



# OPERATING MANUAL

## FOR ONLINE pH Transmitter

(Isolated 4-20mA Current Output)

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### A. INTRODUCTION

Thank you for purchasing our pH series meter. These microprocessor -based meters are economical and simple to use. The design incorporates a 7segment LED displays, offers a good & reliable measurement

### B. INSTRUMENT DESCRIPTION

- A general purpose pH/Conductivity/TDS/Temperature meter for use in panel / filed / lab as per models recommended by us.
- The instrument includes Features include: automatic range selection, calibration on standard solutions or direct cell constant entry, automatic temperature compensation

### C. SAFETY

- Please read this information carefully prior to installing or using this equipment.
- The unit described in this manual is designed to be operated only by trained personnel.
- Any adjustments, maintenance and repair must be carried out as defined in this manual, by a person qualified to be aware of the hazards involved.
- It is essential that both operating and service personnel employ a safe system of work, in addition to the detailed instructions specified in this manual.
- References should always be made to the Health and Safety data supplied with any chemicals used. Generally accepted laboratory procedures for safe handling of chemicals should be employed.
- If it is suspected that safety protection has been impaired in any way, the unit must be made inoperative and secured against any intended operation. The fault condition should immediately be reported to the appropriate servicing authority.

### D. GOOD PRACTICE GUIDELINES

- For greatest accuracy ensure no particulate matter is suspended in the solution under test. If necessary, filter or allow the particles to settle prior to use. Do not allow the cell to come into contact with any sediment which may be present.
- Ensure no air bubbles are trapped in the electrode area
- Ensure the cell plates or cell electrodes are completely immersed in the solution under test.
- Ensure no salt deposits or particulate matters are allowed to build up around the cell points or on the Probe body It is recommended that such deposits be removed by rinsing the cell in deionizer water. No attempt should be made to wipe off these deposits as this may cause damage to the cell electrodes.
- Ensure the correct reference temperature is selected for the operating procedures being used.

### E Instrument Specifications:

- Display: Full 4 Digit pH 14mm red LED display

- pH Range: 0.00 to 14.00 pH
- Buffer Options: Two Point Calibration
- Zero Point: 7.00pH
- Span Point: 4.0pH / 9.20pH/10.0pH
- Temperature Range: 0.0°C to 100.0°C
- Repeatability:  $\pm 0.01$  LSB
- Accuracy: 0.01 pH + 1 count
- Temperature Compensation: N.A.
- ATC sensor: RTD Pt 100 Std (RTD Pt 1000) - optional
- Temperature Range: 0.0 to 120.0 °C / 32.0 to 212.0 °F
- Resolution: 0.01 °C / °F
- Accuracy:  $\pm 0.5^{\circ}\text{C}$  /  $\pm 0.9^{\circ}\text{F}$
- Power Supply: 220-240 VAC, 50-60 Hz
- pH Meter Types
- Panel Type = 96X96X85 mm / Filed Type = 120X140X70 mm
- Weight: 0.5 Kg

#### F Keys:



**PROG**



**UP**

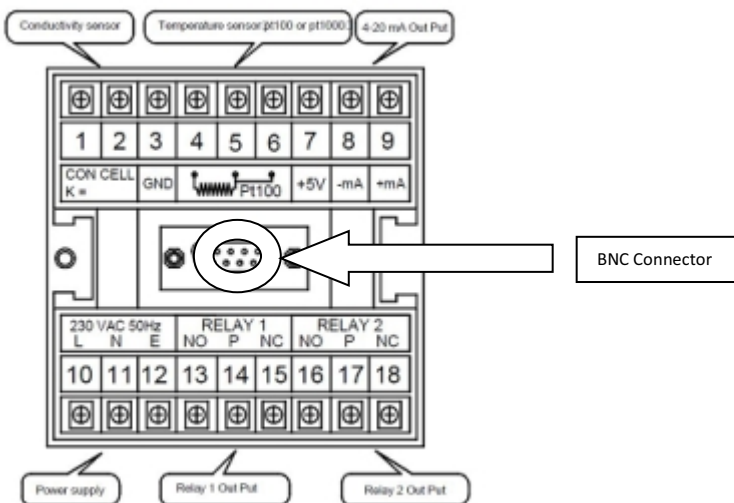


**DOWN**



**ENTER**

#### G. Basic Hardware Connection



1. Make the connections as per the diagram for PT100 temperature sensor and PH sensor.
2. Connect pH sensor to BNC connector at middle of the terminal plate
3. Connect temperature sensor (Pt100 or PT 1000) to terminal No. 4, 5 & 6.
4. Connect 230Volt AC 50 Hz Power supply to terminal No. 10, 11 & 12 as per designation.
5. For Preamplifier +5 volt & ground is provided (if Preamplifier is used) terminal No. 3 & 7



#### H. Instruction Set:

- A. To Configure & calibrate primary sensor & meter, Press **PROG** key, Display will show **TEMP** Manual temperature point at 25°C
- B. User can set the manual temperature from 0.0°C to 100.0°C by **UP/DOWN** keys This will be used in case if temperature sensor is not connected or malfunction in running time. Normally put 25.0°C & Press **ENTER** key to save the Manual temperature.
- C. Press **PROG** key, Display will show **TEMP MANU** (Manual) Temp mode, by using **UP/DOWN** keys, you can change it to **TEMP AUTO** Temp mode, then Press **ENTER** key to save
- D. Display will show **SPT1** & show set point, User can use **UP/DOWN** keys to set desired Set point in between **00.00** to **14.00** ph & press **ENTER** key to save or to skip press **PROG** key
- E. Display will show **HS-1** & show Hysteresis point, User can use **UP/DOWN** keys to set desired hysteresis point in between **.00** to **.50** ph & press **ENTER** key to save or **PROG** key to go for calibration
- F. Display will show **SPT2** & show set point user can use **UP/DOWN** keys to set desired Set point in between **00.00** to **14.00** ph & press **ENTER** key to save or to skip press **PROG** key.
- G. Display will show **HS-1** & show Hysteresis point, User can use **UP/DOWN** keys to set desired hysteresis point in between **.00** to **.50** ph & press **ENTER** key to save or **PROG** key to go for calibration
- H. If **ENTER** key leads to SET? Display will show **SET? NO or Yes**, by using **UP/DOWN** keys select **YES** or **NO** & press **ENTER** key Meter will save settings accordingly & come to initial display

#### Calibration Mode:

- I. In calibration mode, display will show **PASS** & **0000**, Enter the password by pressing **UP/DOWN** key as **10** & press **PROG** key
- J. Display will show **ZERO** & then **07.00** ph value. Put the ph electrode in 7.00 ph buffer solution for 30 seconds (Ensure electrode is rinsed and immersed correctly in the solution) & press **ENTER** key.
- K. Display will show **SPAN** & then **04.00** ph value. Put the ph sensor in 4.00 ph buffer solution for 30 seconds (Ensure electrode is rinsed and immersed correctly in the solution) & press **ENTER** key.
- L. Display will show the **SET? NO or YES**, by using **UP/DOWN** keys select **YES** or **NO** & press **ENTER** key Meter will save the settings accordingly and come to initial display

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