

OPERATION MANUAL

BEHJOO Controller CNT 100F

TDS Transmitter



Technical Specifications BEHJOO Controller CNT100F

TDS Transmitter

1-General specifications:

- TDS Measurement RANGE
0-200 ppm, 0-20000 ppm, 0-20 ppm, 0-200 ppm
- Automatic calibration
- Manual Temperature Compensation MTC
- Two separate commands for starting the solenoid valve, pump or contactor up to 2 Amps 250 volts
- ability to install the device up to 200 meters away from the process location (according to the order)
- Body Material ABS, Degree of protection IP54
- Ability to work at temperatures of -10 to 50 degrees Celsius and relative humidity 0-90%

2- Lateral Equipment:

- Types of TDS electrode
- Types of electrode holders
- Proper protection panel or floor

Introducing the different parts of the device



Figure No.1

3-Front view of the device (Figure No.1)

1- LCD Display

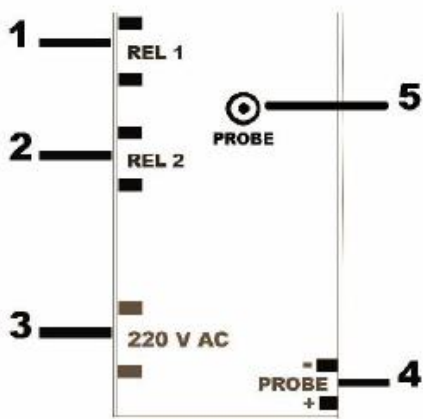
2-The Enter key is used to enter the menu or save the values displayed

3- The Key ▼ to lower the menu and reduce the displayed values

4-The key ▲ to increase the menu and increase the displayed values

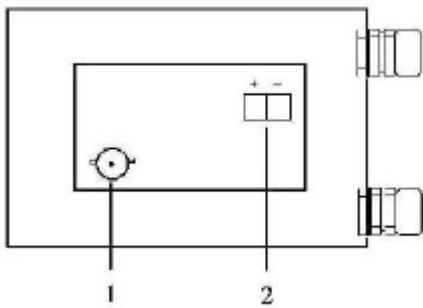
5- Escape key to Exit the displayed menu or delete the steps or resetting

4-Behind View of the device and terminals (Figure No.2)



- 1-Output terminals for relay command 1
- 2-Output terminals for relay command 2
- 3-Location of Input power connection
- 4- Location of Conduction or transmitter connection
- 5- Not used (It is not connected anywhere)

5-transmitter (Figure No.3)



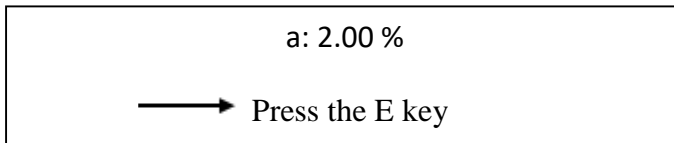
- 1-Connection location of the TDS electrode
- 2- Connection location of the transmitter

6- Main menus

- 1- Menu of the Temperature Coefficient adjustment a
- 2- Menu of the Reference Temperature adjustment t0
- 3- Menu of the Select automatic or manual compensation system for temperature change ATC: OFF/ON
- 4- Menu of the Manual temperature adjustment MTC
- 5- Menu of the Calibration (Calibration Mode)
- 6- Menu of the setting the on and off points for the relay 1
- 7- Menu of the setting the on and off points for the relay 2

1- Menu of the Temperature Coefficient adjustment a

Press the E key once, use the key ▼ and ▲ to select the above menu,



This means that the display must show above value.

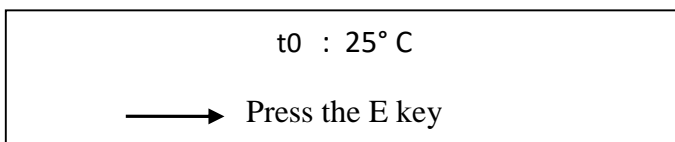
Press the E key once, use the key ▼ and ▲ to adjust Temperature Coefficient. (The default value is 2%)

After selecting, once press the E key to save information.

Use the Escape key to exit the main menu.

2-Menu of the Reference Temperature adjustment t0

Press the E key once, use the key ▼ and ▲ to select the above the menu,



This means that the display must show above value.

To enter this menu Press the E key once.

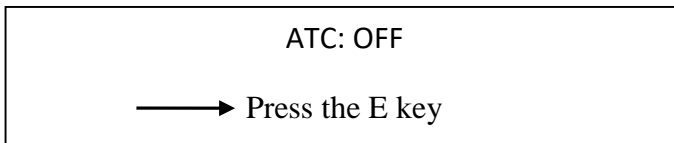
To select the temperature mode of 25 or 20 C use the ▼ and ▲ key. (The default value is 25° C)

After selecting, once press the E key to save information.

Use the Escape key to exit the main menu.

3- ATC Selection menu

Press the E key once, use the keys ▼ and ▲ to select the above the menu,



This means that the display must show above value.

To enter this the menu, press the key E once.

Use the keys ▼ and ▲ to select OFF mode. (ATC OFF)

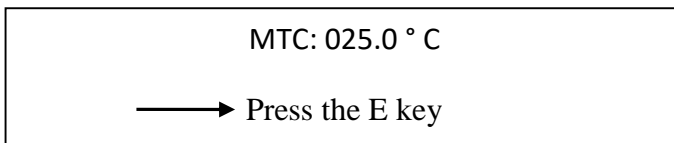
After selecting, once press the E key to save information.

Use the Escape key to exit the main the menu.

4- Menu of the Manual temperature adjustment MTC

If you do not use the temperature sensor (ATC=OFF), you can enter the desired temperature in this section

Press the E key once, use the keys ▼ and ▲ to select the above the menu,



This means that the display must show above value. To enter this the menu, press the key E once.

Use the keys ▼ and ▲ to select the proper temperature.

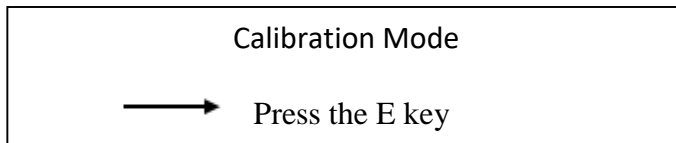
After selecting, once press the E key to save information.

Use the Escape key to exit the main the menu.

5- Menu of the Calibration (Calibration Mode)

This menu is used to calibrate the device, according to the range of the controller, first prepare the appropriate standard solution and after connecting the electrode to the transmitter and placing the electrode and temperature sensor (in case of use ATC) inside the standard solution, enter this part.

To enter this menu Press the E key once, use the key ▼ and ▲ to select the above the menu,

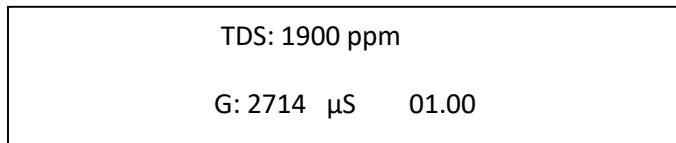


This means that the display must show above value.

To enter this menu, press the key E once.

If your standard solution is not exactly equal to the number shown, you can select your Intended number with the keys ▼ and ▲, for instance (190 ppm)

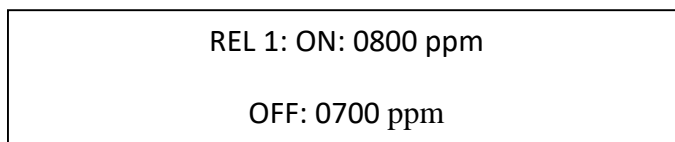
After the solution is balanced and the changes in the electrode signal are fixed, press the E key. If there is a problem in the work steps, the error message will appear.



Exit the menu with the ESC key and Check that the standard solution and connections are intact.

6- Menu of the setting the on and off points for the relay 1

Press the E key once, use the key ▼ and ▲ to select the above the menu,

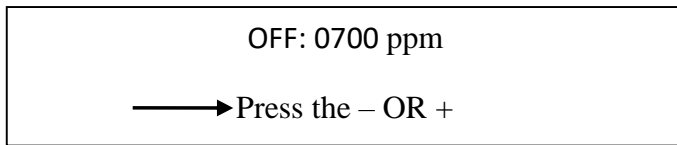


This means that the display must show above value.

In this menu, you can select the desired TDS to turn on and off on relay 1

Press the E key once to change the above values.

The display should be show the amount of TDS to turn off the relay.



By Using the keys ▼ and ▲, you can select the appropriate TDS value to send the off command, this means that the device by reaches to this TDS value, Issues the command to turn off relay 1. It is best to select the on and off values at appropriate intervals so that the device does not fluctuate (More than a few hundred). After selecting the appropriate number, press the E key once to save the information.

To adjust the amount of TDS and to turn on the relay 1 Follow the previous steps. At the end of this step, the Recorded values off and on relay 1 are displayed. Exit this the menu by pressing the Escape key

7-Menu of the setting the on and off points for the relay 2

In this the menu, you can select the desired TDS to turn on and off on relay 2

The steps are the same as in step 6.

Tips for installation and calibration

- Disconnect all device output connections
- After installing the transmitter and electrode connections, turn on the device and adjust and calibrate by steps 1 to (7 part 6)
- Turn off the device and install the electrode and holder in the right place and connect it to the transmitter
- After reassurance the fluid passes properly in the pipeline or tank and properly connect it to the electrode, carefully connect the input power Turn on the device for 10 minutes to reach equilibrium.
- Turn on the device for 10 minutes to reach equilibrium
- If the situation is favorable, connect the output systems (pumps or alarm circuit).
- If the output commands are turned on and off sequentially, disconnect the output keys and reset the relays
- In cases where the error due to temperature changes cannot be ignored, use ATC System and the relevant temperature sensor