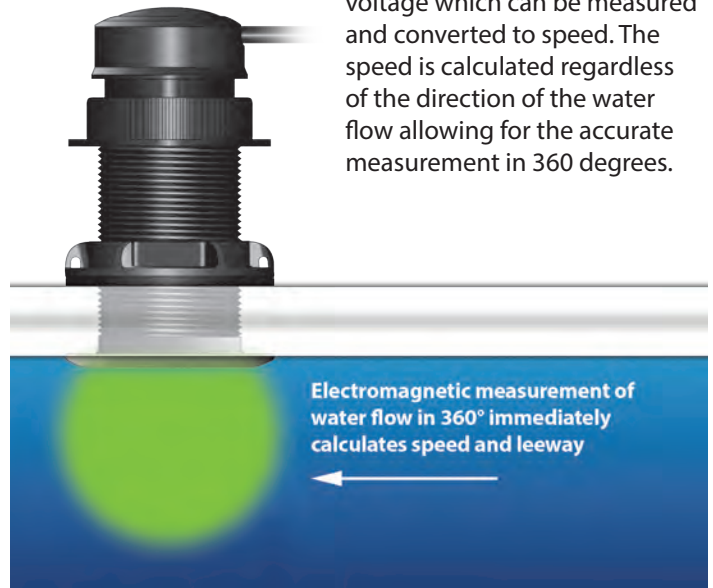
CAST™ App Features

- DX900+ has wireless connectivity to the AIRMAR CAST™ App on iOS and Android devices

- Calibrate the speed in a simple, intuitive way regardless of the instrument brand or model that is on board

- DX900+ stores calibration and configuration and delivers the data to the NMEA network
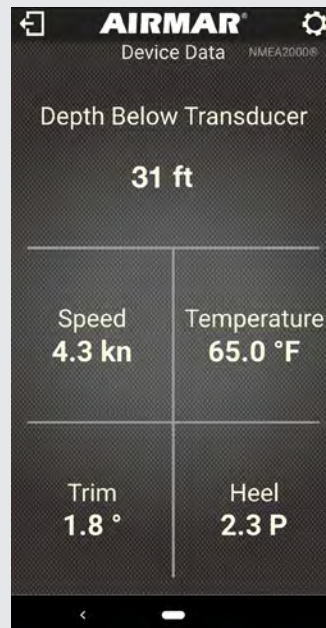
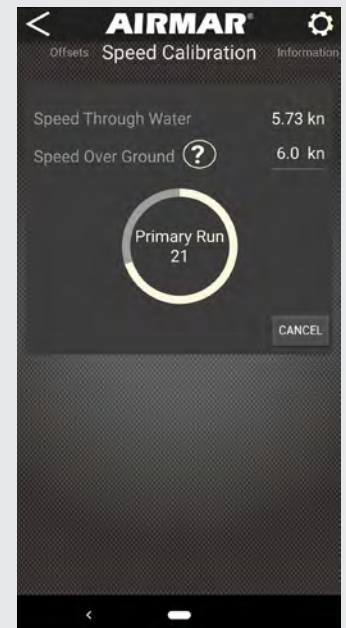Easily configure NMEA 2000® parameters on DX900+
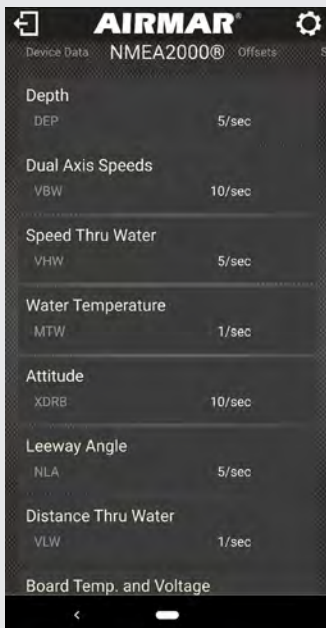
Customize offsets for depth and other important data for your boat
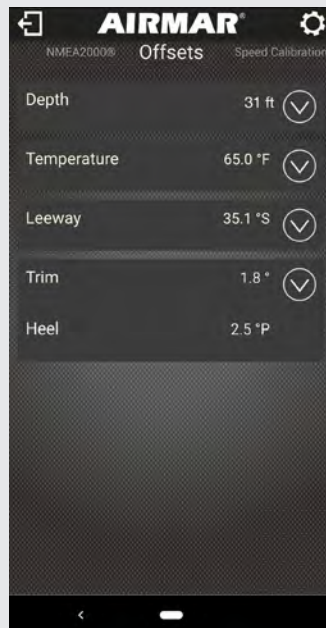
Easy to read digital readout on your phone or tablet

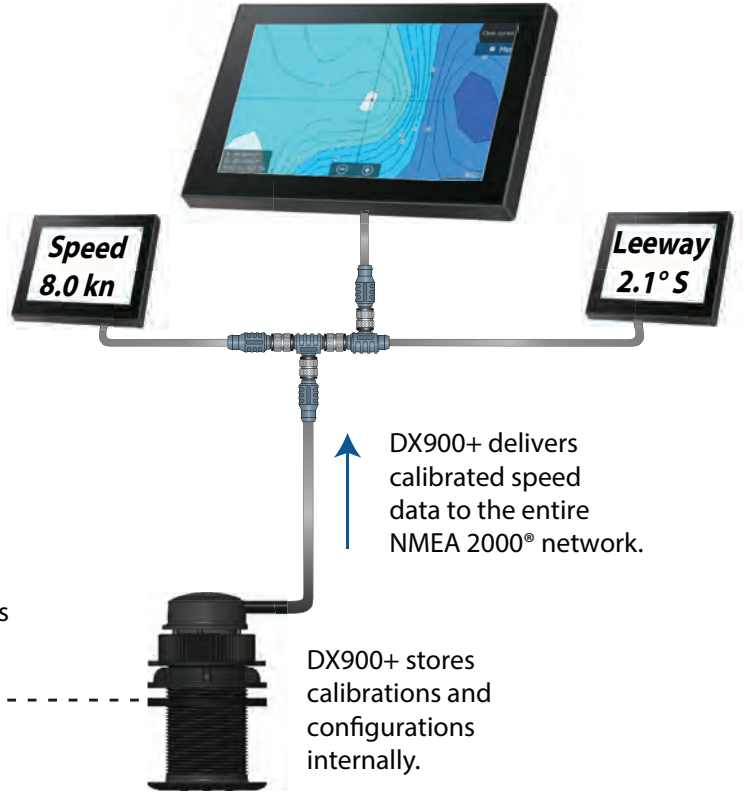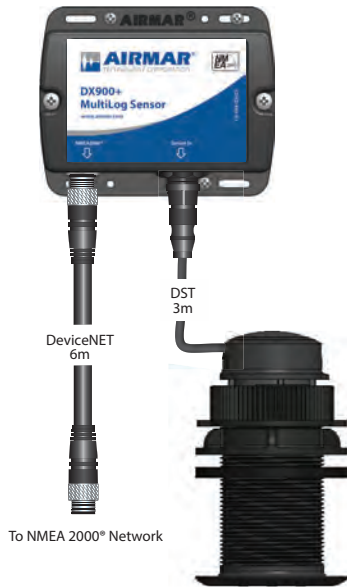Calibrate speed quickly and easily using speed-over-ground or distance

CAST™ App

Wirelessly connects →

DX900+ delivers calibrated speed data to the entire NMEA 2000® network.

DX900+ stores calibrations and configurations internally.

DX900+ CONFIGURATIONS

NMEA 2000® – Depth/Speed/Temperature

DeviceNET 6m

DST 3m

To NMEA 2000® Network

NMEA 0183 – Speed/Temperature

To NMEA 0183 Instrument/Display

NMEA 0183 6m

DIMENSIONS

ø 75 mm (2.94")

120 mm (4.72″)

59 mm (2.34")
Max. Hull
Thickness

2"-12
threads

5 mm
(0.19")

ø 75 mm (2.94")
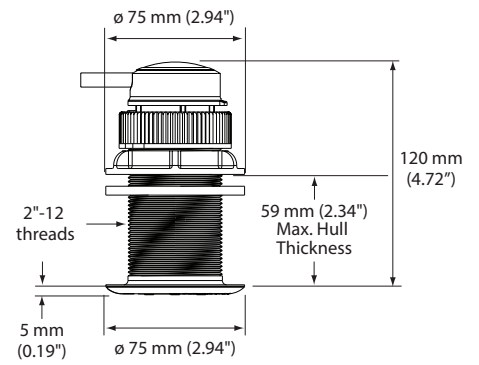
P717V Housing*

*Low-profile, plastic or stainless steel housings available.
Also retrofits to P617V housing.

NMEA 0183 TRANSMITTED SENTENCES

SENTENCE	DESCRIPTION	ON BY DEFAULT FOR EM LOG ST	MAXIMUM LENGTH (CHARS)
$YX**MTW**	Sea Water Temperature	✓	20
$VM**VBW**	Dual Ground/Water Speed	✓	35
$VW**VHW***	Speed Thru Water	✓	30
$VW**VLW***	Distance Thru Water	✓	45
$YX**XDR(T)**	Transducer Measurements: Board Temp. and Voltage	❏	43
$YX**XDR(B)**	Transducer Measurements: Vessel Attitude	✓	43
$VM**NLA**	Nautical Leeway Angle	✓	19

✓ = supported and enabled by default
❏ = supported but not enabled by default
(*) = TalkerID is VM when these sentences are output by EM Log products.
(**)= Proprietary sentence sent from Em Log DST Electronics Box to the Insert (on by default)

SPECIFICATIONS

Operating Frequency	360 kHz
Depth Range	60m
Transverse Speed Range	± 6 knots
Longitudinal Speed Range	± 60 knots
Accuracy of Transverse and Longitudinal Speed	+/− 0.1 knots for speed under 10 knots +/− 1% for speed above 10 knots
Display Resolution	0.01 knots
Outputs	NMEA 0183 (ST) or NMEA 2000® (DST)
Configurable data update rate	up to 10 Hz
Operating Temperature Range	-15°C to 55°C (5°F to 131°F)
Water Temperature Accuracy	+0.5°C (+1.0°F)
Supply Voltage	9 VDC to 16 VDC
Average Power Consumption	5.0W (DST) / 2.5W (ST)
Sensor Cable Length	3m (DST) / 6m (ST)
Blanking Plug	Yes
NMEA 2000 Load Equivalency Number (LEN):	10
Weight (Sensor, box and cable)	2.25 lbs.

Note: The sensing pins in contact with the water are made from very high quality alloy, allowing very stable measurements and high resistance to corrosion.

NMEA 2000® TRANSMITTED PGNS – DX900+

PGN	DESCRIPTION
59392	ISO Acknowledgment
60928	ISO Address Claim
65285	Proprietary: Boot State Acknowledgment
65287	Proprietary: Access Level
65408	Proprietary: Depth Quality Factor
65409	Proprietary: Speed Pulse Count
65410	Proprietary: Internal Device Temperature and Supply Voltage
126208	Acknowledge Group Function
126464	PGN List – Transmit and Received PGNs Group Function
126720	Proprietary: -33: Attitude Offsets -35: Simulate Mode -40: Calibrate Depth -41: Calibrate Speed -42: Calibrate Temperature -43: Speed Filter -44: Temperature Filter -62: Depth Filter -65: Calibrate Speed Dual Axis -66: Raw Orientation Data -67: Attitude Filter
126996	Product Information
126998	Configuration Information
127257	Attitude
128000	Nautical Leeway Angle
128259	Speed (water referenced)
128267	Water Depth
128275	Distance Log
130310	Environmental Parameters (water temp.)
130311	Environmental Parameters (water temp.)
130312	Temperature (water temp.)
130316	Temperature, Extended Range (water temp.)
130578	Vessel Speed Components
130944	Proprietary: POST

RoHS COMPLIANT ISO CERTIFIED NMEA 2000 CE

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