Formula implementation using Action Rules in Control Solutions i.CanDoIt server:

The formula

RT = 1.8*(T2-T1)*F/24 may be calculated as follows:

First, we set up two registers to hold our constants as follows:

Thresholds		Trending	Cascade	Calculate	Constants						
This page defines constants that will be written to the assigned local registers one time at startup.											
			Showing 1 to 2 of 2		Update <prev next=""></prev>						
Rule #	Value	Destination Register #									
1	1.800000	1221									
2	24.000000	1223									
# Rules	Enabled: 2				Insert Delete						

Next we set up a sequence of calculate rules. These are executed in sequential order starting with the first rule, and repeating in round robin fashion.

Thresholds Trending		Cascade	J	Calculate	Constants						
This page allows setting up simple calculations on register data.											
				Showing 1	to 4 of 4		Update <prev next=""></prev>				
Rule #	Perform Operation		Using Register #	And/Through	This Register #	Place Result in Register #					
1	subtract	*	1203	and 💌	1201	1207					
2	divide	~	1205	and 💌	1223	1209					
3	multiply	~	1207	and 💌	1209	1211					
4	multiply	~	1211	and 💌	1221	1213					
# Rules	Enabled: 4	Insert Delete									

In this example, local register #1201 (R1201) contains T1, R1203 contains T2, and R1205 contains F. The result will be placed in R1213. If the values T1, T2, and F are being read by sensors, substitute the appropriate register numbers.

Rule #1 calculates (T2-T1) and stores interim result in R1207. Rule #2 calculates F/24 and stores interim result in R1209. Rule #3 calculates (T2-T1)*F/24 and stores interim result in R1211. Rule #4 calculates 1.8*(T2-T1)*F/24 and stores final result in R1213.

Be sure to use floating point registers for interim results. If the final result in R1213 needs to be further scaled to control an output, add rules as needed, or write the result to an analog output with its scale factors set appropriately as required by the application.