



**ARANKA**

# **USER MANUAL**

## **AIPA-1908**

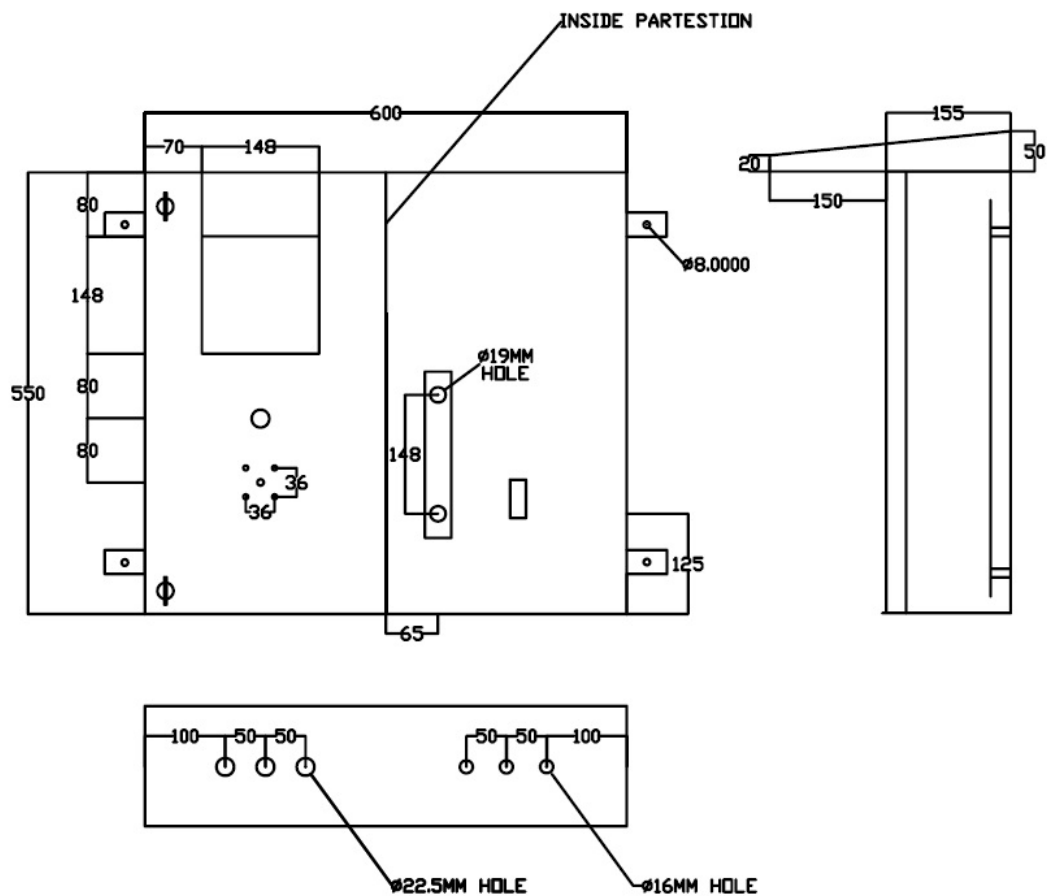
# ***TURBIDITY ANALYSER***

## **SINGLE CHANNEL**

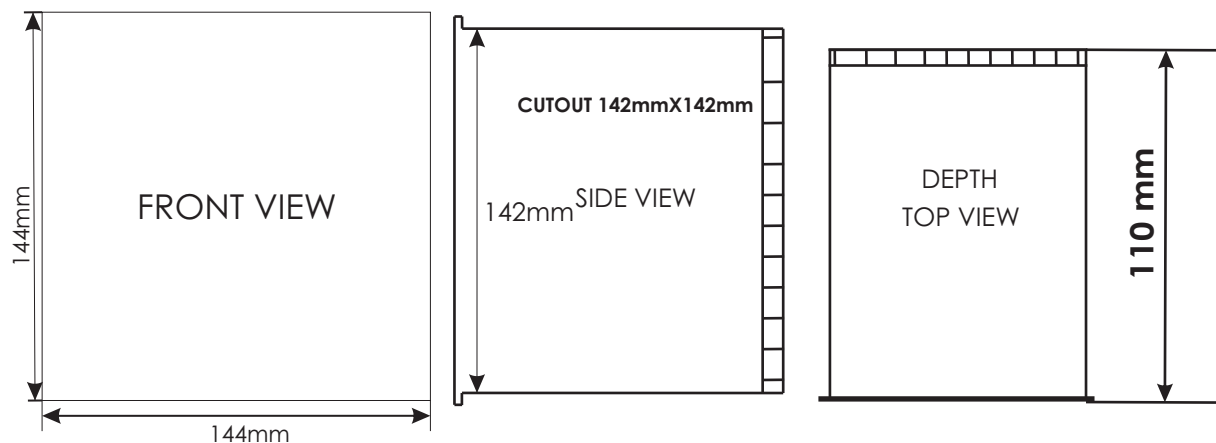
### **Ver. 1.0**



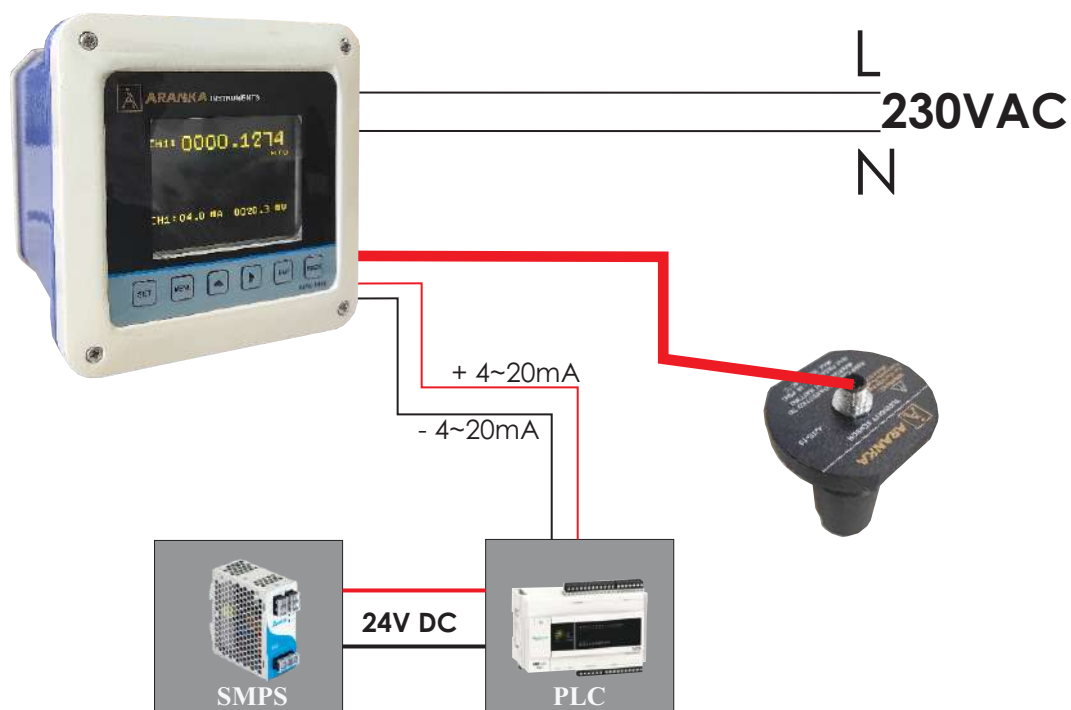
# DIMENSION



## DIMENSION



## TERMINAL DIAGRAM



## ACCESSORIES DETAILS



**Turbidity Flow Cell Inlet And Outlet Connection PU Push Fit With Pu6 Tube. Bottom Side Open able For Wash Or Clean Flow Cell.**

### **Turbidity Flow Cell**



**Turbidity Calibration Cup To Calibrate Turbidity Sensor With Standard solution.**

### **Turbidity Calibration Cupl**



**Turbidity Sample Flow Indicator [ Rotameter]  
Range 0~27 LPH. Body Acrylic with Flow Control Valve. Connection Pu6 Push Fit Connection.**

### **Turbidity Rotameter**

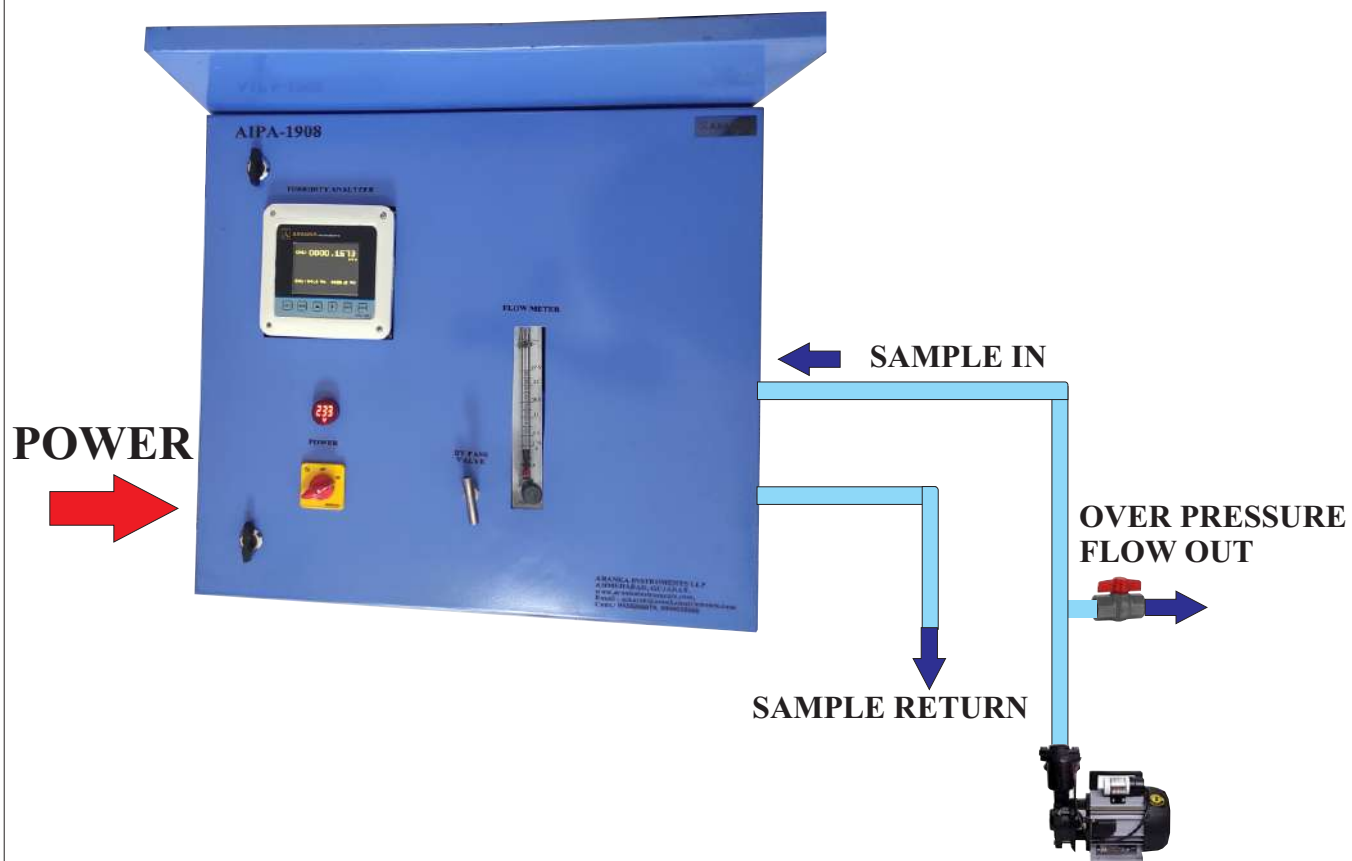
### **Tube For Sampling**

**Turbidity Sample Tube Pressure Capacity Max 10 Bar, Size Pu6 Transparent.**

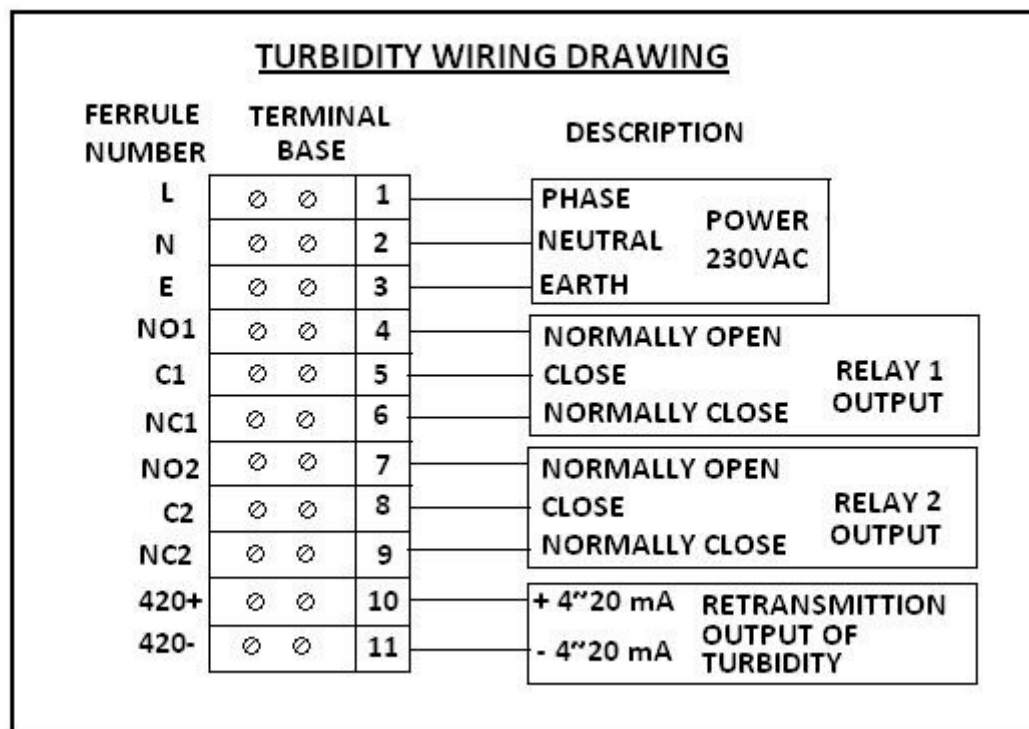
### **By Pass Valve**

**Turbidity Sampling By Pass Valve MOC S.S.316., Connection 1/4" BSP Female, Connector Pu6 Push Fit. Valve Type Needle Valve.**

# INSTALLATION DESIGN



# TERMINAL DISCRPTION



## **OPERATING INSTRUCTIONS**

- 1) System Reading will Saturate after 30 minutes.
- 2) Sensor and Flow Cell Need to Clean Every 15 Days.
- 3) Solid Particle are not allow inside Sampling System.
- 4) Line Flow [Rotameter ] Should Be with in 9 to 12 LPH.
- 5) Line Pressure Should not Increase More Than 20 PSIG.
- 6) System Power Must Be with in 100~255VAC@50Hz.
- 7) System Earth must be Given.
- 8) System Earth must be less than 1VAC between Neutral and earth.
- 9) System Calibration Recommend Every 6 Month.

## SPECIFICATIONS

TYPE	AIPA-1908
POWER	90~260VAC
DISPLAY	LCD
RANGE	0-40/0-400 / 0-4000 NTU
RESOLUTION	0.001NTU
LIGHT SOURCE	LED 880 nm
LIGHT RECEIVER	Photo Diode GaSe Type
Measuring Method	90 Degree Scattered
Calibration	Front key
Calibration Method	Slope Standard Method
5A RELAY OUTPUT 1	YES
5A RELAY OUTPUT 2	YES [OPTIONAL]
ANALOG OUTPUT	4~20mA
CONTROL	ON/OFF
COMMUNICATION	RS485 [OPTIONAL]
ANALYZER BODY	ALUMINIUM
Sensor MOC	Darlington Black
Flow Cell MOC	Darlington Black

## KEY FUNCTIONS



TO SET TDS  
CONTROLLING VALUE



TO ENTER CALIBRATION & DISPLAY OFFSET MODE



TO INCREASE VALUE &  
IT WILL SCROLL 0 TO 9



TO SHIFT DIGIT

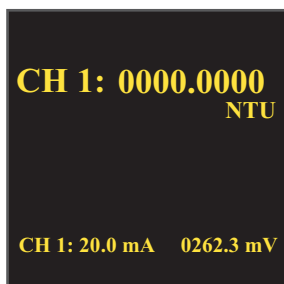


TO SAVE DATA & ENTER TO NEXT SCREEN



EXIT FROM CURRENT DISPLAY

## MAIN SCREEN

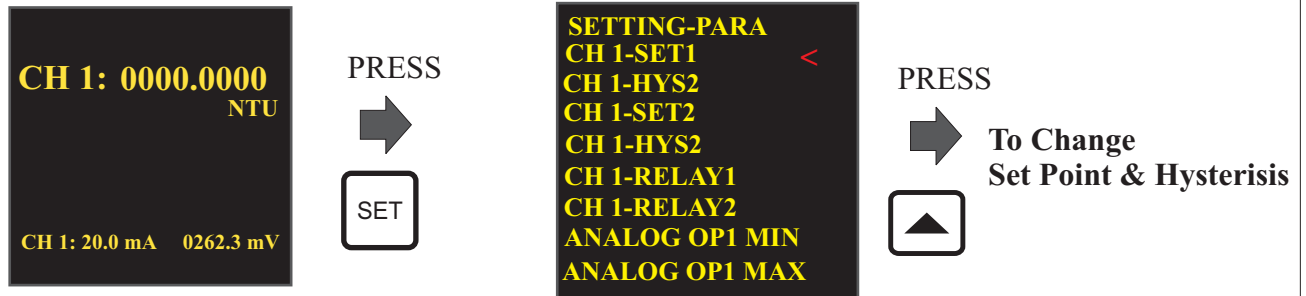


← Shows Turbidity Reading Present Value in NTU

← Shows Turbidity Retrasmittng mA Output Value and  
Sensor Output Value.



# SET POINT



CH 1-SET1 : TO SET RELAY SET POINT FOR RELAY ONE.  
 CH 1-HYS1 : TO SET RELAY HYSTARESES FOR RELAY ONE.  
 CH 1-SET2 : TO SET RELAY SET POINT FOR RELAY TWO.  
 CH 1-HYS2 : TO SET RELAY HYSTARESES FOR RELAY TWO.  
 CH 1-RELAY1: TO SET RELAY OPERATION ON/ OFF BEFORE SET VALUE OR AFTER  
 CH 1-RELAY2: TO SET RELAY OPERATION ON/ OFF BEFORE SET VALUE OR AFTER  
 ANALOG OP1 MIN : TO SET MINIMUM RANGE VALUE IN NTU FOR TURBIDITY  
 4~20mA OUTPUT  
 ANALOG OP1 MAX: TO SET MIXIMUM RANGE VALUE IN NTU FOR TURBIDITY  
 4~20mA OUTPUT

PRESS  
 To Increase Set Value Roll on From 0 to 9



PRESS  
 To Shift Digit to Roll Curser



PRESS  
 TO SAVE DATA & ENTER TO NEXT SCREEN



PRESS  
 EXIT FROM CURRENT DISPLAY



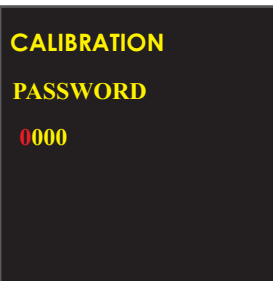
# CALIBRATION



PRESS MENU BUTTON FOR 3 SEC. TO ENTER CALIBRATION SCREEN. SCREEN ASK FOR PASSWORD ENTER 5088 TO ENTER SCREEN



PRESS

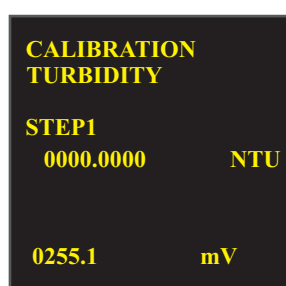


PRESS



ENTER PASS WORD  
ENTRY VALUE  
CHANGES COLOR  
OF CHARACTERS.

PRESS



When Turbidity Sensor Deep In Standard Solution. Let mV Value Near To Stable. Enter STEP1 Standard Value in NTU and Press ENT Key.

Turbidity Sensor Output in mV Turbidity Increases mV Value Also Increases.

There are 10 Steps Calibration in Calibration Mode. you Can Do Calibrate Analyzer with Desire Number of steps. We Recommend Minimum 6 Steps For Better Accuracy. Calibration Must Be Done in Incremental Method.

Note: During Calibration When Standard Solution NTU increases mV will Increase. if you Found on Increase of NTU The mV are not Increase than Check Sensor Light Source or Cable Connection. if Light Source Life End Than Communicate to Company For New Sensor. STEP 1 Calibration Must Done with 0 or 0.02 NTU.

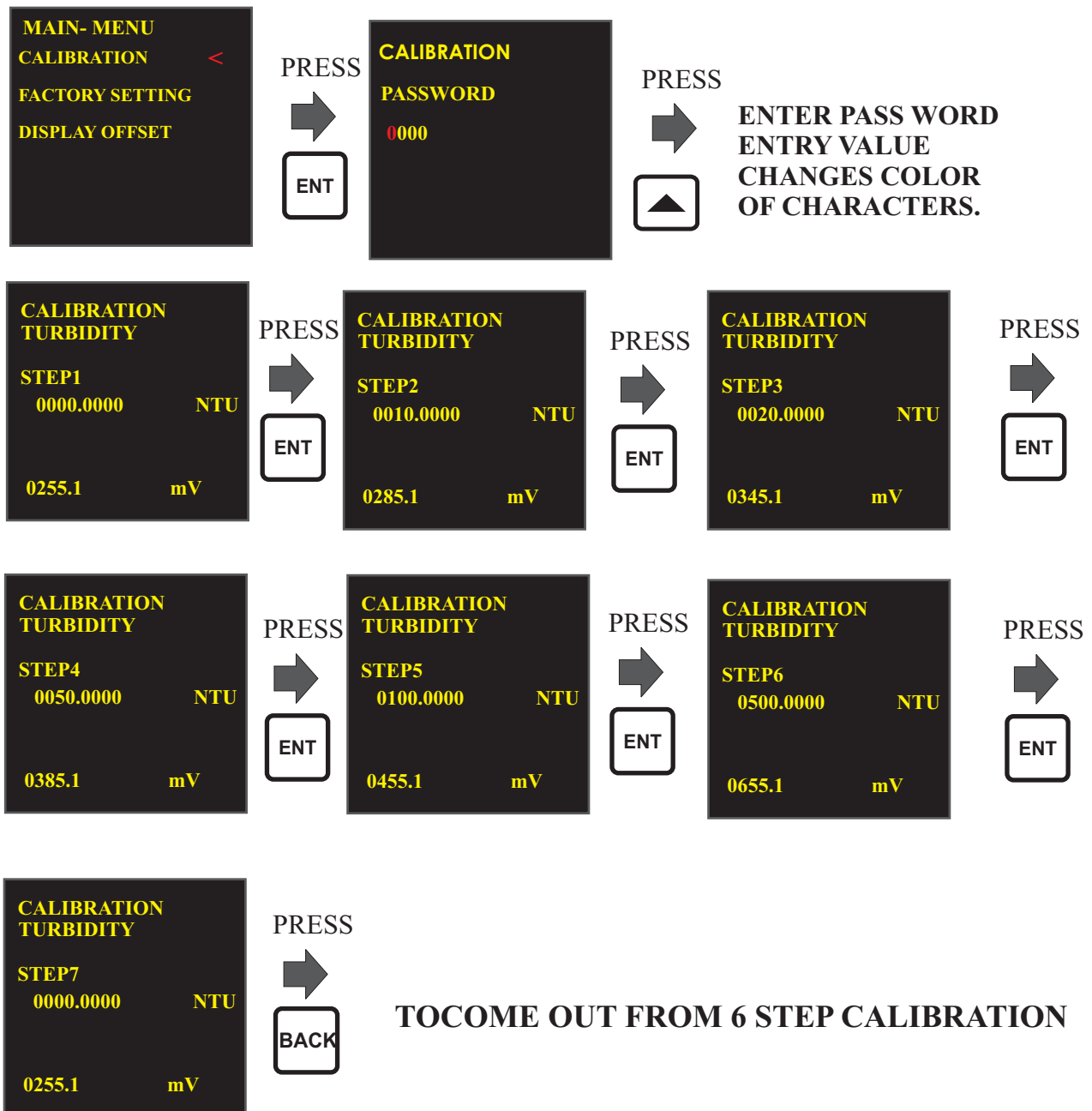
## Calibration Example

STEP	TURBIDITY STANDARD SOLUTION VALUE
STEP1	0.00 NTU OR 0.02 NTU
STEP2	5.00 NTU OR 10.00 NTU
STEP3	15.00 NTU OR 20.00 NTU
STEP4	50.00 NTU
STEP5	100.00 NTU
STEP6	500.00 NTU

NOTE : ABOVE VALUE OF STEP 2 TO 6 ARE FOR EXAMPLE TO UNDERSTAND YOU CAN USE ANY KNOWN OR STANDARD SOLUTIONS YOU HAVE NEAR TO VALUE. MAKE SURE STEP1 MUST BE CALIBRATE WITH 0.00 OR 0.02 NTU.

To Escape or do calibration with less than STEP 10 than When Press BACK Key To Come Out. For Example you have 6 nos Standard Solution Than When you Completed STEP6 Screen Show STEP 7 Than Press BACK Key Main Screen will Come And Calibration will Completed.

## CALIBRATION PROCESS STEP EXAMPLE



# DISPLAY OFFSET



PRESS MENU BUTTON FOR 3 SEC. TO ENTER DISPLAY OFFSET SCREEN. THIS SCREEN FUNCTION CAN USE FOR CORRECTION ANY DEVIATION REQUIRE AFTER CALIBRATION. SCREEN WILL ASK FOR PASSWORD ENTER 5678 TO ENTER SCREEN

**CH 1: 0000.0000**  
NTU

CH 1: 20.0 mA    0262.3 mV

PRESS



**MAIN- MENU**  
**CALIBRATION**  
**FACTORY SETTING**  
**DISPLAY OFFSET <**

PRESS



**DISPLAY OFFSET**  
**PASSWORD**  
**0000**

PRESS



**ENTER PASS WORD**  
**ENTRY VALUE**  
**CHANGES COLOR**  
**OF CHARACTERS.**

PRESS



**OFFSET-PARA**  
**CH 1 OFFSET <**  
**CH 2 OFFSET**  
**TEMP OFFSET**  
**OP 1 OFFSET**  
**OP 2 OFFSET**

**CH 1 OFFSET : TO CORRECTION TURBIDITY VALUE ON CHANNEL 1.**

**CH 2 OFFSET : - NA -**

**TEMP OFFSET : - NA -**

**OP1 OFFSET : TO CORRECTION TURBIDITY RETRANSMISION 4~20mA OUTPUT.**

**OP2 OFFSET: - NA -**

## **CH 1 OFFSET SCREEN**

**OFFSET-PARA**  
**TURBIDITY**  
**CH 1- OFFSET**  
**+0000.0000 NTU**

## **OP 1 OFFSET SCREEN**

**OFFSET-PARA**  
**OP 1 OFFSET**  
**+00.0                      mA**

# **TROUBLE SHOOTING**

- **TURBIDITY IS NOT SHOWING PROPER**
  - \* **CLEAN SENSOR**
  
- **TURBIDITY READING IS FLUCTUATING**
  - \* **CLEAN SENSOR, CHECK INTERFACE CABLE FROM INSTRUMENT TO SENSOR, CHECK SENSOR LIGHT SOURCE IS IT WORKING IF NOT THAN NEED NEW SENSOR.**
  
- **TURBIDITY SENSOR mV ARE NOT CHANGING WITH TURBIDITY READING**
  - \* **CHECK SENSOR CONNECTION, SENSOR HAD FUSED**



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