



M/S INDUSTRIAL INSTRUMENTATION SERVICES

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PRODUCT: ON LINE pH METER/CONTROLLER/TRANSMITTER/DATA LOGGER



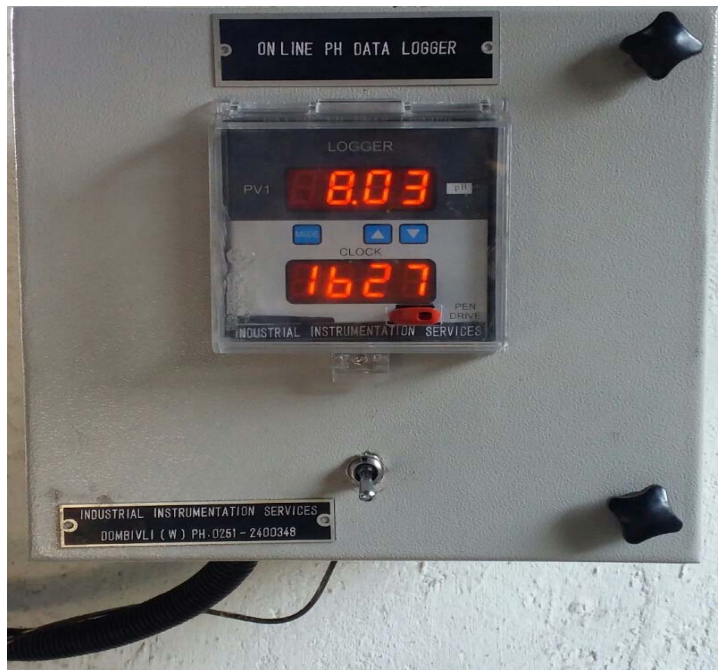
ONLINE PH MONITOR



ONLINE 2SET POINT PH CONTROLLER



ONLINE PH CONTROLLER & 4-20mA TRANSMITTER



ONLINE PH DATALOGGER & REAL TIME CLOCK



PH INDICATING CONTROLLER-TRANSMITTER-DATA LOGGER & GSM MODEM FOR SMS ALERT



PH INDICATING DATA LOGGER & GSM MODEM FOR SMS ALERT

FEATURES :-

Instrument is very useful in Various Industries Like Chemical, Fertilizer , Pharmaceutical, Dyes & Pigments Power Plant, Food, Water Treatment , Effluent Plant & etc to Measure Correct Acidic & Alkaline Value

- Bright Red LED displays
- Precision indication of pH
- Auto Temperature Compensation through PT-100 Temp.Sensor
- Front Panel calibration of pH-4 (or pH-9.2) and pH-7
- Wall Mounting Panel M.S Powder Coated

SPECIFICATIONS: pH MONITOR(Indicator)

- Display : 3½ Digit Red 0.56inch 7 Segment LEDs
- Range : 0.00 to 14.00 pH
- Input Impedance : >1012Ω
- Auto Temperature : 0 to 100°C with external PT100 source Compensation (instrument supplied with resistance corresponding to 25°C for PT100)
- Accuracy : 0.5% ± 1 Digit
- Calibration : Standard pH-7 : 7 ± 1 Slope pH-4 : 4 ± 1
- Supply : 220V AC ± 10%

Specifications: pH CONTROLLER & TRANSMITTER

- Display : 3½ Digit LED 0.56" character height
- Range : 0.00 to 14.00 pH
- Auto Temperature : 0-100°C using PT100 external sensor Compensation
- Calibration : Standard pH-7 : 7.00 ± 1 Slope pH-4 : 4.00 ± 1
- Alarm Limits : 0 to 14.00 for Acid/Base
- Accuracy : 0.5% ± 1 Digit
- Input Impedance : >1012 Ω
- Tx. Output : 4-20mA isolated for 0-14.0 pH
- Relay Output (2 Nos) : Contact rating 5A at 220V AC
- Control Relay Logic : Acid Relay ON for pH > Set Limit ,Base Relay ON for pH < Set Limit
- Consent Contact Output : P-NO contact rating 5A/220V AC ON when pH within ACID& BASE Limits.
- Supply : 220V AC ± 10% at 50Hz

Specifications: **pH DATA LOGGER**

- Display : 0.56" Red LED display for pH 0.56" Red LED display for Clock
- Sensor : pH sensor for pH. PT100 sensor for Temperature
- Range : 0.00 to 14.00 pH
- Temp. Comp. : In Auto Mode, 0-100°C using PT100 ext. sensor
In Manual Mode, settable from front panel from 0-100.0°C
- Calibration : 2 Point calibration. Auto buffer recognition of 4.00, 7.00, 9.00 & 10.00 pH
- Input Impedance: >1012 Ω
- Resolution : 0.01 for pH. 0.1°C for temperature
- Logging Rate : 1 second to 99Mins59seconds
- Data Logging : Directly create a .csv file on the Pen Drive (compatible with Excel)
giving a tabular format values of Date, Time and selected channels
- Real Time Clock: Adjustable Calendar (Month/Date) and Time (Hrs:Mins)
- Power Supply : 230V AC \pm 15% at 50/60Hz

NOTE: It is necessary to either use an external PT100 temperature sensor for compensation or terminate with a resistance corresponding to the PT100 resistance value at room temperature. The equipment is supplied with a termination resistance for 25°C

CALIBRATION PROCEDURE: (At room temperature)

- 1-Power on the Instrument (Ensure Power supply Terminal connection Properly L-Phase ,N-Nutral ,E-Earthing)
- 2-Connect pH Electrode at B & C connector
- 3-Wash the electrode with distilled water & clean properly.
- 4-Deep the Electrode in Standard Buffer Solution of 7.0 pH (Neutral Value)
- 5-Check the reading for 7.00 pH , if there is difference adjust the trim pot mark as 7 pH
- 6-Wash & Clean the pH electrode & deep in to 4.00 pH (Acidic value)
- 7-Check the reading for 4.00 pH , if there is difference adjust the trim pot mark as 4 pH
- 8- Wash & Clean the pH electrode & deep in to 9.20 pH (Alkaline value)
- 9- Check the reading for 9.20 pH , it will show correct value within accuracy
- 10- Wash the electrode with distilled water & clean properly.
- 11-After Calibration Instrument is ready for Use.

NOTE:-For Alkaline value Calibration use standard Buffer of 9.2 pH.

For Calibration use trim pot mark as 4 pH

ACCESSORIES SUPPLIED WITH INSTRUMENT (Brought out Items)

pH ELECTRODE
Range: 0 to 14pH





PH ELECTRODE

1. HELPFUL OPERATING TECHNIQUES

- 1) The electrode is shipped in a plastic bottle containing a solution of 4 buffer and potassium chloride. The electrode should remain in the bottle until it is used. If the electrode is used infrequently the bottle and its solution should be saved and the electrode stored in it (see the Electrode Storage Section).
- 2) During shipment the air bubble in the electrode's stem may move into the bulb area. If bubbles are seen in the bulb area, hold the electrode by its top cap and shake downwards as is done with a clinical thermometer.
- 3) Vigorously stir the electrode in the sample, buffer or rinse solution. This action will bring solution to the electrode's surface more quickly and improve speed of response.
- 4) After exposure to a sample, buffer or rinse solution, shake the electrode with a snap motion to remove residual drops of solution. This action will minimize contamination from carryover.
- 5) As a rinse solution, use a part of the next sample or buffer which is to be measured. This action also will minimize contamination from carryover.
- 6) When calibrating, use a buffer close in value to that expected from the sample. This action will minimize span errors.
- 7) Keep buffers and samples at the same temperature. This action will eliminate the need to correct values for temperature effects.

- 8) pH readings stabilize faster in some solutions than others; allow time for the reading to stabilize. In general, buffers provide stable readings in several seconds (tris buffers take somewhat longer) while samples usually take longer times.
- 9) Keep in mind that all pH electrodes age with time. Aging is characterized by shortened span and slower speed of response. If the meter has a manual or microprocessor slope (span) control, the control can be adjusted to compensate for electrode span errors (but will not effect the speed of response). Aging is best detected by calibrating the electrode in, for example, 7 buffer, then rinsing and placing the electrode in 4 buffer. As a rule, if the span is 10 % or more in error (a reading of 4.3 or higher for this example) the electrode should be cleaned and retested (see the Electrode Cleaning Section) or reconditioned (see the Reconditioning Section). If performance is not restored the electrode should be replaced.

2. CALIBRATION AND MEASUREMENTS

As a rule, follow the procedures recommended by the pH Meter manufacturer keeping in mind the Helpful Operating Techniques given above. The frequency of calibration is a function of the electrode, the pH meter and the solutions the electro measurements :

- 1) Remove the electrode form its soaker bottle and save the bottle.
- 2) Vigorously stir the electrode in a rinse solution.
- 3) Shake the electrode with a snap action to remove residual drops of solution.
- 4) Vigorously stir the electrode in the buffer or sample and allow the electrode to rest against the beaker's wall.

- 5) Allow the reading to stabilize and then take the reading.
- 6) Repeat these steps for each sample or buffer determination.
- 7) Between readings place the electrode in a beaker containing about 2 cm (1 inch) of, preferably, pH 4 buffer or distilled water.

3. ELECTRODE STORAGE

When pH readings are made infrequently, for example, several days or weeks apart, the electrode can be stored simply by replacing it in its soaker bottle. First, slide the cap onto the electrode, then the o-ring, then insert the electrode into the bottle and firmly tighten the cap. If the solution in the soaker bottle is missing, fill the bottle with pH 4 buffer.

4. ELECTRODE CLEANING

Coating of the pH bulb can lead to erroneous readings including shortened span. The type of coating will determine the cleaning technique. Soft coatings can be removed by vigorous stirring or by use of a squirt bottle. Organic chemical or hard coatings should be chemically removed. Only in extreme cases should the bulb be mechanically cleaned as abrasion can lead to permanent damage. If cleaning does not restore performance, reconditioning may be tried.

5. RECONDITIONING

When reconditioning is required due to electrode aging (see Helpful Operating Techniques, Part 9), the following chemical treatments can be tried. They are presented in the order of the severity of their attack on the pH glass and may not improve (and in some case actually further deteriorate) electrode performance.

Note :

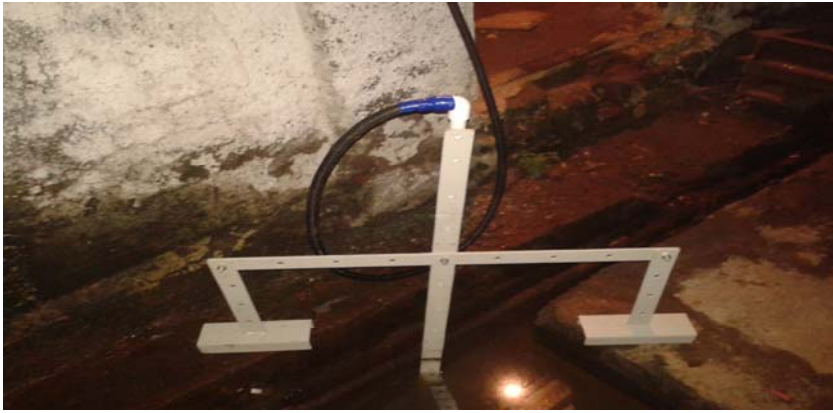
Use proper precautions when handling these hazardous chemicals. Ammonium bifluoride and HF (hydrofluoric acid) are extremely hazardous and should only be used by qualified personnel.

- 1) Immerse the electrode tip in 0.1N HCL for 15 seconds, rinse in tap water and then immerse tip in 0.1N NaOH for is seconds and rinse in tap water. Repeat this sequence three times and then recheck the electrode performance. If performance has not been restored, try Step 2.
- 2) Immerse the tip in a 20% solution of $\text{NH}_4\text{F}\cdot\text{HF}$ (ammonium bifluoride) for 2 or 3 minutes, rinse in tap water and recheck performance. If performance has not been restored, try Step 3.
- 3) Immerse electrode tip in 5% HF for 10 to 15 seconds, rinse well in tap water, quickly rinse in 5N HCL, rinse well in tap water and recheck performance. If performance has not been restored it is time to get another epoxy body, sealed reference combination pH electrode.

HOUSING (P.V.C) & ASSEMBLY OF pH ELECTRODE:



ACTUAL FEW SITE PHOTOGRAPHS







OUR SOME SATISFIED CLIENT LIST FOR ONLINE pH METER & TDSMETER

1-BHABHA ATOMIC RESERCH CENTER	31-NAVBHARAT INDUSTRIES UNIT-1
2- UNITED BREWERIES LIMITED	32-MAHESH TEXTILE PROCESSORS
3-PREM POOJA TEXTILE PROCESSOR PVT LTD	33-C-GEN BIOTECH
4-MONOGRAM TEXTILE PROCESSOR PVT LTD	34-DOMBIVLI BETTER ENVIROMENT SYSTEM ASSOCIATION (COMMON EFFLUENT TREATMENT PLANT-CEPT)
5-CHEMICAL CORPORATION (I) LTD	35-TECHNOVA IMAGING SYSTEM PVT. LTD.
6-C.G.A CHEMICALS LTD	36-NAVBHARAT INDUSTRIES UNIT-2
7-SHUBH LAXMI DYEING MILL	37-TECHNOCHEM
8-DHANLAXMI TEXTILE INDUSTRIES	38-EMTEX TEXTILE INDUSTRIES PVT LTD
9-ASHUTOSH DYEING INDUSTRIES	39-BADLAPUR TEXTILE INDUSRIES PVT LTD
10-SHOBHAVAT INDUSTRIES	40-NAVBHARAT INDUSTRIES UNIT-2
11-GURUDEO TEXTILE & PROCESSING	41-SHREE VINAYAK ORGANICS (I) PVT LTD
12-JEMINI TEXTILE INDUSTRIES	42-BEDMUTHA INDUSTRIES LIMITED
13-PARAMDAS TEXTILE & PROCESS	43-NILAMBER DYEING & PROCESSORES PVT LTD
14-MONOGRAM TEXTILES LTD	44-BLACK ROSE INDUSTRIES LIMITED
15-TULSI CLOTH & FABRICS	45-KOPRAN RESEARCH LABORATORIES LIMITED
16-JEEN MATA PROCESSING & DYEING LTD	46-DEEPAK NITRITE LIMITED
17-JUBILANT LIFE SCIENCES LTD	
18-BELCHEM INDUSTRIES	
19-METRO POLITAN EXIMCH PVT LTD	
20-HASTAKALA PROCESSING	
21-SWASTIK INDUSTRIES	
22-SHREE SHANKAR SILK MILL	
23-SHREE KAILASH PROCESSORS	
24-AZEOCRYST ORGANICS PVT LTD Unit-1	
25- AZEOCRYST ORGANICS PVT LTD Unit-2	
26-HASTKALA TEXTILE INDUSTRIES	
27-TECHNOVA IMAGING SYSTEM PVT LTD.	
28-JUBILENT LIFE SCIENCES LIMITED	
29-SPECTRAM RENEWABLE ENERGY PVT LTD.	
30-PHARMA PRODUCT PVT LTD	