

INSTALLATION INSTRUCTIONS

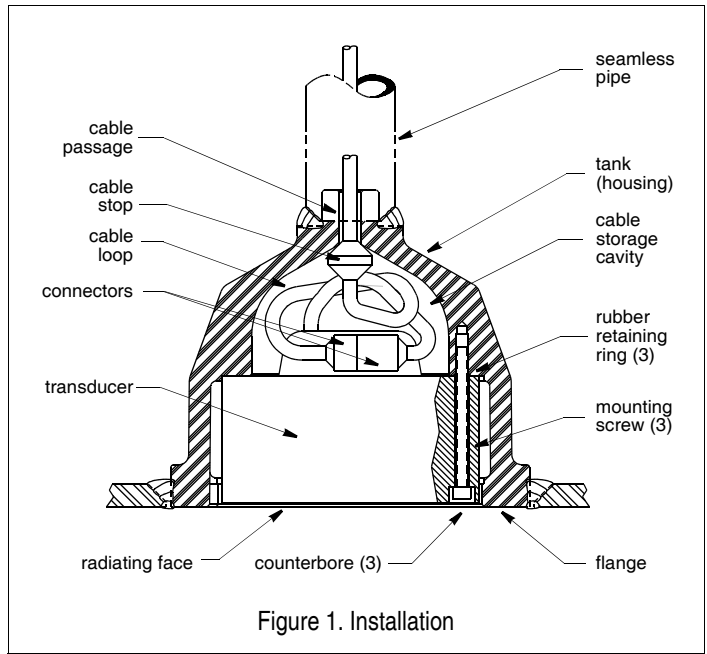
M192-NAV Transducer

Installed in Lloyd's Type Approved, Tank, CS235

IMPORTANT: Please read the instructions completely before proceeding with the installation. These directions supersede instructions in your instrument manual if they differ.

WARNING: NEVER USE SOLVENTS!

Cleaners, gasoline, paints, sealants, and other products may contain strong solvents, such as acetone, which can attack many plastics dramatically reducing their strength.



Tools and Materials Needed

- Water-based antifouling paint (**mandatory in salt water**)
- Cable gland
- Junction box
- Underwater lubricant such as Aqualube®
- Hex wrench: 8M
- Marine sealant

NOTE: The terms tank and housing are used interchangeably.

Antifouling Paint

Surfaces exposed to salt water *must* be coated with antifouling paint. Paint the housing with an appropriate antifouling, corrosion inhibiting coating. Use only **water-based** antifouling paint on the radiating face of the transducer. *Never* use ketone-based paint on the transducer's face since ketones can attack many plastics possibly damaging the transducer. It is easier to apply antifouling paint before installation, but allow for sufficient drying time.

Installing the Transducer and Cable

Caution: *Never pull, carry, or hold the transducer by the cable as this may sever internal connections.*

1. Inspect the transducer, cable, and connectors carefully before installing. All parts *must* be clean and free of oil, grease, paint, solvents, and other foreign material that may hinder performance.
2. Pull the tagged end of the transducer cable (P/N 22-136-01) through the housing cable passage and the seamless pipe until the cable stop is seated *firmly* against the cable passage opening (see Figure 1).

Approximately 305 mm (12") of cable will remain in the housing with the male connector attached.

3. Use a suitable cable gland at the top of the pipe to support and clamp the cable.
 4. Secure the free end of the cable in a junction box located in a dry, gas free environment within the ship.
- Caution:** *The transducer's mounting screws utilize rubber retaining rings to hold the screws in place during installation. Do not remove them.*
5. *Carefully* push the socket head end of each mounting screw into the counterbore of the transducer to fully expose the threaded end of the screw. Sparingly apply a uniform coat of Aqualube® or other similar underwater lubricant to the screw threads.
- Caution:** *Lubrication is vital to the removal of these screws should replacement of the transducer ever be required.*
6. Push the threaded end of each screw back into the transducer until approximately 7 mm (0.25") of the lubricated threads are exposed and held in place by the retaining ring.
 7. While supporting the weight of the transducer, plug the mating connectors together until they are fully engaged. The connector faces *must* touch.
 8. Slowly rotate the transducer approximately 1 to 2 turns as it is raised into the housing to properly dress the cable and joined connectors in the cable storage cavity. The transducer face will be almost flush with the flange of the housing when the cable is properly stowed and the mounting screws are seated in the threaded holes of the housing.

Note: For diver installations, we suggest attaching the hex wrench to a lanyard.

9. Tighten each of the mounting screws using the hex wrench until the transducer is secured in the housing and does not move. The recommended tightening torque is 20N-m (15ft-lb). Fill the screw heads and counterbores with marine sealant until they are flush with the transducer's radiating face. Remove any excess sealant to ensure smooth water flow over the transducer (see Figure 2).

Maintenance

Aquatic growth can accumulate rapidly on the transducer's surface reducing the performance in weeks. Clean the surface with a soft cloth and mild household detergent. Reapply antifouling paint every 6 months.

Transducer Replacement

The information needed to order a replacement Airmar transducer is printed on the **vinyl** tag affixed to the transducer cable. *Do not* abrade the marking or remove this tag. Contact your marine dealer or echosounder manufacturer to obtain a replacement. When ordering, specify the frequency, date code, and part number (see Figure 3).

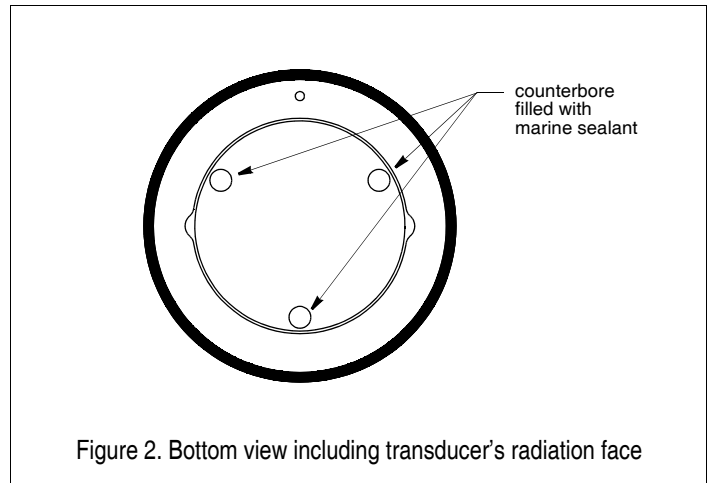


Figure 2. Bottom view including transducer's radiation face

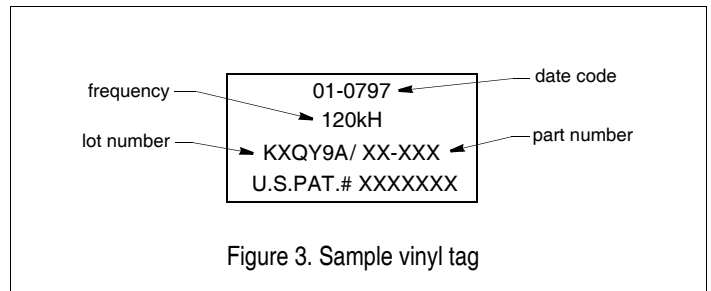


Figure 3. Sample vinyl tag