

Dry suit heating controller ----preliminary manual

The display/controller will be delivered mounted on a Thor cord cable (small E/O cord on request only!)

WAM cord cable can NOT be used.

They are made due to custom wish. On order you can decide the distance between E/O cord plug and controller. Standard would be around 30cm (E/O plug to controller box)

The controller requires an ON/OFF switch on the battery canister even it can also switch to "OFF". To fully shut down the controller the ON/OFF switch on the canister has to be put to OFF.

The box does have two water contacts and a piezo and does have two modes DIVE and SURFACE.

Only in SURFACE mode settings can be made via the piezo.

There is no battery inside, there is no need to ever open the display! We strongly recommend never opening the controller as the wiring inside is very tight.



In SURFACE and DIVE mode a normal single push to the piezo changes the heating power. Four settings can be chosen.

"OFF" ...no power

"25%", "50%" and "75%" power

"ON" is equal 100%, full power

Main display

On the left side the battery symbol shows how much capacity is left over in the battery tank (if akku type is correct chosen).

The current power level is then displayed in percent under the word "Power" (at 0% it is OFF and at 100% it is ON).

Then, under word "RTime", predictions are made as to how long (time in hours and minutes) at the current power level and the remaining capacity of the battery tank the heater can still be safely supplied by the battery tank (remaining diving time). This is not always exact and should only be an approximate guideline, which also depends on the correct setting of the battery type, heating power and battery capacity.

On the far right in the upper line it is indicated whether you are currently in diving mode (DIVE) or in surface mode (SURF). In the 3 rows below the mode display, the stored settings for "battery type", "battery capacity" and "full heating power consumption" are displayed one below the other.

SETUP-Menu

Entering the settings menu can only be done in SURFACE mode by a short **double push** to the piezo. If in setup menu the wet contacts will be shorted (or submerged in water) the controller will leave setup at once without changes and forced into dive mode.



Once entered the Setup-Menu, there are 3 points

Display, Settings and Cancel.

You see a small arrow on left side automatically scrolling. Wait it reached the point you like to configure and push once the piezo.

A submenu opens.

The display submenu allows to switch screen and adjusting brightness

Flip screen is self-explaining.

Brightness

Auto: brightness is adjusted via the photosensor (brighter in sun, darker with less light around) and is obviously best choice.

Full: full brightness (mostly not necessary and can shorten the OLED life span).

DIM: lower brightness, good for night or cave diving.



Here a choice must be made, no cancel option.

After choosing the option by pushing the piezo once when arrow is on proper position the choice is stored and display goes back to standard main display.

To make more settings you must reenter the setup menu

The settings menu does have 3 submenus

IMPORTANT note: the settings in any of the submenus of the settings menu does NOT have any influence on the main work/purpose of the controller. Whatever is set here does NOT have an influence on switching the heating power from 0 to 100% !

Th settings are only important for the predictions of capacity, heating time and so on. The more accurate the settings are done the more accurate are the predictions. Of course, keep always in mind "not all batteries are always the same". Older, often used, or bad cells may have a different real value then what is written on the specifications.



Set akku type

Set capacity

Set heating

Each has again a submenu

Set akku type



You can choose the proper akku type 2S, 3S or 4S by pushing the piezo once when arrow in on correct position.

A choice is required in this menu

Set capacity and set heating



Also, here a choice is required.

These submenus do NOT have a floating arrow. The value is floating

Once you enter this submenu you only see one line with a value. The value is permanent slowly increasing up to a maximum and then falls back to minimum value and starts again to raise.

Set capacity range: 6 to 41 Ah in step off 1 Ah

Set heating range: 10 to 160 W in steps of 5 W

Once the counter reaches the value needed push the piezo once. It will be stored and display goes back to standard main display.

All settings made in the menus are stored in an eeprom and will not be erased when disconnecting the controller from battery. Unless you change battery, type or heating system there is no need to reconfigure the settings.

The power level is also stored when controller is disconnected or battery tank is turned off.

The last power setting, is then on next turn on the actual setting.

For example, on last use you turned battery off and setting was on 50% heating power, then when you now turn on it also will be at 50% power.

Box size

Length 61,5mm, plus M16x1,5 cable glands

high: 39mm

wide: 41mm

Standard is with 9,3mm THOR cord cable, with 1,5mm² wire for up to 18A at 30° C.

