



Thermometrics High Temperature Thermistor BR55KA822

Sensor Application Note #8

Overview

This Sensor Application Note provides additional information to wire and configure the Thermometrics high temperature thermistor BR55KA822.

This model specifies a ruggedized bead structure (BR), bead diameter of 55 mils (55), adjacent leads with stub ends glass coated (K), material system code A (A) and a nominal resistance of 8200 ohms at 25°C (822). There is also a tolerance code letter at the end, expressed as a % tolerance at 25°C, according to the following table:

F	G	J	K	L	M	N	P	Q	R	S
1	2	5	10	15	20	25	30	40	50	Non-standard – consult factory

Consult the Thermometrics data sheet for more information on the BR55 thermistor.

Wiring

Connect the thermistor leads to the H and L inputs on any multiplexer channel. Polarity is not important.

Configuration

Type	Make	Model	Instruction File	Description	Output Units
Thermistor	Thermometrics	BR55KA822-°C	BR55KA822.ins	With or without MultiSensor	°C
		BR55KA822-°F	BR55KA822.ins	With or without MultiSensor	°F

To read the thermistor connected as an Upper Channel Device use the models **BR55KA822J-°C** or **BR55KA822J-°F**, to output in Celsius or Fahrenheit, respectively. When using the VWDSP Interface use models **VBR55KA822J-°C** or **VBR55KA822J-°F**, to output in Celsius or Fahrenheit, respectively. These types describe the 5% tolerance thermistor (as denoted by the J suffix) but they can be used with any of the tolerance types.

The BR55KA822 sensor configurations are included in shipments of MultiLogger beginning with v2.1.5. Contact Canary Systems if you require assistance configuring them with older versions of the software.

Resistance vs. Temperature Table

°C	Ω	°C	Ω	°C	Ω	°C	Ω	°C	Ω
-30	113898	30	6721.54	90	903.64	150	203.77	210	64.985
-25	86182	35	5540.74	95	785.15	155	183.11	215	59.819
-20	65805	40	4592	100	684.37	160	164.9	220	55.161
-15	50684.2	45	3825.3	105	598.44	165	148.83	225	50.955
-10	39360	50	3202.92	110	524.96	170	134.64	230	47.142
-5	30807.4	55	2693.7	115	461.91	175	122.1	235	43.673
0	24288.4	60	2276.32	120	407.62	180	110.95	240	40.533
5	19294.6	65	1931.92	125	360.8	185	100.94	245	37.671
10	15424.2	70	1646.56	130	320.21	190	92.086	250	35.055
15	12423	75	1409.58	135	284.95	195	84.214	255	32.677
20	10061.4	80	1211.14	140	254.2	200	77.088	260	30.496
25	8200	85	1044.68	145	227.3	205	70.717		