

## **SW350 Optional Remote Temperature Probe**

Offered as an additional component to your SW350's SRC Marine Charge Controller, the Remote Temperature Probe enables the user to move the source location of the charge controller's battery temperature compensation feature from the face of the charge controller itself. This feature can be useful for users who separate their battery bank and charge controller into areas or compartments with detectable differences in temperature.

### **The Technology**

Because battery charging is an electrochemical reaction, it is affected by temperature in such a way that must be monitored in order to optimize battery function. When subject to colder temperatures, the reactions within a battery will occur more slowly and thus the battery will need a higher voltage supplied to it in order to pass current. When heated, a battery undergoes faster electrochemical reactions and can overcharge if the supply voltage is not reduced.

Both undercharging and overcharging can cause damage and shorten battery life, which is why accurate temperature monitoring and compensation is important for maximizing the performance of your superwind. The superwind SCR marine charge controller's temperature compensation feature helps prevent over- and under-charging of the battery by adjusting the supply charge in real-time response to fluctuations in temperature.

### **Offers Greater Flexibility for Your Individualized Setup**

On its own, the SW350's SRC Marine Charge Controller utilizes a built-in probe which reads ambient temperature around the face of the controller. The unit regulates the voltage supplied to the batteries based on these readings. If your battery bank is exposed to roughly the same temperature fluctuations as the controller, these adjustments will suit your batteries without the need for an external probe.

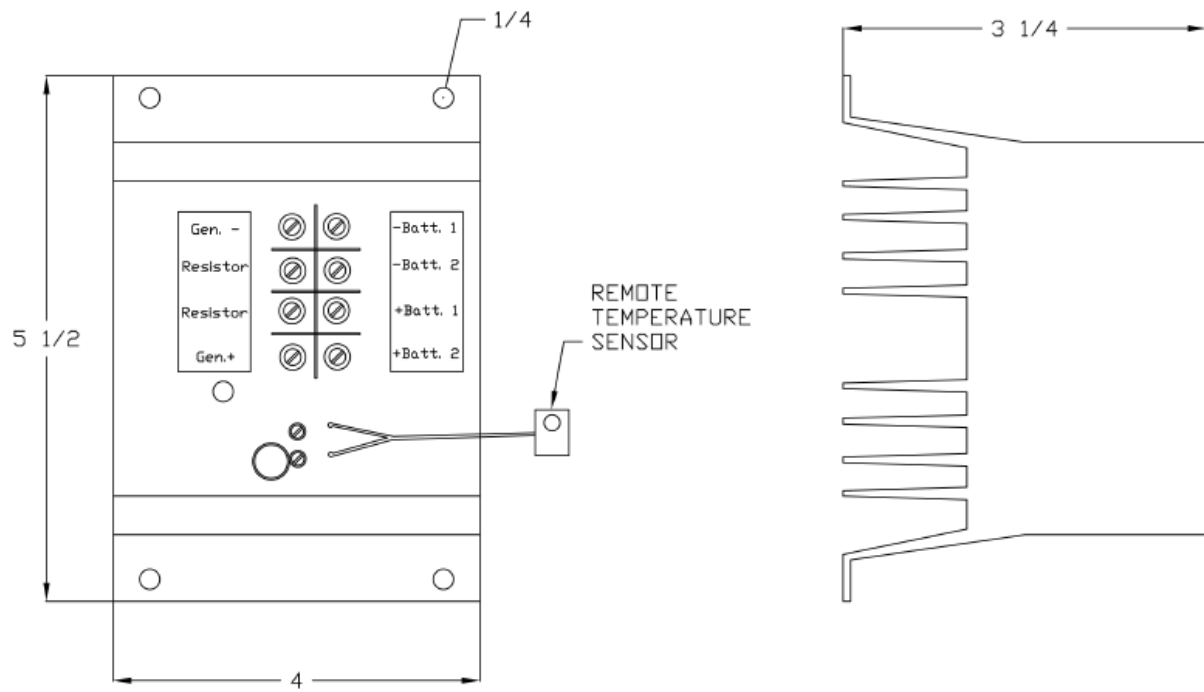
The remote temperature probe allows users to extend where the temperature readings are taken - away from the charge controller itself. If your integration setup requires that your charge controller and battery bank are located in separate areas with noticeably different temperatures, the remote sensor allows the readings to more accurately govern charge regulation to better protect your batteries.

For example, if you are pressed for space in your boat, and the charge controller is installed somewhere in or near your engine room (exposed to excess waste heat), it will automatically reduce the charge supplied to the batteries in order to protect them from overcharge. However, if your battery bank is located outside the engine room and not exposed to the same amount of heat, this compensation isn't necessarily the best for your battery life.

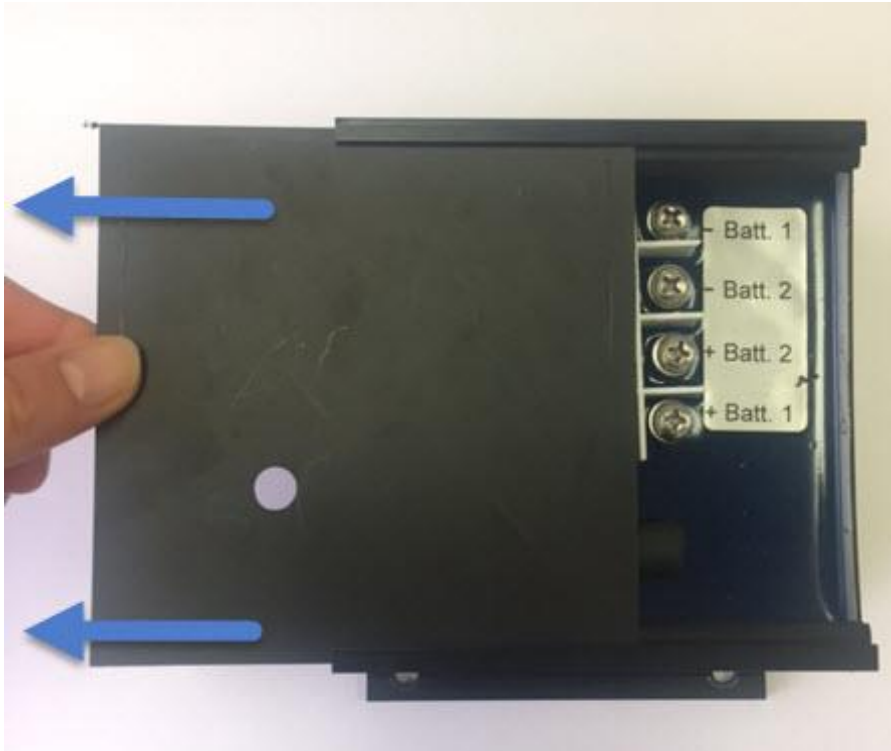
The remote temperature probe allows you to measure temperature from a point outside of the controller's specific location. Ideally you would place the remote probe closer to your battery bank, or at least outside of the engine room, where its readings can more accurately reflect the ambient temperature surrounding the batteries. This way, instead of sensing the warmer temperature inside the engine room - and thus reducing the charge supply in response - the external probe can transmit a more accurate temperature reading to the charge controller, which in turn will adjust the charge supply in a way that better suits your battery bank's needs.

**Installation:**

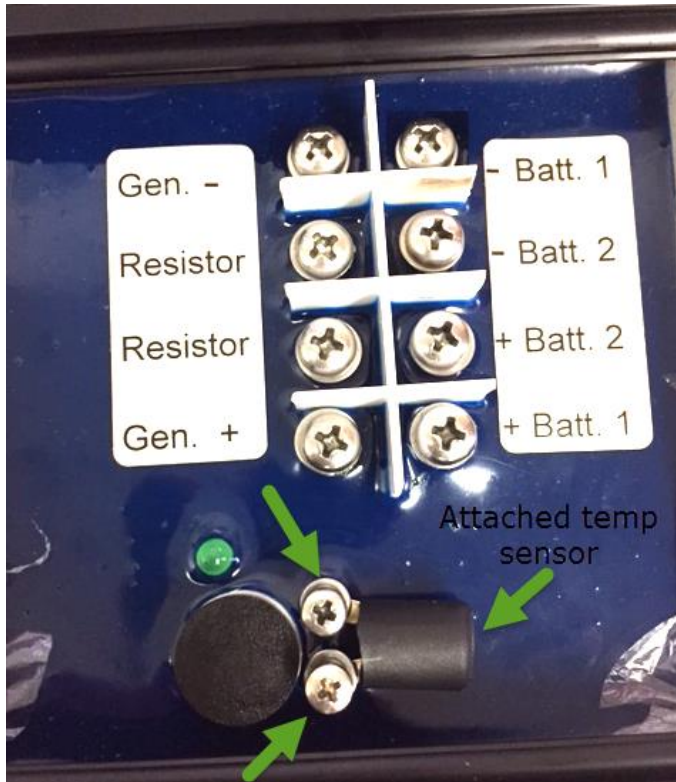
**DISCONNECT ALL LIVE POWER BEFORE WORKING ON ELECTRICAL EQUIPMENT**



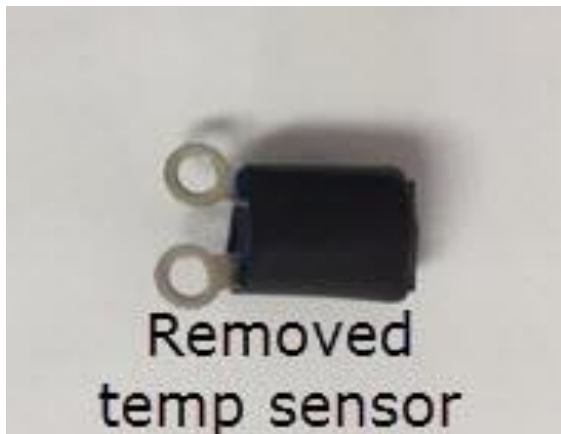
1. Remove the top cover from the charge controller by sliding it sideways through the grooves.



2. Locate the two screws attaching the temperature sensor to the face of the SW350 SRC Marine Charge Controller, and remove them using a screwdriver.



3. Once the screws are out, remove the temperature sensor from the charge controller face. Store somewhere safe.



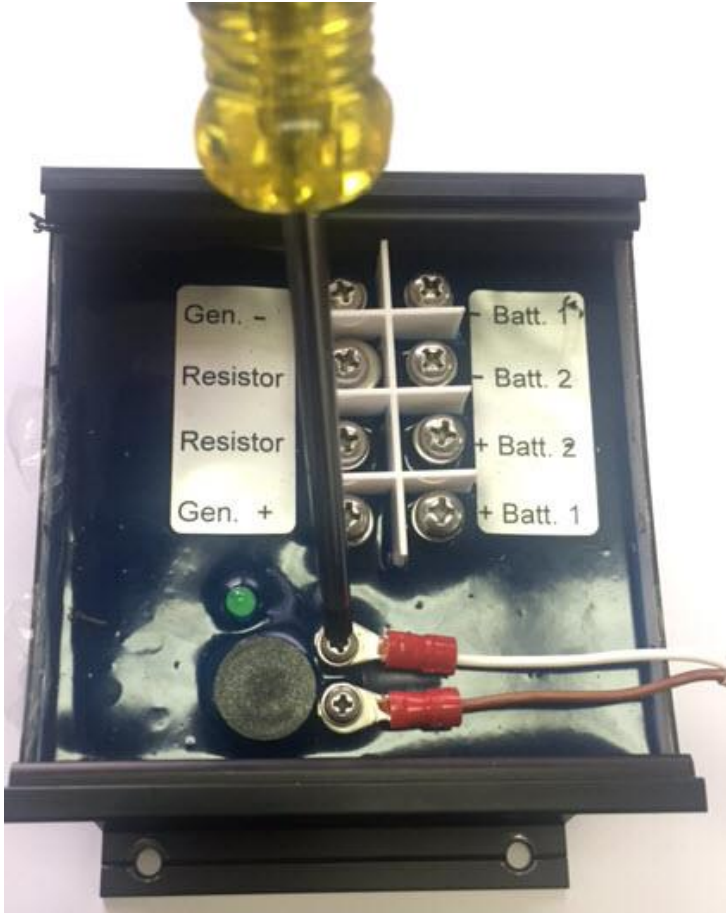
4. When removing each screw, be sure to keep track of the small metal discs that fill in extra space between the screw head and controller surface. If they fall off, place the discs back onto the screw as shown: one smooth disc closer to the screw head, and one ridged disk below it. This is the formation in which the screws will be placed back onto the controller face to secure the remote sensor, with its prongs beneath the ridged discs.



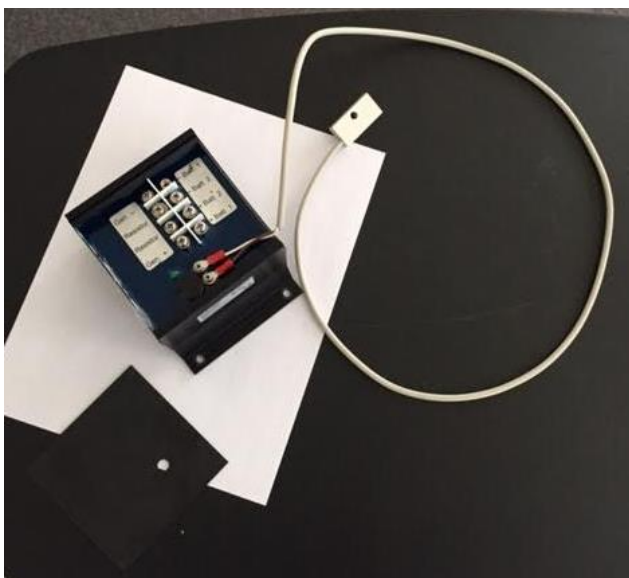
5. Locate the two metal circular prongs on the remote sensor and line their openings up with the two holes on the face of the charge controller (where the screws were before removing them). Be sure not to cross or tangle the wires.



- Place the screws into the holes so that the two metal disks around each screw lie on top of each prong, and use a screwdriver to tighten until the prongs of the remote temperature probe are firmly secured to the surface of the charge controller.



- Mount the sensor to a wall or surface using a nail or screw.



8. Replace cover on controller face, ensuring that hole on cover lines up with green LED light.

