

Air Temperature Sensor Calibration



Note All FuelTech IAT Applications should use one of the following RIFE Part #'s 52-1201 thru 52-1208 or 52-1243 These are "Lo-AT" sensors

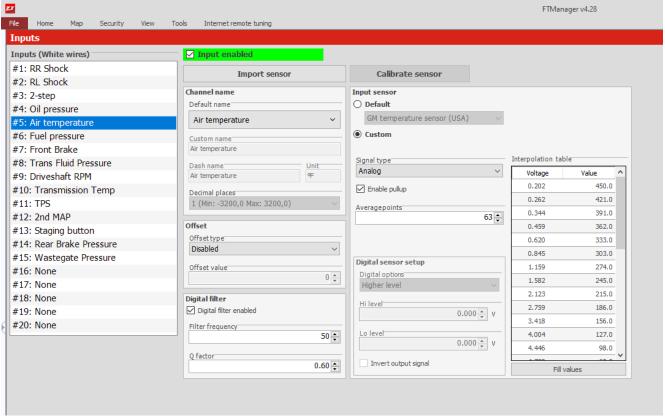
FuelTech ECU's don't allow for the use of a resistance input on their ECU's. This requires the user to utilize an analog voltage sensor in order to read the sensor. The issue is that RIFE's Hi-AT sensor does not work well with the pull up resistor in the ECU, the solution is to use a RIFE Lo-AT sensor in all FuelTech applications.

By using a Lo-AT sensor and a specific calibration (shown below), the sensor will provide good resolution throughout the range with the only downside being a slight trimming of the total range. In this application, the total range is -5°F to 450°F.

To set up your sensor in the FuelTech software, go to Inputs> #5: Air temperature and select "Air Temperature" from the channel name drop down. Under "Input sensor", click the radio button for "custom", select "Analog" in the Signal type drop-down and check "Enable pullup". Input the values from the chart below into the Interpolation table and that's it. When complete the page should look like this:

(next page)





The calibration table is below, if you have any questions, don't hesitate to call your dealer or RIFE at 805-987-7867





IAT Calibration Table

	Temp°C	Temp°K	Temp°F	Voltage	Resistance (Ω's)
1	-21	253	-5	4.955	110,877
2	-4	269	25	4.882	41,418
3	13	286	56	4.728	17,373
4	30	303	86	4.446	8,026
5	47	320	116	4.004	4,022
6	64	337	147	3.418	2,160
7	81	354	177	2.759	1,231
8	97	371	207	2.123	738
9	114	387	238	1.582	463
10	131	404	268	1.159	302
11	148	421	298	0.845	203
12	165	438	329	0.620	141
13	182	455	359	0.459	101
14	199	472	389	0.344	74
15	215	489	420	0.262	55
16	232	505	450	0.202	42