

• INTRODUCTION

This manual describes features and functions of the LED tank module. The tank module is mounted onto an HP port of the first stage regulator, and its main function is to transmit tank pressure data via hoseless coded RF protocol to the dive computer. The dive computer then displays the tank pressure and also calculates gas consumption rate and time remaining before reaching the reserve value. For this to happen, the tank module and the dive computer have to be paired. For information on mounting and proper positioning on the first stage and on how to pair the two devices, please refer to the dive computer manual available at www.mares.com.

The LED tank module features also, as the name suggests, an LED on the top of the tank module body. The LED can be used on the surface before a dive to distinguish between a full and an empty tank without needing a dive computer to display the exact value. During a dive the LED blinks when certain pressure levels have been reached and can thus alert your dive buddy or dive guide when you have reached the half tank mark or the tank reserve.

• 1. OPERATION

The tank module turns on automatically upon pressurization to at least 10 bar / 145 psi. It turns off automatically when the pressure drops below 10 bar / 145 psi.

In order to save battery power, the tank module turns itself off also when the pressure does not change over more than 4 minutes. This prevents unnecessary battery consumption in case of a pressure check well ahead of a dive with the tank left open afterwards, or in case the tank is not closed and the first stage purged immediately after a dive, or in the case of stage tanks that are left pressurized during the dive even when not in use. The tank module turns itself on again when a difference of pressure of more than 1 bar / 14.5 psi is sensed.

• 2. SURFACE FUNCTIONS

Upon pressurizing the tank module, if a pressure of 180bar/2600psi or more is sensed, the LED will blink 10 times in GREEN color in 4-second intervals.

• 3. FUNCTIONS DURING DIVE

For battery preservation, the LED turns off after the surface check and stays off until a pressure of 100bar/1450psi is reached (half tank warning). At that point it blinks in YELLOW color once every 4 seconds. Once the tank pressure reaches 50bar/725psi the LED blinks in RED color once every second (tank reserve).

LED ALARMS/ WARNINGS	LED COLOR	Blink frequency	Blink repetitions	Threshold value
Surface check	GREEN	Every 4s	10	180bar/2600psi
Half tank warning	YELLOW	Every 4s	Active below threshold	100bar/1450psi
Tank reserve warning	RED	Every 1s	Active below threshold	50bar/725psi

3.1 PAIRING PROCEDURE

NOTE

Pairing is permanent and does not require repeating, even after a battery replacement.

Once paired, the two devices (computer and tank module) are paired until either device is paired to a different one.

- Open the tank valve (the tank pressure should be at least 30bar/435psi). You now have two minutes to complete the procedure.
- Ensure that other tank modules, if present, are at least 3 meters/10ft away from the wrist unit.
- Place the dive computer 10cm/4 inches away from the tank module (make sure dive computer is parallel to the tank module).
- Start the pairing procedure on the dive computer. Please refer to the dive computer manual available at www.mares.com.
- After successful pairing check that the tank pressure is properly displayed on the computer (Pre dive mode on the dive computer)

If you have not been able to successfully complete the pairing procedure within 2 minutes, close the tank valve, depressurize completely the first stage, wait for 20 seconds then repeat the process from the beginning.

• 4. TECHNICAL INFORMATION

The tank module/dive computer combination has been tested and CE certified by RINA, notified body 0474, located in Genova, Italy.

The tank module/dive computer combination is a Category III device as defined under European Directive 89/686/ CEE, and complies with the specifications set out in the harmonized European Standard EN250 for use with air compliant with Standard EN 12021 (oxygen content of 21%).

The EC certification process and verification of the operating performance under standards EN250 are understood to be applicable to a maximum depth of 50 m below the surface.

The tank module/dive computer combination can be used in cold water (water at temperatures below 10°C).

Marking

The instrument markings are located on the tank module, and consist of the following:

- working pressure rating: 300 bar / 4,350 psi;
- reference standard: EN250;
- reference marking: CE 0474.

The conformity marking indicates compliance with the essential health and safety requirements as per attachment II D. and 89/686/EEC. The number alongside CE identifies RINA, notified body 0474, located in Genova, Italy, authorized to inspect the finished product under art. 11 B D.e. 89/686/CEE.

Operating temperature: -10 °C to +50 °C / 14 °F to 122 °F

Storage temperature: -20 to 70 °C / -4 to 158 °F

Power supply:

- CR123A user-replaceable battery
- Battery life: 150-200 dives. Actual battery life depends on the number of dives per year, usage of the LED, the length of each dive and the water temperature.

4.1. MAINTENANCE

The tank module and the parts of this product used to measure tank pressure should be serviced by an authorized Mares dealer every other year or after 200 dives (whichever comes first). Aside from that, the tank module is virtually maintenance free. All you need to do is rinse it carefully with fresh water after each dive (avoid any chemical products) and replace the battery when needed. To avoid possible problems, the following recommendations will help assure years of trouble free service:

- avoid dropping or jarring the tank module;
- do not expose the tank module to intense, direct sunlight;
- do not store the tank module in a sealed container, always ensure free ventilation.

4.1.2. REPLACING THE BATTERY IN THE TANK MODULE

⚠ WARNING

We recommend having the battery of the tank module replaced by an authorized Mares dealer. The change must be made with particular care in order to prevent water from seeping in. The warranty does not cover damages due to an improper placement of the battery.

⚠ WARNING

- Never touch the metal surface of the battery with bare fingers. The two battery poles must never be short circuited.
- A leaking tank module cap may lead to the destruction of the tank module by water seeping in or cause the tank module to switch off without prior notice.
- Always open the tank module in a dry and clean environment.
- Only open the tank module to replace the battery.

NOTE


You do NOT have to repeat the pairing procedure after replacing the battery in the tank module.

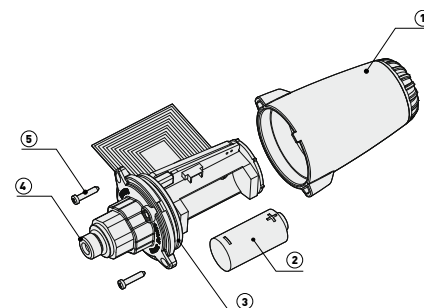
1. Remove the tank module from the HP port of the first stage regulator.
2. Dry the tank module with a soft towel.
3. Remove the 2 screws (5) with a Phillips screwdriver.
4. Carefully remove the tank module cap (1).
5. Carefully remove the tank module cap o-ring (3) Be careful not to damage the sealing surfaces.
6. Remove the battery (2) by holding it on both sides. Do not touch the contacts or the electronic parts.

⚠ WARNING

If you notice traces of seeping water, damages or other defects on the o-ring, do not use the tank module for further dives. Take it to an authorized Mares dealer to be checked.

7. Always insert a new o-ring when you replace the battery and dispose the old o-ring. Make sure that the new, lubricated o-ring is in perfect condition, and that o-ring, o-ring groove and the sealing surface of the tank

- module and tank module cap are free of dust and dirt. If necessary, clean the parts with a soft cloth. Fit the o-ring in the o-ring groove.
8. Wait for 30 seconds, then insert the new battery. Ensure that the  side is facing away from the base of the tank module. The tank module can be damaged if you do not insert the battery correctly.
 9. The tank module will now perform an automatic test during which the LED blinks and switch into ready mode after 60 seconds.



4.2. WARRANTY

Mares products are guaranteed for a period of two years subject to the following limitations and conditions:

The warranty is non-transferable and applies strictly to the original purchaser.

Mares products are warranted free from defects in materials and workmanship: components that, upon technical inspection, are found to be defective, will be replaced free of charge.

Mares S.p.A. declines all responsibility for accidents of any kind that result from tampering or incorrect use of its products.

Any products returned for overhaul or repairs under warranty, or for any other reason, must be forwarded exclusively via the vendor and accompanied with a proof of purchase slip. Products travel at the risk of the sender.

4.3. WARRANTY EXCLUSIONS

Damage caused by water seepage resulting from improper use (e.g. dirty seal, battery compartment closed incorrectly, etc.).

Rupture or scratching of the case, glass or strap as a result of violent impact or blows.

Damage resulting from excessive exposure to elevated or low temperatures.

Damage caused by the use of compressed air to clean the dive computer.

• 5. DISPOSAL OF THE DEVICE



Dispose of this device as electronic waste. Do not throw it away with regular rubbish.

If you prefer, you can return the device to your local Mares dealer.