



BAPI 1.8K THERMISTOR TABLES

Dave Bohlmann, 12 June 2018

OVERVIEW

These two tables can be used with BAPI 1.8K thermistors. Various vendors use this same thermistor in 1.8K thermistor sensors. These are thermistors, not RTDs. The main differences between thermistors and RTDs are:

- Thermistor resistance **DECREASES** with **INCREASING** temperature, whereas RTD resistance will **INCREASE**
- RTD resistance values are pretty linear, whereas thermistors have a marked curve to them
- Thermistor resistance will change considerably more over their temperature range, compared to RTDs

These tables have limits of -67 to 302 F (-55 to 150 C).

INPUT CONFIGURATION

Use one of the two tables described below, and configure your controller input to be 1 Kohms (NOT 10 Kohms). Set multiplier to 1 and offset to 0. Use the proper table for the desired units:

- `aci-20k_Fahrenheit.csv` **for Fahrenheit**
- `aci-20k_Celsius.csv` **for Celsius**

RESISTANCES

You should double check that this table is the correct one for the BAPI 1.8 Kohm sensor you are using. The four key resistances below can be checked with a table in the datasheet for your sensor. These should match within 25 ohms for all four:

- 0 F = 11,168 ohms
- 32 F = 4,962 ohms
- 77 F = 1,800 ohms
- 100 F = 1,133 ohms