# Cristec offers new tri-voltage battery controller



Cristec Bat-Mon Tactile 3.5" Battery Controller Control Screen

If there's one thing that the electric motors on our boats are going to put to the test, it's the battery. To ensure longevity and reliability in all situations, Cristec offers a new three-voltage touchscreen battery controller for more precise management of <u>electrical power supplies</u>.

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CRISTEC (CRéation, Innovation Scientifique et TEChnique) is an expert in energy conversion. Founded in 1983 in Annecy, the company is a member of the ENAG group and has been based in Quimper (Brittany) for nearly 25 years. The group has been designing and distributing energy management equipment for yachting, industry and renewable energies for nearly 70 years.

To control the batteries, we had a basic display that showed the electrical voltage supplied by the accumulators, sometimes the charge voltage and little other information. They were quite satisfactory to allow us to start our motorizations and to feed the few servitudes on board.

## **Evolution of uses**

The needs have largely evolved now. Electric motors are finally breaking through and it will become vital to manage the availability of electricity as precisely as we manage fuel autonomy in motorboating. The more powerful units, and even more so, need to manage this autonomy with even greater precision as the number of batteries increases.

## Control of up to 3 battery groups

The Cristec battery controller allows the control of batteries of different voltages under a common negative: a very common installation for electric motors.

Designed to monitor up to 3 independent battery packs - or DC sources - with up to 3 additional battery voltage readings, it is suitable for all types of batteries, including Lithium. Its touch screen display shows data such as voltage, current, capacity and remaining runtime of the service battery, as well as an additional voltage (e.g. starter battery). It also records historical battery behavior, such as average depth of discharge, unavailable capacity, and number of charge/discharge cycles to help plan replacements and rotations between power packs.

### Availability of a 300 A shunt



Shunt 300 A supplied in series

A high-precision 300 A shunt is provided as standard for battery control. Two additional shunts can be used as an option. For each shunt used, an additional voltage measurement is also available (e.g. motor or thruster park).

These shunts are extremely useful when it is necessary to switch without interruption from one group to another in order to obtain a high instantaneous capacity, for example for the supply of an air-conditioning engine or of a cooling unit on board a reception boat.



### Management of energy inputs and outputs

Installation with a solar panel



Installation without solar panels

The Cristec Bat-Mon Tactile 3.5" battery controller is able to manage the outgoing energy of battery banks. It is also able to manage the energy produced by a solar panel. Finally, a dry contact allows to automate the starting of a generator in case of a severe drop of the on-board batteries capacity.



#### Touch screen energy management

The touch screen of the device allows to switch from one battery group to another easily. It also offers the possibility, in manual mode this time, to start the generator in order to recharge the batteries when it is necessary due to a too important discharge.

The optional temperature sensors can be used to automate the changeover to one or another park depending on the temperature in the storage room and thus prevent premature wear of the energy storage elements.

## Reasonable price for advanced features

The Cristec Bat-Mon Tactile 3.5" battery controller is available with a 300 amp shunt at a retail price of 384 euros. It is possible to add up to 2 shunts to control a total of 3 groups of batteries, at the price of 140,40 euros the additional shunt. This easy-to-implement solution is one of the first available in the rapidly growing market of electrically powered boats.