HZCD-80
SF6 Purity Analyzer

USER MANUAL

Huazheng Electric Manufacturing(Baoding) Co.,Ltd

Dear Customers:

Thank you for choosing HZCD-80 SF6 Purity Analyzer.

We hope that this tester will make your work more easy and pleasant, letting you enjoy office automation during test analysis.

Please read this User Manual before using the tester, and follow the instructions to operate and maintain it for prolonging its service life.

The instrument is characterized by “Performing the test automatically by a slight click only”.

If you are satisfied with our product, please introduce to other users. Any other problems in using this equipment, please phone us (0312)3333059. We are always at your service for giving you every satisfaction.

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Ⅰ. Product Overview

1. Product Overview

The HZCD-80 SF6 Purity Analyzer is the latest intelligent measuring instrument developed by our company. This product uses a high brightness LCD touch screen as the human-machine interface. The Chinese language interface is easy to operate and display all kinds of data in real time. High precision and fast response full touch screen is used as man-machine input, and multiple functions are switched freely. The instrument uses a large capacity and rechargeable battery, long standby time. Configuration standard USB interface, historical data can be exported to U disk through interface.

The HZCD-80 SF6 Purity Analyzer uses the most advanced micro thermal conductivity sensor with temperature compensation at present. It provides a simple SF6 purity field detection method for users. It is mainly used to measure the purity of SF6 gas (percent content) in the SF6 bottle gas and SF6 switch equipment, and can also be used in the application of several kinds of background gases.

2. Technical Specifications

1).Technical features

- portable design, easy to carry and use
- The long life micro thermal conductivity sensor with temperature compensation is adopted.
- The flow sensor is imported, and the flow test is accurate.
- Large memory capacity, can store up to 100 sets of test data
- 5-inch color touch screen, intuitive and easy to use.
- Real-time data curve tracking, the trend of purity content change is clear and intuitive

- USB2.0 interface, historical data can be imported into the U disk.
- 4400mAh rechargeable lithium battery can operate continuously for 10 hours at a time.

2). Technical parameters

- Measurement range: 0 ~ 100%(SF6 percentage)
- Measurement accuracy: + 0.1 (90% ~ 100% range)
- Discrimination rate: 0.01%.
- Sampling flow: 0.5 ~ 0.8 l /min.
- Response time: 15 s (response 90%).
- Sampling system: built-in stabilizer valve, filter, electronic flowmeter.
- Display mode: color touch screen display, full Chinese interface, backlit.
- Output interface: USB2.0 specification.
- Power source: built-in rechargeable lithium battery (with charging protection device) can work for 8 hours continuously.
- Size: 320(mm) * 270(mm) * 140(mm).
- Working temperature: -40 ~ +80℃.

Ⅱ. Instrument Operation

1.Menu introduction

After turning on the power, the instrument enters the main interface, and there are four menu options on the main interface, showing current temperature and humidity, battery power and system time. The main interface is shown in Figure 1.

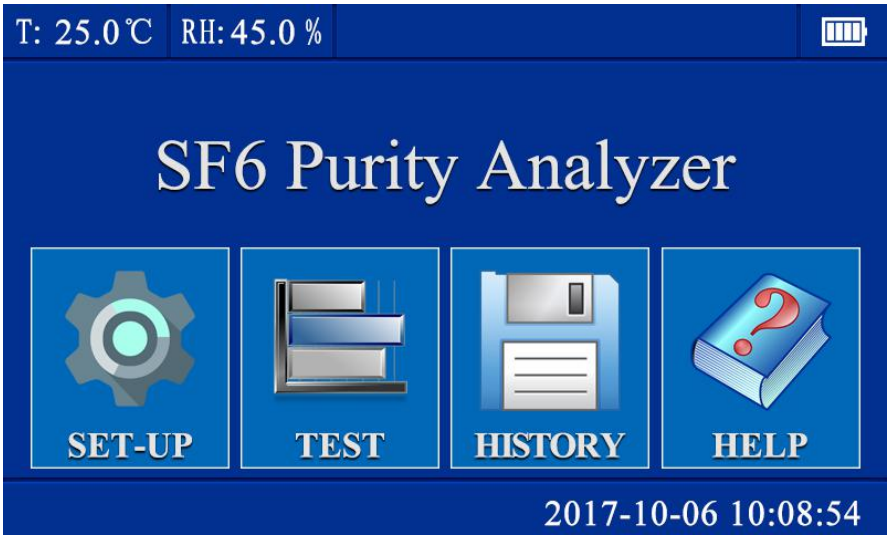

Figure 1

1). Test

① Under the main interface, click on the "**TEST**", the instrument will enter the measurement interface and the instrument will show the measured SF6 purity value(percentage content), gas flow, ambient temperature, ambient humidity, and current system time. The interface is shown in Figure 2:

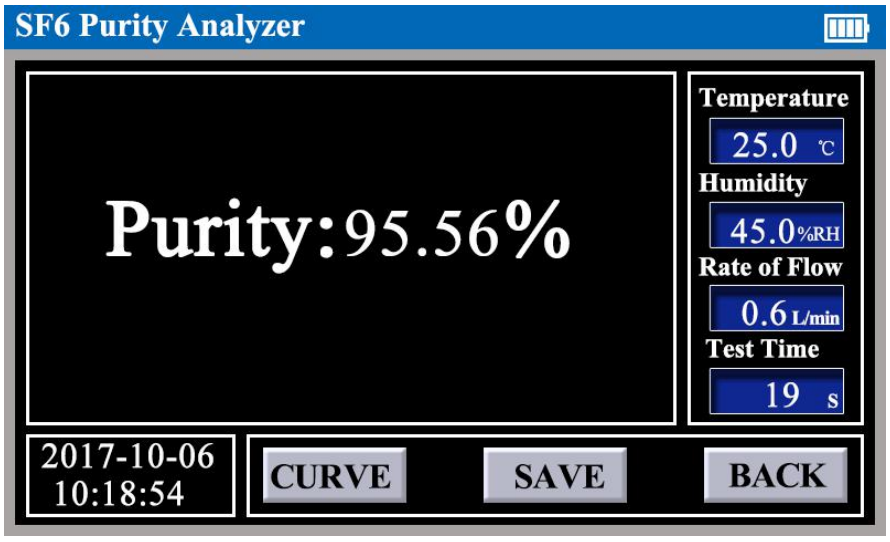

Figure 2

② Under the measurement interface, press "**CURVE**" to enter the curve tracking display interface. Press "**SAVE**" to enter the data saving interface, and the test data can be saved according to the instructions of the instrument. Press "**BAKE**" to exit the measurement state back to the main operation interface.

③ Under the data saving interface, click on the blank space of the edit box on the right of the device number. After the cursor is displayed, press the right numeric keypad, enter the device number, and press the "**OK**" key to save the test data and enter the data query. Interface. Press the "**Cancel**" to exit the data saving interface and return to the measurement state. As shown in Figure 3:

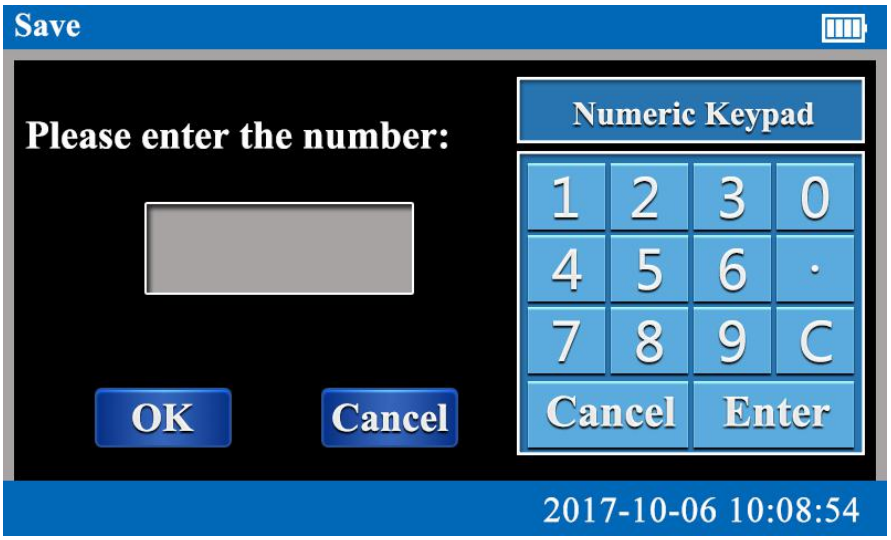

Figure 3

2). History

In the main interface, press "**HISTORY**" to enter the historical data query interface and display the saved data. Press the up and down arrows on the left side of the interface to view the records. Press the "**PRINT**" key to print the data displayed on the current page. Press the "**CLEAR**" key to clear the instrument and store all the data (please be careful). Press the "**U-DISK**" key can be used to import all the stored data to the USB flash drive. Press the "**HOME**" to return to the main operation interface. The interface is shown in Figure 4.

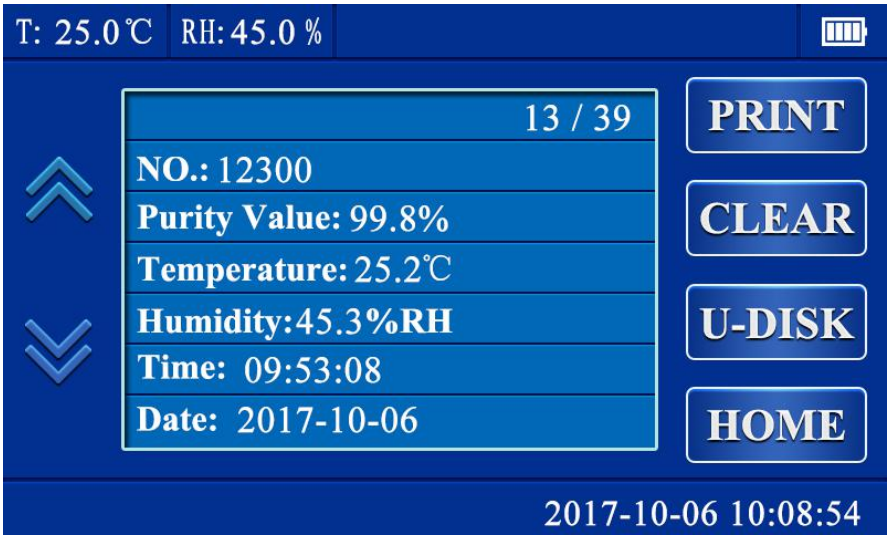

Figure 4

3). Help

Under the main interface, press the "**HELP**", enter the help interface to display some operational precautions. As shown in Figure 5.

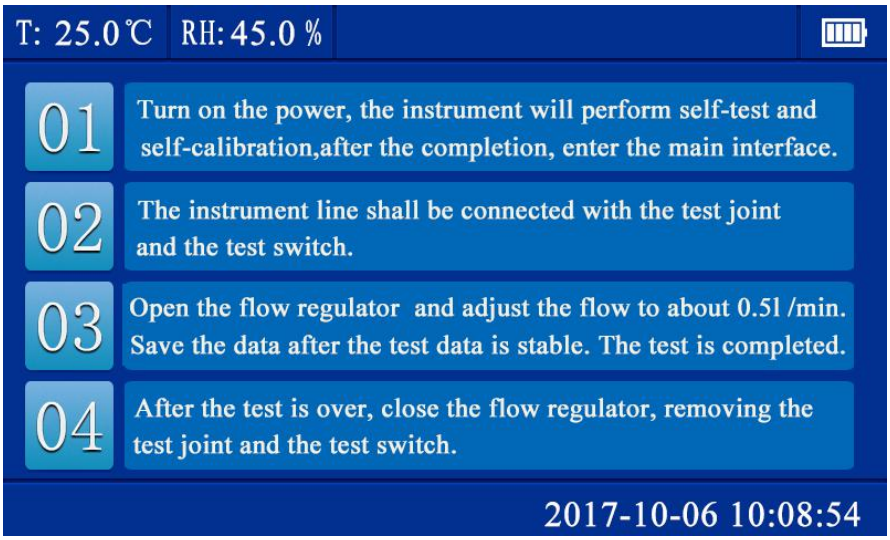

Figure 5

Click anywhere on this interface to exit the interface and return to the main operation interface.

4). Set-up

Under the main menu interface, when pressing the "**SET-UP**" menu, the instrument parameter setting interface can be performed, including "**Time-Set**", "**Calibration**" and

"**HOME**". As shown in Figure 6.

Figure 6

① Time-Set

Click "**Time-Set**" to enter the time and date setting interface. Under this interface, the current time and date of the system can be modified. Press "**SELECT**" to move the cursor, press "**UP**", "**DOWN**" key to add and subtract, press "**HOME**" key to save Settings and return parameter setting interface. As shown in figure 7.

Figure 7

② Instrument calibration

Click "**Calibration**", enter the password and press "**Enter**" to enter the instrument

calibration interface. This function must be performed when the instrument needs calibration, and the manufacturer shall be returned to the manufacturer for operation.

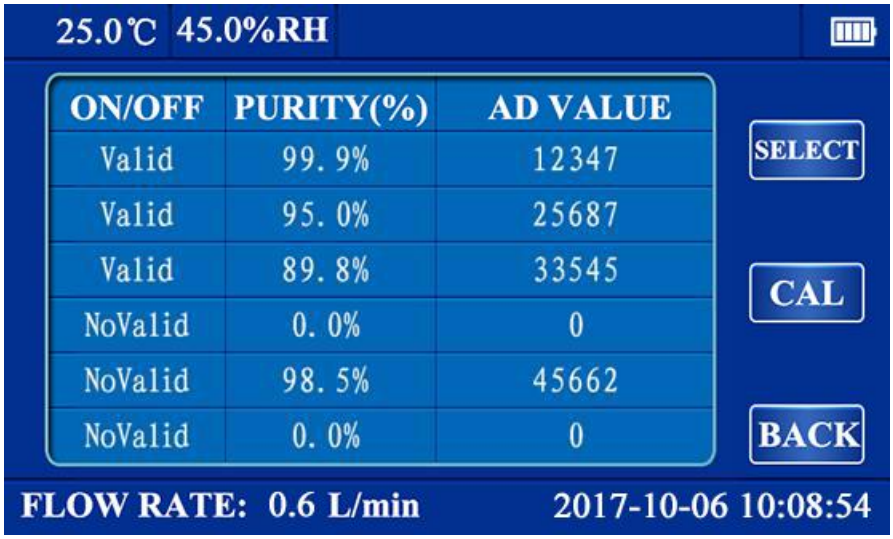

Figure 8

Note: "**Valid**" means that the data of the bank is Valid, and "**No Valid**" means that the data of the bank is invalid and does not participate in the calculation. Click "**No Valid**" or "**Valid**" to switch the valid invalid flag.

Click the "**SELECT**" button to switch the six rows of data and highlight a line, as shown in the figure 9.

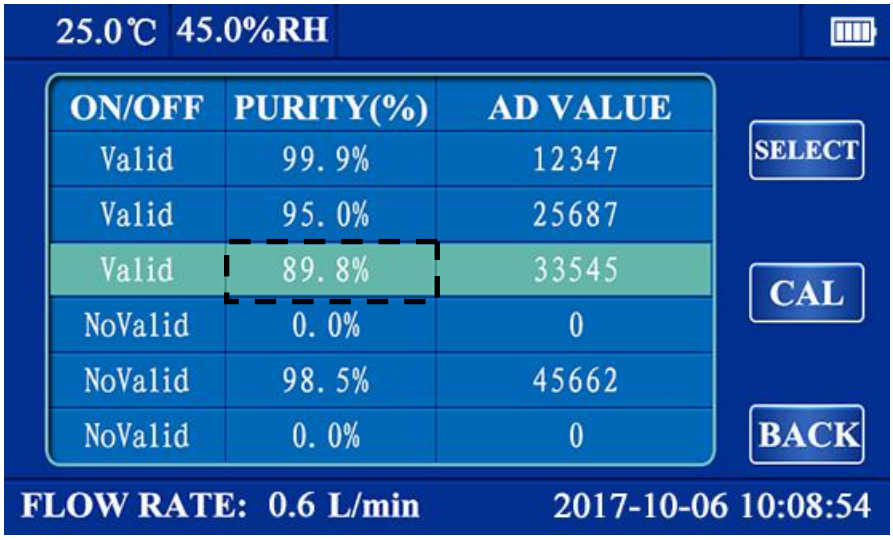

Figure 9

Click on the imaginary area of figure 9 and the number keyboard will pop up. Enter

the percentage of purity of the standard gas, as shown in the figure 10. After the input is completed, click "**OK**" to return.

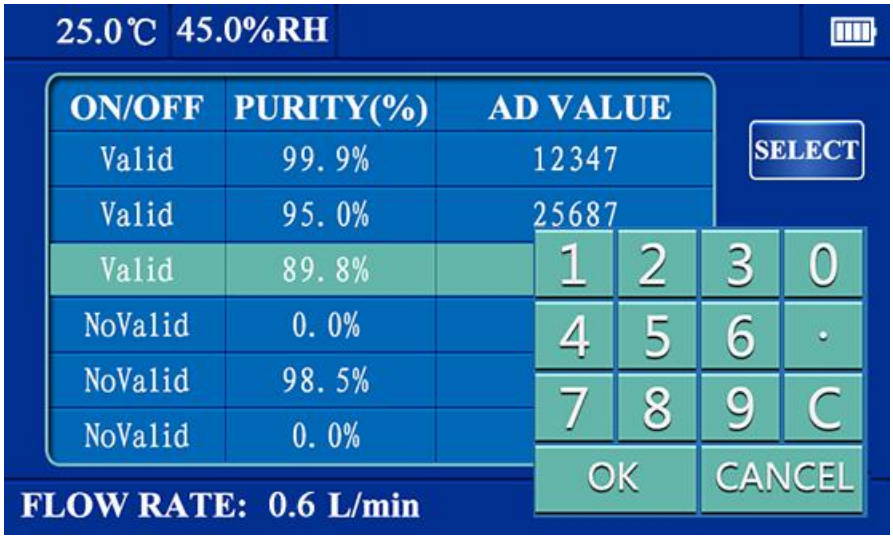

Figure 10

Click the "**CAL**" key in figure 9 to enter the calibration interface.

As shown in the figure 11.

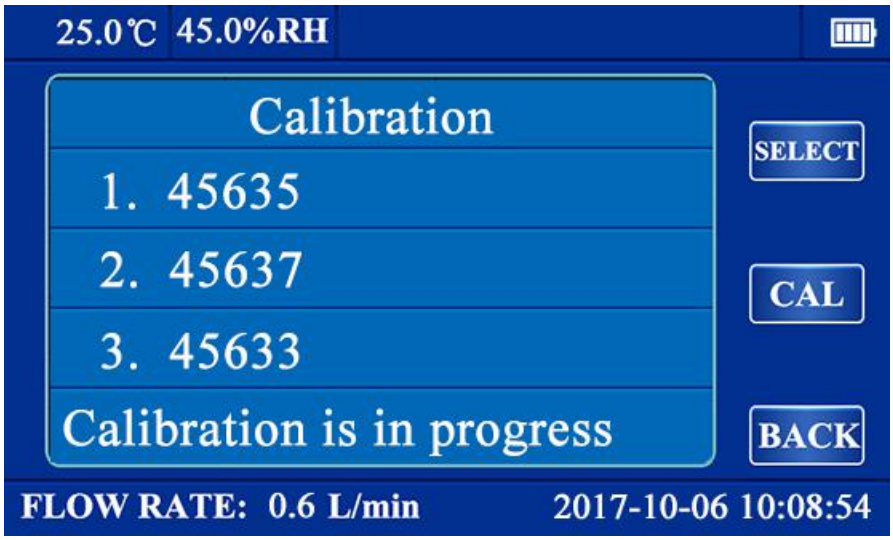

Figure 11

When the calibration is complete, the instrument will exit the calibration interface and save the current data.

During the calibration process, click the "**SAVE**" key to save the current data, and exit the calibration interface. Press the "**BACK**" key to exit the Auto-Calibration and do not save the current data.

Ⅲ.Operation Steps

1. Warm up the machine for ten minutes. This process eliminates the effect of ambient temperature on the test results.

2. Connect SF6 device

1) Connect the thread end of the measuring pipe with the switch connector and tighten it with a wrench.

2) Then insert one end of the fast joint on the test pipe into the sampling port on the purity meter.

3) Connect the exhaust pipe to the vent.

3. Check the charge

When using DC power, please check the battery power displayed in the upper right corner. If the power is less than about 20%, please turn it off and continue to use it after charging.

4. Start measurement

First, all the needle valves on the pipe are measured, then the flow valve on the purity gauge panel is adjusted. The flow rate is adjusted to about 0.5L/M, and the gas purity of SF6 is measured.

5. Store data

After the equipment measurement is completed, the data can be saved in the instrument, and the operation menu can be adjusted according to the "**HISTORY**" key.

6. Measuring other equipment

After measuring a device, close the needle valve on the measuring line and the regulating valve on the purity meter. Remove the adapter from the SF6 electrical equipment. If you need to continue to measure other devices, follow the above steps to continue measuring the next device.

7. End of measurement

After the measurement is finished, turn off the purity instrument.

Ⅳ. Maintenance and Service

1. Replace the printing paper

Press the button on the left and load the paper into the printer as shown on the right, and close the front cover.

As shown on the left

As shown on the right

V. Matters need attention

1. The instrument should be placed in a safe position to prevent falls and avoid violent vibrations.

2. Do not measure corrosive gas.

3. When adjusting the gas flow, the flow valve should be slowly opened, so that the flow indicator within the range of 0.5 ~ 0.8 L/minute.

4. Before the instrument is used, it should be charged in time. When charging, simply insert the instrument's own power adapter into the charging port. Without turning on the instrument's power switch, the instrument will automatically charge. The charging time usually takes more than 5 hours.