# Temperature Alarming System (TAS)
# (SRS Document)

**TAS_001:** System has a current temperature (C) which is obtained from external temperature sensor or connected potentiometer.

**TAS_002:** C should be compared with a configurable threshold (T).

**TAS_003:** C and T have valid range 0-150 degrees.

**TAS_004:** T is configurable with two different methods; PC terminal program (PC-Term), and the on-board keypad matrix (KEYPAD).

**TAS_005:** TAS system has four states; Main State, Key Configuration State, Terminal Configuration State, and Alarm State.

**TAS_006:** The system starts in the main state as a default state.

**TAS_007:** Each state has relative display menu on the on-board 2*16 LCD. LCD-Line 1 displays the state-related data, and LCD-Line 2 displays the various state-related control inputs.

**TAS_008:** At the main state, the C, T, and the alarm activation mode (AA:Yes(Y)/No(N)) are displayed on LCD-Line 1, LCD-Line 2 displays the alarm activation control choice (AAC:13) and T configuration choices; KEYPAD choice (K:15), PC-Term choice (T:G).

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C:123 T:123 AA:Y
K:15 T:G AAC:13
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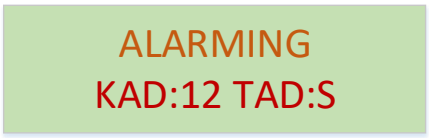
**TAS_009:** At the main state, if (AAC:13) is selected, the (AA:Y/N) should be toggled (from yes "Y" to no "N" or vice versa).

**TAS_010:** At the main state, if C >= T and (AA:Y) , then the system should enter the alarm state.

**TAS_011:** At the main state, if (K:15) is selected, then the system should enter the Key Configuration State.

**TAS_012:** At the main state, if (T:G) is selected, then the system should enter the Terminal Configuration State.

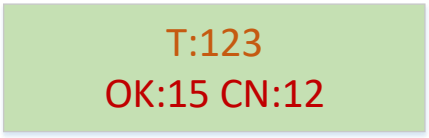
**TAS_013:** At the alarm state, the alarm string message "ALARMING" is displayed on LCD-Line 1, LCD-Line 2 displays the KEYPAD alarm disable choice (KAD:12) and PC-Term alarm disable choice (TAD:S).




**TAS_014:** At the alarm state, the alarm process is initiated where an on-board buzzer is turned on for a half second and turned off for another half second periodically.

**TAS_015:** At the alarm state, The AA could be disabled by selecting (KAD:12) or (TAD:S), then the system should return to the main state with (AA:N).

**TAS_016:** At the key configuration state, the new inserted T is displayed on LCD-Line 1, LCD-Line 2 displays the cancel choice (CN:12), and the acceptance choice (OK:15).

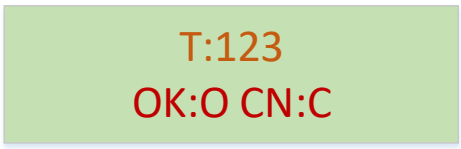



**TAS_017:** At the key configuration state, system will receive three KEYPAD digits as new T configuration. The new T is displayed digit by digit on LCD.

**TAS_018:** At the key configuration state, if OK is selected, then the system should return to the main state after updating T with the new configured T.

**TAS_019:** At the key configuration state, if CN is selected, then the system should return to the main state without updating T.

**TAS_020:** At the terminal configuration state, the new inserted T is displayed on LCD-Line 1, LCD-Line 2 displays the cancel choice (CN:C), and the acceptance choice (OK:O).




**TAS_021:** At the terminal configuration state, system will receive three PC-Term digits as new T configuration. The new T is displayed digit by digit on LCD.

**TAS_022:** At the terminal configuration state, if OK is selected, then the system should return to the main state after updating T with the new configured T.

**TAS_023:** At the terminal configuration state, if CN is selected, then the system should return to the main state without updating T.