

# YUTECH pH ANALYZER AND pH CONTROL SYSTEM

BASED ON YUTECH'S A15 INTELLIGENT ANALYZERS AND SYSTEMS PLATFORM



**pH ANALYZER**



**pH ANALYZER AND CONTROL SYSTEM**

## SALIENT FEATURES:

- pH Analyzer and Electrode combination targets sensing of Hydrogen Ion Concentration (pH) which defines the Alkalinity or Acidity of Liquids or Syrups.
- YUTECH pH Analyzer works with any Combination Type pH Electrode and can accept RTD PT-100 Signal either from Separate Sensor or RTD embedded in pH Electrode.
- pH Analyzer plays a crucial role in Sugar Process Automation and helps in Stabilizing the overall Sugar Process as well as Sugar Colour and Quality.  
The YUTECH Intelligent Programmable pH Analyzer is a State-of-the-Art System having Built-in Fuzzy Logic for Accurately Sense, Analyze, Calculate and Derive Masecuite pH with Temperature Compensation. Furthermore, the Algorithm can also detect pH Electrode Decay and raise Alarm as well as notify the SCADA / PLC / DCS.
- Accurate pH reading ensures better Process Control and helps to maintain constant Masecuite / Melt / Molasses / Syrup pH thus results in Better Sugar Colour and Quality and Production Efficiency and Minimum Process Losses.

## Innovative Features for Ease of Operation and to save on Installation Cost and Materials:

- **Built-in pH Equation**
- **Built-in Temperature Compensation**
- **Built-in PID Controller:**
  - Highly Accurate Fuzzy Logic PID Controller developed especially for Process Control and Flow Control Applications.
  - pH Control Logic built especially for Juice Liming Process
  - Remote Set Variable Facility
- **Built-in 3-Point Auto/Manual Station to Select Control Output from:**
  - Selector Switch for Local PID Output or DCS/PLC PID Output
  - Manual Output for Trouble Shooting

**This feature simplifies installation by eliminating need for installing a Junction Box and Extra wiring.**

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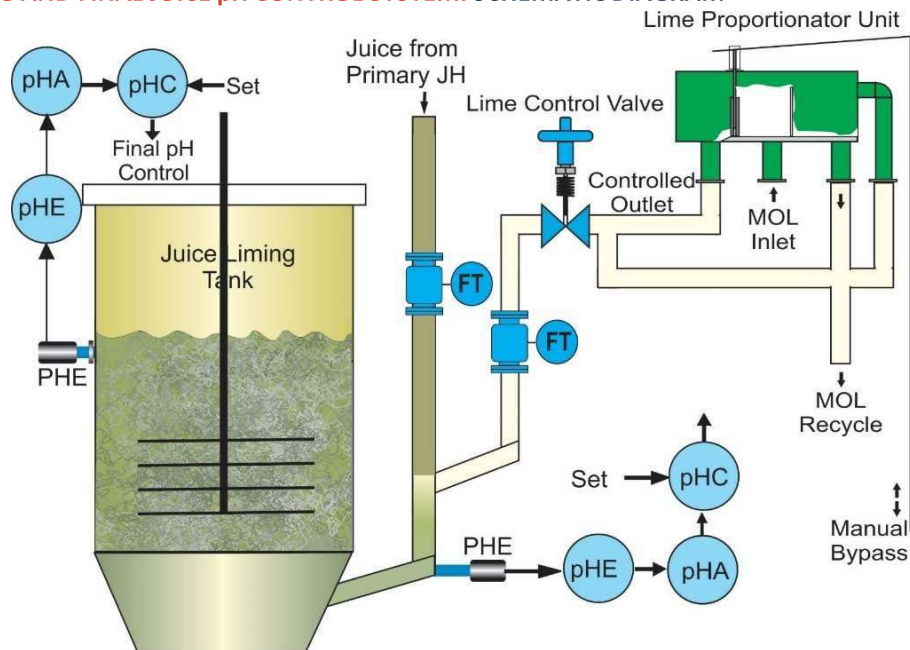
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**YUTECH**

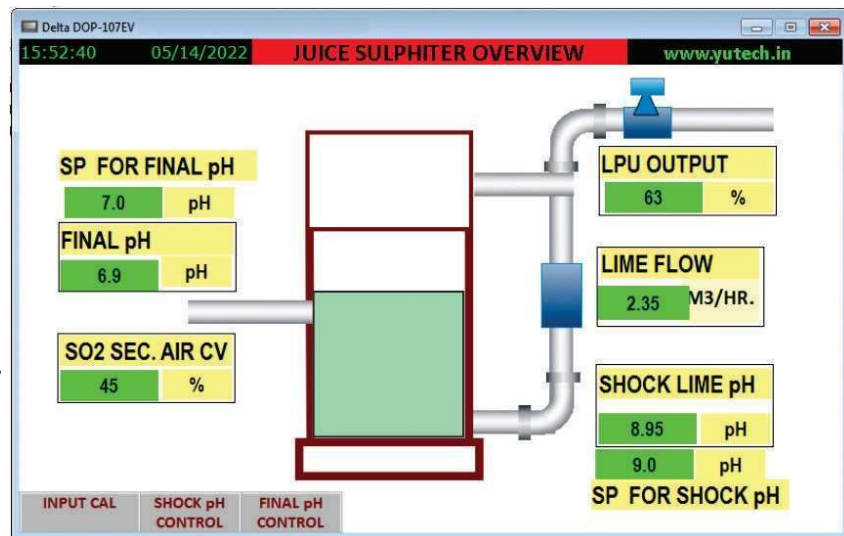
- pH Sensor or Electrode Detects Hydrogen Ion Concentration as a function of emf. This Signal is then Processed in Analyzer to obtain pH Reading on a Scale of 0 – 14pH.
- YUTECH pH Analyzer is equipped with Intelligent Electrode Decay Calculation Algorithm which generates Alarm when Electrode Weakens and also generates Alarm when Change of Electrode is needed.
- Very Easy Calibration and Online Electrode Recalibration using Set-7 Function
- In-Built Automatic Temperature Compensation
- In-Built Self Cleaning and Washing of Electrode with pre-adjustable timing cycle
- 4-20 mA Output, Separate Modbus and Ethernet Communications
- On-line Calibration Software “YUTECH-AccessApp-pH” provides Remote Access to pH Analyzer for Calibration, Compensation and Trouble Shooting.

## JUICE LIMING AND FINAL JUICE pH CONTROL SYSTEM: SCHEMATIC DIAGRAM



## JUICE LIMING AND SULPHITOR AUTOMATION:

- Shock Limed Juice pH Sensing
- Shock Limed Juice Temperature Sensing
- Final Juice pH Sensing
- Final Juice Temperature Sensing
- Lime Proportionator Control with respect to Temperature Compensated Shock Limed Juice pH
- Secondary Air or Molten Sulphur Pump VFD Control with respect to Temperature Compensated Final Juice pH



FOR MORE DETAILS PLEASE SEE THE PRESENTATION ON OUR WEBSITE [www.yutechautomation.com](http://www.yutechautomation.com).

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