The Smart Alternative!
Airmar’s New ST800 and ST850 Smart™ Sensors feature embedded micro-electronics. Speed and temperature signals are processed inside the sensor and can be displayed on any radar, chart plotter, or device that accepts NMEA 2000® data.

Minimize Your Drag
The ST850 is Airmar’s standard, thru-hull, speed and temperature sensor. The plastic, bronze, and stainless steel outer housing options are available to meet all hull requirements. These low-profile housings are nearly flush and minimize drag with only 5 mm (3/16”) extending outside the hull.

Eliminate Turbulence
The plastic P217 and bronze B119 countersunk flush outer housings are easy-to-install. The plastic P314 and bronze B21 outer housing options have a traditional beveled-edge for flush mounting. Flush-mount housings eliminate turbulence for accurate readings at high-speeds. They are the optimal choice for installation in racing sailboats and high-speed powerboats.

AIRMAR TECHNOLOGY CORPORATION
Sensing Technology

www.airmar.com

ST800
ST850

Thru-Hull
Speed & Temperature
Smart™ Sensors

Features
- Speed and temperature
- NMEA 2000® or Analog output options
- Retractable plastic, bronze, or stainless steel housings with valve sleeve
- ST800—Retrofits into Airmar P120 and B120 housings
- ST850—Retrofits into Airmar P17 and B17 housings
- 6 m (20’) NMEA 2000 cable, 9 m (30’) Analog cable
- Devicenet connector or NMEA 2000 version
- Speed Range: 2 knots to 45 knots (2 MPH to 52 MPH)
As Airmar constantly improves its products, all specifications are subject to change without notice. All Airmar products are designed to provide high levels of accuracy and reliability, however they should only be used as aids to navigation and not as a replacement for traditional navigation aids and techniques. Other company or product names mentioned in this document may be trademarks or registered trademarks of their respective companies, which are not affiliated with Airmar.

### Technical Information

**ST800, ST850**

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### SPECIFICATIONS

- **Weight:**
  - 0.7 kg (1.4 lb)—Plastic
  - 1.3 kg (2.8 lb)—Bronze
  - 1.6 kg (3.5 lb)—Stainless Steel

- **Speed Range:** 2 knots to 45 knots (2 MPH to 52 MPH)

- **Acoustic Window:** Urethane

- **Hull Deadrise:** Up to 22°

- **Data Update Rate:** 1 per second

- **Pressure Rating:** 3 m (10')

- **Pulse Rate:** 17,000 p/nm* [4.8 Hz per knot]—*p/nm = pulses per nautical mile

- **Supply Voltage:** 9 VDC to 16 VDC

- **Supply Current:** <200 mA

- **Standard Cable Length:** 6 m (20') NMEA 2000 cable, 9 m (30') Analog

- **Temperature Sensor Accuracy:** ±0.5°C [±1.8°F]

- **Temperature Sensor Range:** -10°C to 40°C [14°F to 104°F]

- **NMEA 2000® Load Equivalency Number (LEN):** 2

- **CE Regulation:** Complies to IERC60945

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### DIMENSIONS

**ST800**

- P120 Plastic, B120 Bronze

- Plastic

- Brass and Stainless Steel

- Ø 75 mm (2.94”)

- 2-12” threads

- 125 mm (4.92”)

- 5 mm (0.20”)

**ST850**

- P17 Plastic, B17 Bronze, and SS577 Stainless Steel

- Plastic

- Bronze and Stainless Steel

- Ø 51 mm (2.00”)

- 2-12” threads

- Ø 75 mm (2.94”)

- 5 mm (0.20”)

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### DATA OUTPUT PROTOCOL

**Analog Paddlewheel Format**

**OR**

**NMEA 2000® Supported PGNs**

- 59392 ....... ISO Acknowledgement
- 600928 ....... ISO Address Claim
- 126208 ....... Acknowledge Group Function
- 126464 ....... Transmit PGN List Group Function
- 126464 ....... Received PGN List Group Function
- 126996 ....... Product Information
- 128259 ....... Speed (Speed Water Reference)
- 128275 ....... Distance Log
- 130310 ....... Environmental Parameters (Water Temperature)
- 130311 ....... Environmental Parameters (Water Temperature)
- 130312 ....... Environmental Parameters (Water Temperature)