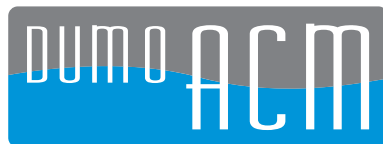


INSTALLATION AND OPERATION INSTRUCTIONS



toscano



1.- Important

Dumo ACM is a product resulting from the research and development of Toscano Linea Electronica SL, designed to prevent the growth of algae and barnacles and to reduce biological activity in ship hulls, underwater structures and submerged marine components. From Toscano we wish to thank the confidence you deposited as a customer and, for any assistance you may need, please contact us.

This manual contains important information that you must read, understand and follow.

Safety Instructions

1. It involves risk of injury to children. Do not let them play with the appliance or one of its components.
2. Check that the voltage matches the the device voltage before use.
3. Before starting up the appliance, check that any of the components is not damaged.
4. Check at regular intervals that the emission indicator lamp of the equipment lights up the power cord, the control unit, the power of the issuer or the issuer is not corrupted. Do not use the device in case of damage. Repairs may only be performed by a service recognized by Toscano.
5. Risk of electric shocking: connect the appliance to a power socket with earthing. Never use extension cords with 2 wires. In case of overdoors connections, the socket has to be watertight in accordance with local regulations.
6. If the plug does not fit into the socket, never replace the cable by yourself, but by a technical service recognized by Toscano
7. The equipment includes 30 meters cable of the emitter. Check if you need a longer distance.
8. Risk of injury: Do not place the transmitter against your body during operation of the device.
9. Do not connect the power while the transmitter is out of water.
10. Install the control unit only in accordance with the requirements of this manual.
11. Use this appliance only for its intended purpose and in the manner indicated in the manual.

12. Never immerse the control unit or the connectors on the water.
13. Connect the device to the mains only after the installation was done entirely according to the manual. Unplug the equipment before handling the control unit.
14. If the device is temporarily or permanently out of service, wash with fresh water and store in a dry place.
15. Do not use accessories not recommended by Toscano. This may pose a hazard to the user and damage the appliance.
16. Never pull the emitter cable to move it.
17. Keep this manual in a safe place.

2.- Parts List

The package contains:

- A. DUMO ACM submarine transmitter with 30 meters cable.
- B. DUMO ACM Control Unit made of ABS plastic.
- C. Wall brackets for mounting the control unit.
- D. DUMO ACM horseshoe float, specially designed for attachment to the keel and application in boat hull.
- E. Nut and washer to attach the transmitter to the float.

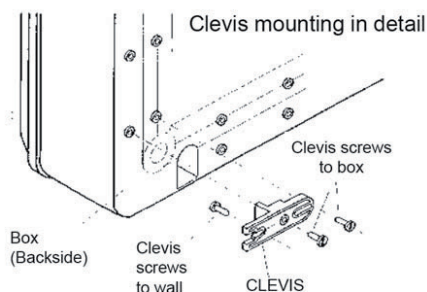
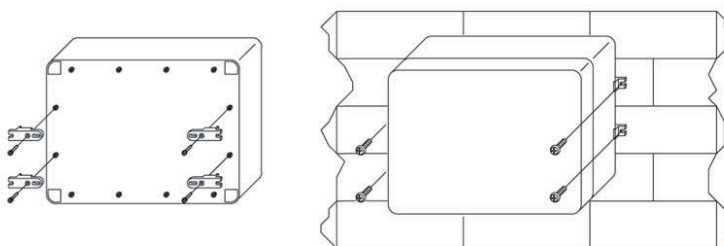


3.- Installation

Dumo ACM control unit is suitable for outdoor installation with IP56 protection and UV resistant ABS.

Always install the case upright and, if possible, avoid direct sunlight.

To set the control box on a wall at the dock or inside the boat, install the box with the help of the included brackets. The four supports are fixed with two screws for each of them at the bottom of the box, as shown in the illustration. On the underside of the control unit there are grooves for placement. Once the four brackets are attached to the control unit, you can mount the unit on the wall.



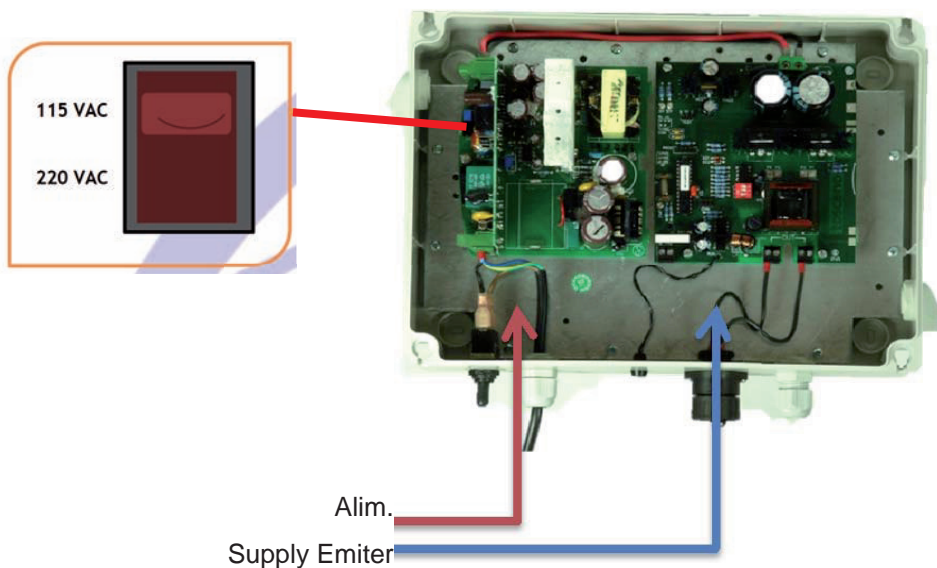
3.1.- Control Unit Supply

Dumo ACM: Power options:

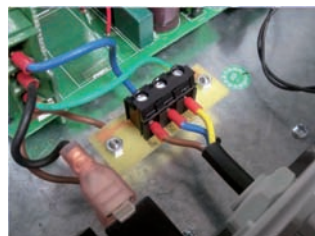
Dumo ACM can operate at different voltages as you need it.

The unit can be powered at 115 VAC or 220 VAC.

Be sure to select the correct voltage on the side selector before connecting the equipment to the supply voltage.



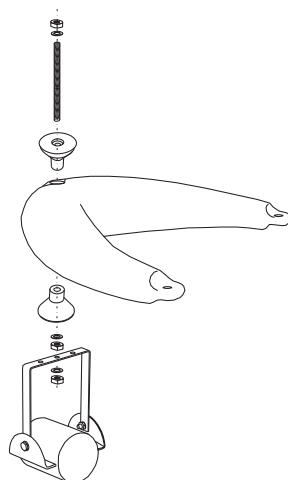
Inside the box you will find three terminals: L, N and PE (earthing) which correspond to the power input.



4.- Transducer Assembly

For the float assembly it is only necessary to screw it to the transducer. At the bottom of the float you will see a threaded end. Pass through the central hole of the emitter fork and tighten the nut.

It is important that emission membrane is oriented as shown in the picture.



Connect the transmitter to the control unit.



Pay attention to the guide



Confront and plug.

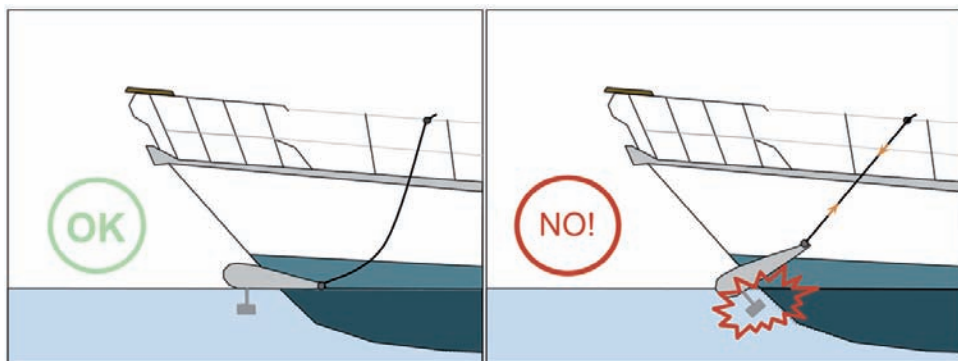


Screw.

5.- Location and startup

Dumo ACM is designed to be installed on the bow of the boat or mobile docking under tide level.

Toscano recommends NOT to leave the equipment installed during navigation. Dumo ACM prevents algae to grow on the hull while the ship is docking, where algae are most common.



Dumo ACM deployment can be done with the help of a rope in less than five minutes:

1. Attach one or two ropes to the holes of emitter float . It is also recommended to set the emitter connector with a rope or connected to the control unit, preventing the connector falls overboard. In the event that plug falls into the water, clean it with fresh water and dry before connecting it to the control unit.
2. With the two ropes on the deck of the ship, carefully haul the emitter down into the water making the float to fit the keel of the boat.
3. Tie the ropes to the deck allowing the emitter to float freely, without forces that push the float from water surface.

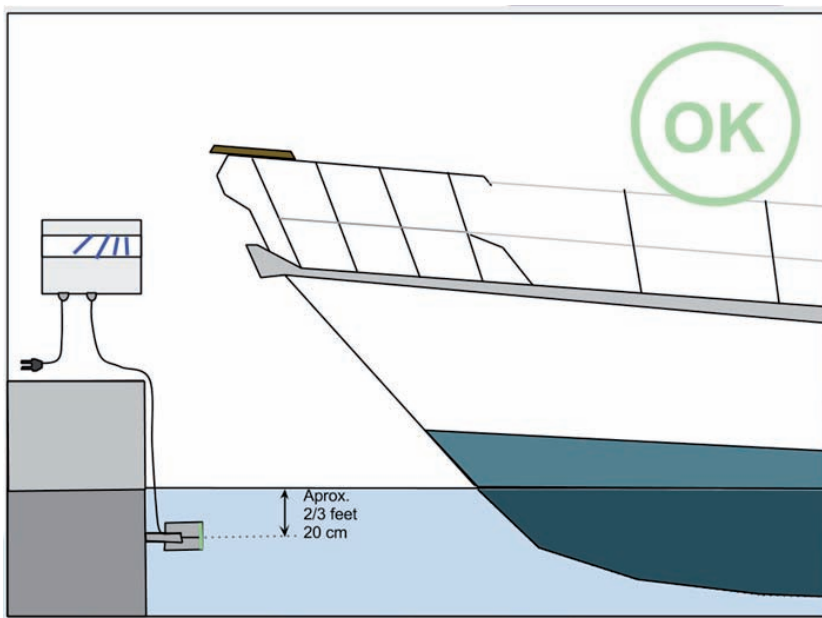
IMPORTANT: The ropes must be free of tension, just to keep the equipment in place.



Deploy in the dock:

Dumo ACM can also be permanently mounted to the dock. In this case, the installation must be done by setting the transmitter to 20 cm (2/3 feet) deep approximately from water surface. This type of installation is required to be done on docks that move with the tides so the equipment is always under water at the same depth.

Once the equipment is in position, connect the transmitter to control unit.



Dumo ACM startup

Connect the transmitter to the control unit.

Attention: Do not turn on the equipment if the emitter is out of the water or off.

Once you have verified that the transmitter is properly installed, switch on the equipment.

To check the correct operation of the equipment you will find a red light blinking over the control unit, showing the equipment ultrasound emission. You can also hear a low buzz from the float.

Picking Dumo ACM up for navigation

Toscano recommends to NOT NAVIGATE while Dumo ACM is working. During navigation we recommend to keep Dumo ACM stored leaving the bow of the boat free for sailing:

1. First, turn off the equipment.
2. Once the equipment is turned off rise the emitter up to the deck.
3. Rinse the emitter with fresh water and store the equipment.

Maintenance

The transmitter must be cleaned with fresh water whenever it is out of water and at least once a year, with a cloth and mild soap. If you find that the emitter gets dirty in a short period of time, you will have to clean it more often.

Important: Always unplug the unit when cleaning and handling components of Dumo ACM.

It is important to keep the sides of the control unit clear and ventilated to ensure good ventilation inside the unit.

The float can get deflated. To avoid this, regularly check the condition of the float and, if necessary, restore its state by inflating.

Technical specifications

Power CA	115 / 230 VAC (selectable) 24 VDC bajo pedido
Supply voltage frequency	50 / 60 Hz
Consumption	60-130 W
Maximum range	up to 82 feet (25 m)
Operating temperature range	-10°C to +70°C
Operating basis	Multifrequency (automatic)
Surge Protection	Yes
LED Operation indicator	In control module
Electronic module protections	Yes
Cable protections	Yes
Sensor protections	Yes
Environmental protection	IP55 (enclosure)
CE approval	61000-6-3
Weight	8,3 Kg

Contact details

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The contents of this guide may differ in some details from product or software. All the information in this document is subject to change without notice.

For online help or support in reference to Dumo ACM contact us at info@toscano.es or visit www.Toscano.es.

Warranty

This product is warranted by Toscano Línea Electrónica, SL for a period of two years from the date of original purchase against faults in materials and workmanship.

The warranty includes parts and labor. Transportation and travel expenses are not covered by Toscano.

Repairs under this warranty will be accepted only if you can prove a reliable way (by invoice) that the date of the claim is within the guarantee period.

This warranty does not cover damage resulting from accident, improper use, neglect, and modifications or repairs performed by unauthorized personnel.

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Notes

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