TEMPERATURE SENSOR INSTRUCTIONS

Overview:

Liquid temp kits can be used to measure water temp, oil temp, Trans temp, and cylinder head temp. There are two different types of sensors, K-Type and single wire economy sensors. Depending on which one you have will result in a specific installation and calibration.

Part Numbers:

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#8037	Liquid Thermocouple Sensor
#8039	Liquid Temperature Sensor
#4118	Cylinder Head Temperature Kit

Installation:

There are two different types of temperature kits: economy and K-type thermocouples. The economy temp sensor will be a small brass sensor that has a single nut on the top of the sensor to connect a wire to. The K-type thermocouples will have a yellow connector with two metal prongs on the end. Please follow the appropriate directions based on which sensor you have.

- Liquid Thermocouple: For the economy temperature kit you can physically install the sensor directly into the engine block, transmission case, etc. When installing, you can use Teflon tape to seal the sensor, but you must leave some of the threads exposed. The reason for this is because we need the sensor chassis itself to have a good connection to ground in order for the sensor to work.

  After the sensor is installed, you can run a wire from the sensor to the DataMaxx system. You then want to terminate the wire into an open Analog channels White signal terminal. Then change the corresponding RTD and GND dip switches to the ON position.

Dip Switch: RTD – ON

GND – ON
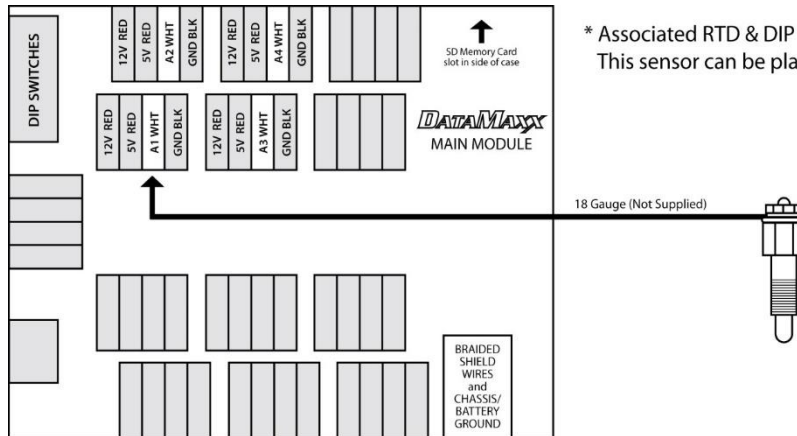
* Associated RTD & DIP switch must be turned on.
This sensor can be placed withing any of the analog ports.

Calibration:

After installing your temperature probe you will need to tell the computer and the DATAMAXX what type of sensor it is. You will also need to know which Module and analog channel that you have plugged it into.

To Calibrate:
* Follow the Initial Calibration instructions in the Software section, OR:
* Record a short 5 second test log file, and download the log file correctly using the SD button.
* Select Edit, then Properties. You are now in the Channel Properties area.
* Find the Analog channel line that you installed the sensor on, follow it to the right and click on the finger pushing a red button.
* Change the "Type of Sensor" and the "Channel Name" to what you want.
    ◦ Economy Thermocouple – "Type of Sensor" is "Datcon 02022-00 Temp".
        ▪ Note that if you have selected "Datcon 02022-00 Temp" from the drop down list, the corresponding RTD and GND dip switches need to be ON.
* When you are done, select OK, and then "Send Config to DataMaxx".

Testing:

If the engine is off and cold, the readings should be within 5 to 10 degrees Fahrenheit of room temperature. If the engine is warm, appropriate readings should be seen. If your probes are reading close to 30 degrees, then there is likely an accidental reversal of wires somewhere. If your probe is reading a maximum or close to 470 degrees, then there is an open circuit, and most likely a wire unplugged. Check all connections between the actual probe and the DATAMAXX module.

Troubleshooting:

- Verify The Calibration: Record a short 5 second log file, and download to your computer using the SD button in the DataMaxx software and save to an event. Once the log file is open, select Edit, then Properties. Find the channel in question, and verify that the calibration is set to "EGT (1800 degree range using K thermocouple)". If it is not, follow the calibration instructions for the "Exhaust Gas Temperature Probes" in the manual. If the calibration is correct, "Check the Hardware Settings".

- Check Hardware Settings: The first step is to visually confirm which channel the sensor in question is physically going to. If this is not the same as the calibration, then re-calibrate. If the sensor is going to the channel you thought, then we need to make sure that the wires are going to the correct terminals. The red wire should go to the black ground terminal and the yellow wire should go to the white signal terminal. If you are having difficulty determining which color is which, simply try swapping the two as it will not damage the probe or channel. If that is correct, we then need to make sure that the corresponding RTD dip switch is OFF and that the GND is on. Refer to the back of your lid to determine which dip switch corresponds to which channel. If none of the Hardware Settings are incorrect then the problem is most likely a dead probe and will need to be replaced.