



VENOM RACING Smart Temp

Venom has made a smarter fail-safe temperature gauge for nitro engines by adding thermal shutdown to a traditional fail-safe. In addition to moving the servos to your preset position in the event of a signal loss, the Smart Temp will stop your car or truck if the engine temperature exceeds the limit you set. The Venom Smart Temp (VST) monitors your vehicle's signal strength, battery voltage and engine-head temperature. You can program its cutoff voltage (3 to 5.4 volts), temperature cutoff (122 to 392 degrees), throttle limits when overheating occurs (60, 80, or 99 percent). The VST even has a simulation test mode to verify that it's working correctly. The read-out automatically switches between the system voltage and the real-time temperature every 5 seconds. With the push of a button, the engine's peak temperature is recalled instantly. The VST has a durable, but not waterproof, case with an easy-to-read display and well-marked buttons. It can be operated on 4.8 or 6V systems and carries a 90-day warranty.

I started my evaluation with a few bench tests. The first was to measure the accuracy of the temperature sensor. I calibrated it with boiling water because at sea level, water boils at 212 degrees F. Using the peak temperature feature, the VST measured a max temp of 206 degrees—less than 3 percent from the actual temperature. My second test was to verify the VST's voltage readings with my Fluke multimeter. The VST displayed exactly the same voltage reading as the Fluke. My third test was a simple signal test during which I increased the distance of the transmitter from the vehicle until I activated the fail-safe. After it had passed all my bench tests, I installed the VST in my Revo for further tests. After dialing the VST in to the Revo with the setup menus, I used the built-in simulation test mode and realized that I had the servo setting reversed in the VST. Uniquely, the Venom Smart Temp fail-safe controls both throttle and brake functions; it is important to set the servo direction correctly (menu six) so that in the event of low voltage or high temperatures, the Smart Temp knows in which direction to fail safely. I set the VST to reduce the engine's throttle to 80 percent when the head temperatures exceed 250 degrees F. I ran several tanks of fuel through the Revo, and the VST worked very well. It will not permit 100 percent throttle until the engine temperature drops 9 degrees F below the set point.

The bottom line is that Venom has successfully integrated two systems into a single unit. I can't think of any enthusiast who couldn't benefit from having this smarter, more informative fail-safe. If you think about all of the things that the VST replaces (conventional fail-safe, temp gun and battery monitor), it is a great bargain.

—David C. Konneker

Venom Smart Temp—VEN-0605; \$40

Venom Racing (800) 705-0620; venom-racing.com

RATING

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