

# OPERATION MANUAL

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## BEHJOO Controller CNT 100F

### OPR Transmitter



## **Technical Specifications BEHJOO Microprocessor Controller CNT100F**

### **Transmitter OPR**

#### **1-General specifications:**

- OPR RANGE Measurement:  
1000 mV up to 1000 V with accuracy 1 mV
- Automatic calibration
- 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%

## Introducing the different parts of the device



Figure No.1

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

1- LCD Display

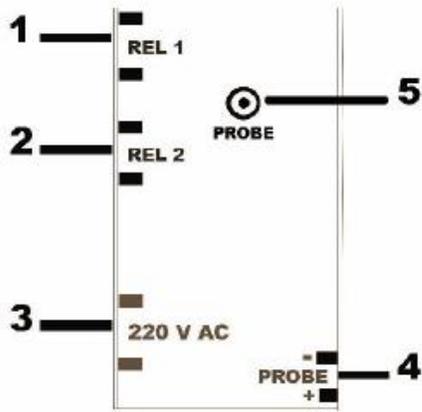
2-The Enter key is used to enter the menu or save the values displayed

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

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

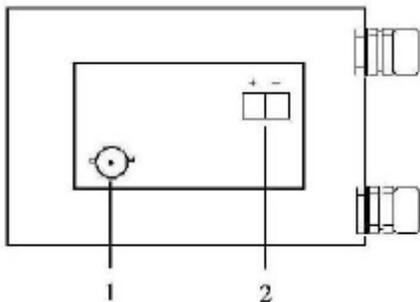
5- Escape key to Exit the displayed menu or delete the steps or resetting

#### 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 transmitter connection
- 5- Location of ORP Electrode connection

#### 5-transmitter (Figure No.3)



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

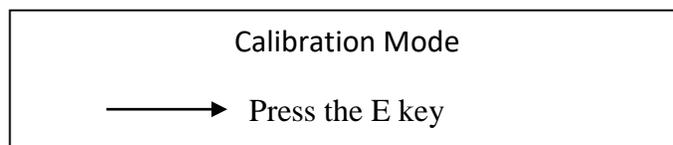
## 6- Main menus

- 1- Menu of the Calibration (Calibration Mode)
- 2-Menu of the setting the on and off points for the relay 1
- 3- Menu of the setting the on and off points for the relay 2

### 1-- Menu of the Calibration (Calibration Mode)

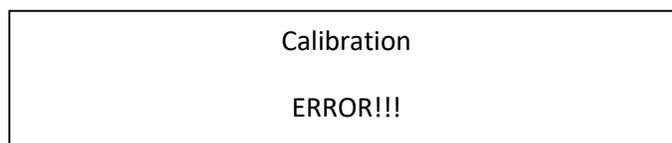
This menu is used to calibrate the device, first prepare the appropriate standard solution and after connecting the electrode to the transmitter and placing the electrode inside the standard solution, enter this part.

To Enter this the 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 the menu, press the key E once. use the keys ▼ and ▲ to select the ORP desired option.

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 this the menu with the ESC key and Check that the buffer and connections are intact

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

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



This means that the display must show above value.

In this the menu, you can select the desired ORP 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 ORP to turn off the relay



By Using the keys ▼ and ▲, you can select the appropriate ORP value to send the off command, this means that the device by reaches to this ORP 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 ORP). After selecting the appropriate number, press the E key once to save the information.

To adjust the amount of ORP 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.

### **3- Menu of the setting the on and off points for the relay 2**

In this the menu, you can select the desired ORP 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
- 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