Hanna Instruments HI 901-01Z

Hanna Instruments HI 901-01Z Potentiometric Titrator User Manual

Model: HI 901-01Z

Product Overview

The Hanna Instruments HI 901-01Z is an advanced automatic potentiometric titrator designed for precise and accurate laboratory analysis. This system is equipped with a single burette driver assembly and a 25 mL glass burette, operating on 115 VAC. It supports a wide range of titration types, including acid/base, potentiometric, and amperometric titrations, making it suitable for diverse analytical needs.

The HI 901-01Z is engineered for efficiency and user convenience, featuring a large LCD screen for real-time data display, extensive method storage capabilities, and automated burette maintenance. Its robust design and compliance with GLP specifications ensure reliable and validated analytical results.

Image of the Hanna Instruments HI 901-01Z Potentiometric Titrator, showing the main unit, the burette driver assembly with tubing, and a beaker with an electrode.

Setup and Installation

Before operating the HI 901-01Z, ensure all components are properly connected and the unit is placed on a stable, level surface.

Component Assembly:

- Connect the burette driver assembly to the main unit.
- Install the 25 mL glass burette into the driver assembly. The innovative**Clip Lock™ system** facilitates quick and secure burette changes.
- Attach the necessary tubing for reagent delivery and waste.
- Connect the appropriate pH or ORP electrodes to the designated ports on the titrator.

Power Connection:

- Ensure the unit is connected to a 115V AC power supply.
- Upon powering on, the instrument will initiate an internal diagnostics check to verify system integrity.

Peripheral Connections:

- For enhanced functionality, connect a PC, monitor, keyboard, and printer to create a complete workstation. The titrator is equipped with an RS485 serial port for data transfer.

Operating Instructions

The HI 901-01Z is designed for intuitive operation, supporting up to 10,000 standard or user-defined methods.

Initial Setup and Method Selection:

- After the power-on diagnostic check, the instrument will be ready for the first titration.
- Use the large LCD screen to select the desired titration method. The screen displays chosen methods, correlated information, and adjustable parameters.

Performing a Titration:

- Place the sample in a suitable beaker under the burette.
- Initiate the titration process according to the selected method.
- Observe the real-time titration curve displayed on the LCD screen. This feature is particularly useful for method optimization and testing.
- The titrator can drive two pumps separately for complex applications.

Data Management:

- Upon completion of a titration, all data, including the titration graph, are automatically stored in the instrument's memory.
- Data can be copied to disk via the built-in floppy drive or transferred to a PC using the supplied serial cable (RS485 interface).
- The unit complies with GLP specifications, allowing storage of GLP information for each sample, including ID

number, date and time of analysis, electrode ID code, and last calibration date.

- Up to 100 analysis reports, complete with titration curve graphing, can be stored.

System Settings:

- Access the set-up menu to adjust various features such as language, display brightness, resolution, pH electrode calibration settings, date, and hour.
- The instrument's status, including date, hour, temperature (if probe connected), and warning messages (e.g., pH electrode calibration), are clearly displayed.

Maintenance

Regular maintenance ensures the longevity and accuracy of your HI 901-01Z titrator.

Burette Maintenance:

- Burette maintenance is automated and simple. Users can select to purge or wash the burette and specify the number of washings.
- The **Clip Lock™ system** allows for rapid burette replacement, simplifying the process of switching between different titrants. The HI 901 automatically recognizes the volume of the newly installed burette.

System Diagnostics:

- The titrator includes self-diagnostic features for peripheral devices such as the pump, valve, burette, and stirrer, aiding in proactive maintenance.

Cleaning:

- Keep the exterior of the instrument clean using a soft, damp cloth. Avoid abrasive cleaners or solvents.
- Ensure all connections are free from dust and chemical residues.

Troubleshooting

This section provides guidance for common issues encountered during operation.

Common Issues and Solutions:

- **Instrument Not Powering On:** Verify the power cable is securely connected to a 115V AC outlet. Check the power switch.
- **Burette Dosing Inaccuracy:** Perform burette maintenance (purge/wash) to ensure no air bubbles or blockages. Verify the burette is correctly installed and recognized by the system.
- **Electrode Calibration Issues:** If a calibration "time-out" is set, the system will advise when the pH electrode needs calibration. Perform a new calibration as instructed. Ensure the electrode is clean and properly connected.
- **Data Transfer Problems:** Check the RS485 serial cable connection to the PC. Ensure the floppy disk is correctly inserted and formatted if using the built-in drive.
- **Peripheral Device Malfunctions:** Utilize the self-diagnostic features for the pump, valve, burette, and stirrer to identify specific issues. Refer to the detailed error messages on the LCD screen.

For persistent issues not resolved by these steps, please contact Hanna Instruments customer support.

Specifications

Feature	Detail
Model	HI 901-01Z
Burette Volume	25 mL Glass Burette
Power Supply	115V AC
Titration Types	Acid/Base, Potentiometric, Amperometric
Method Storage	Up to 10,000 (standard and user defined)
Dosing Accuracy	Under 0.1% of burette volume
Data Interface	RS485 Serial Port, Floppy Disk Drive
Compliance	GLP Specifications
Package Dimensions	25.9 x 18.4 x 13.9 inches
Package Weight	34.05 Pounds
Manufacturer	Hanna Instruments
ASIN	B005J55RZE

Key Features:

- Precise dosing system (accuracy under 0.1% of burette volume).
- Supports up to 10,000 titration methods (standard and user defined).
- Titration graph can be displayed on-screen and saved.
- Self-diagnostic features for peripheral devices including pump, valve, burette, and stirrer.
- User customized reports can be printed, saved on floppy disk or transferred to PC via RS232 interface.

Support and Documentation

For further assistance and detailed information, please refer to the official documentation.

User Manual:

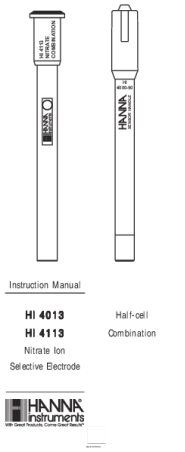
- A comprehensive User Manual in PDF format is available for download. This document provides in-depth instructions for all aspects of the HI 901-01Z operation and maintenance.
- Access the User Manual here: Hanna Instruments HI 901-01Z User Manual (PDF)

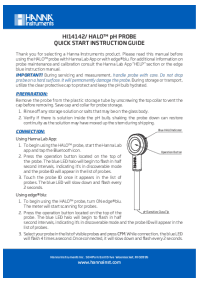
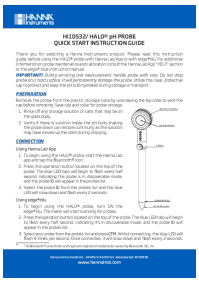
Contact Information:

For technical support, service, or inquiries regarding your Hanna Instruments HI 901-01Z titrator, please visit the official

Hanna Instruments website or contact their customer service department.

Related Documents - HI 901-01Z

	HI93737D-0 Silver Reagent D Safety Data Sheet | Hanna Instruments Comprehensive Safety Data Sheet (SDS) for Hanna Instruments HI93737D-0 Silver Reagent D, detailing identification, hazards, first aid, handling, storage, and regulatory information.
	Hanna Instruments HI 4013 & HI 4113 Nitrate Ion Selective Electrode Instruction Manual Instruction manual for Hanna Instruments HI 4013 (half-cell) and HI 4113 (combination) Nitrate Ion Selective Electrodes, covering specifications, theory of operation, preparation, calibration, measurement, and maintenance.
	HANNA HI 8424NEW Portable pH/mV/°C Meter Instruction Manual Comprehensive instruction manual for the HANNA HI 8424NEW portable pH/mV/°C meter. Learn about its features, specifications, operational guide, calibration procedures, maintenance, and troubleshooting. Includes details on automatic calibration and inductive charging.
	HI98164 Professional pH and Temperature Meter for Yogurt Products The Hanna Instruments HI98164 is a professional portable pH and temperature meter specifically designed for monitoring pH levels in yogurt production. It ensures consistent product quality by accurately measuring pH during the fermentation process, offering advanced features for reliable calibration and data logging.

	[Hanna Instruments HI14142 HALO pH Probe Quick Start Guide] Quick start guide for the Hanna Instruments HI14142 HALO™ Bluetooth® Wireless pH Probe, covering preparation, connection with Hanna Lab App and edge®blu, measurement, calibration, and storage.
	[Hanna Instruments HI10532 HALO pH Probe Quick Start Guide] Quick start guide for the Hanna Instruments HI10532 HALO pH Probe, covering preparation, connection via Hanna Lab App or edge®blu, measurement setup, guidelines, calibration, and storage.