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CSETUP INSTRUCTIONS

CSETUP is a simple utility that utilizes HyperTerminal which is a standard Windows accessory. It enables the user to configure all of the parameters of the ST-5000 family of SMART transmitters. For a more intuitive Windows environment, we offer TRANScon with additional features and flexibility.

1.0 Setup

Connect RS-232 cable to transmitter and computer.
Apply power (24 VDC) to transmitter.

2.0 Data Entry

Make sure that CAPS LOCKS are activated since all entries in CSETUP must be made in upper case.

3.0 Initiating communications

From Windows Explorer, double click on "CSETUP". This should open up a blank HyperTerminal screen.

Press COMM button for 2 seconds. You should observe a simple DOS type menu screen similar to the following:

Main Menu
Type 1st letter
U > Units = Deg F
R > Range 4-20
4 ma = 0. 20 ma = 500.
A > Alarm Setup
On = 0. Off = 0. PWM = 0
I > Input K-80
E > Emiss. E=0.900
P > PP/AVE AVE = 16
C > Calibrate
G > Go (print)

S > Save Set-up
D > Don't Save
M > Menu

4.0 Change Units

Type "U" and the units will change from "F" to "C:. Note that all temperature related values including range and alarm settings will change automatically. For example if the alarm was set to "100", it will now read "37.7777" when you switch from "F" to "C".

5.0 Change Range

Type "R". The menu will prompt for "4 ma =", type in the appropriate value in degrees. Press Enter. The next prompt will be "20 mA =", enter the appropriate value for the upper end of the scale.

6.0 Set Alarm

Type "A"
Prompt will be "ON =", enter the temperature where you wish the alarm to be ON (contacts closed).
Prompt will be "OFF =", enter where you would like the alarm to turn OFF.

7.0 Sensor Input

"I" – this line of the menu shows the sensor name (K-80) that is stored in the transmitter. It cannot be changed in CSETUP. If you need to download a different sensor curve, contact HTI.

8.0 Change Emissivity

DIN Case – type "E". You see a two line choice listing "E =" or "C =". Type "E" and then enter the emissivity value when prompted.

NEMA Case – "E" function does not appear on menu. Emissivity values are set on the three digital switches located on the printed circuit board.

9.0 Peak Picker or Average

The ST-5000 provides the ability to introduce either a moving average function or a Peak Picker for intermittent process conditions.

DIN Case – by typing "P", you will see a two line display offering a choice for either "AVE" or PEAK DECAY". If you want to introduce a moving average, type "A" and enter the number of readings you wish to average. The transmitter updates about 4 times a second so an AVERAGE of 16 is equivalent to a response time of about 4 seconds.

For Peak Picker operation, type "P". the display will read "PEAK DECAY". Enter the decay range in °/second. For example, by entering "10", the Peak Picker will decay at a rate of 10° per second and wait for the next peak temperature signal.

NEMA Case – "P" function not appear on menu. Average and Peak Picker functions are set on the printed circuit board itself.

10. GO Utility

This is a simple diagnostic screen that allow you to observe some fundamental data including: process temperature, actual mV level form the sensor, emissivity setting, average (or decay rate) and cold junction temperature.

Type "G". After about 2 seconds you see a table that scrolls down and is updated about once every 2 seconds. The table looks as follows:

770.2367 mV = 0.1020 AVE = 16 E = 0.9000 CJ = 69.4315

Column 1 Process temperature
Column 2 Raw mV signal from IR sensor
Column 3 Average or Peak Picker setting
Column 4 Emissivity setting
Column 5 Cold junction temperature

11.0 Save Settings

None of the above settings are permanently stored in memory until you save them. Once you are certain you have the correct settings in place,

Type "S" and all the changes are permanently saved for future use. This erases any previous settings in the transmitter.

12.0 Don't Save

By typing "D", you cancel any changes you made and return to the previously stored transmitter values.

13.0 Main Menu

By typing "M", you return to the Main Menu.

IMPORTANT – after entering changes, press "S" to save your settings.