

TRANSFORMER OIL BDV TESTER

Model: PS-1001D



Operation manual

Baoding Push Electrical Manufacturing Co., Ltd.

Product Catalog

Preface	3
1. Summary	4
2. Feature	4
3. Technical indicator	5
4. Service condition	6
5. External illustration	6
6. Chart of operating steps	8
7. Precautions	14
8. Trouble removal	15
9. Cleanout of cells	16
10. Complete set	17
11. After service	18

Preface

Thanks for choosing PS-1001D TRANSFORMER OIL BDV TESTER. We prepared this user manual for your better understanding. You can get the product description, operation, instrument performance, safety precautions and many other aspects from the manual.

Before use, please read the manual carefully, and it's necessary to do the operation and preventative maintenance. It will help you better operation and expand the lifetime of instrument.

For the manual edition, Even the wise are not always free from error. Please point out and give directions if any error or careless omission in this manual. You should be highly appreciated that!

Our company strive to improving the instruments. If any discrepancy emerge in this manual, please subject to the actual instrument. Hope you enjoy this fully automated Oil BDV Tester who can make your work much easier and efficiency!

Please recommend it to more your friends and customers when you're fully satisfied with our instruments and service. When you have valuable comments and suggestions on this instrument, please be sure to contact us. We'll do our best to give you a satisfactory answer. And thank you again for your supports!

1. General Description:

Transformer oil (also known as insulating oil) is important medium to insulate, stop arcing and corona discharge, and to dissipate the heat of the transformer. It used in most oil-filled electrical apparatus. And the dielectric breakdown voltage is the most essential test to transformer oil.

PS-1001D TRANSFORMER OIL BDV TESTER. It is single cup and excellent design for easy operation. Breakdown voltage up to 100KV. Conform to multiple standards (IEC156 ASTM D877 ASTM D1816). Fully auto measuring with one button. It's your ideal choice for transformer oil testing.

2. Features and Advantages:

- 2.1 The instrument adopts large-capacity single-chip microcomputer (SCM) control and works more stable.
- 2.2 Special circuit design inside the instrument eliminates the phenomenon of crashes.
- 2.3 Built-in three main international standards (IEC156, ASTM D877 and ASTM D1816), and program user-defined.
- 2.4 Oil vessel is the one-time casting organic glassware, different volume available.
- 2.5 Large LCD screen with backlight display.
- 2.6 Multiple protective functions (over-current, over-voltage, short-circuit, etc), strong anti-jamming capability, and good electromagnetic compatibility functions.
- 2.7 Portable structure, easy to move, and convenient for both indoor and outdoor use.
- 2.8 USB/RS232 interface and wireless transmission function is optional.

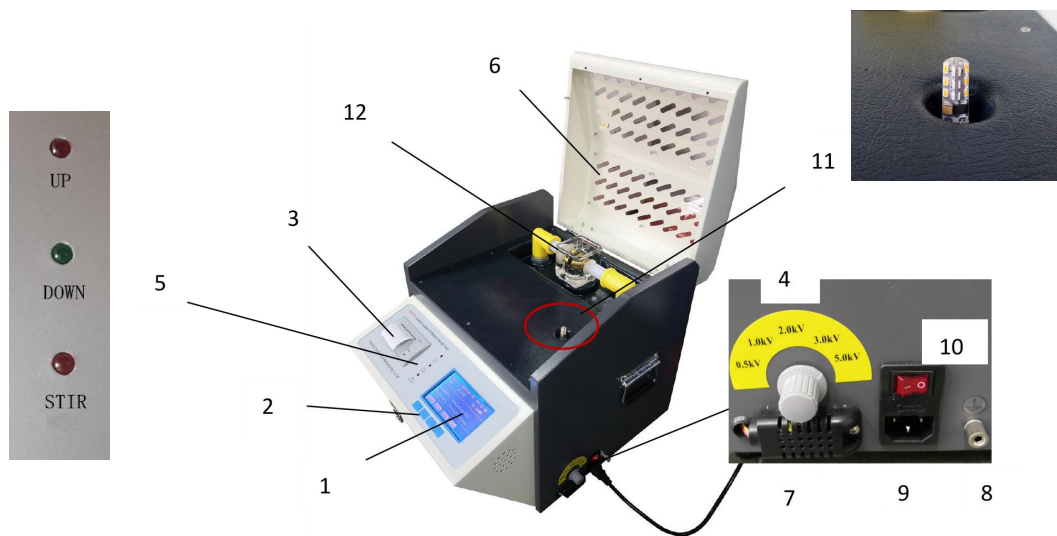
3. Technical Data:

- 3.1. Step-up transformer capacity: 1.5 kVA
- 3.2. Rising rate of voltage: 0.5 kV/s, 1kV/s , 2.0kV/s, 3.0kV/s, 5.0kV/s
- 3.3. Max Test Voltage: 100kV
- 3.4. Aberration rate of power supply: < 1%
- 3.5. Display Mode: 5.4 inch LCD screen with back light
- 3.6. Electrode Gap: Standard 2.5mm (adjustable)
- 3.7. Dimension: 409 mm × 393 mm × 388 mm
- 3.8. Net Weight: 29KG

4. Working Conditions:

- 4.1. Environment Temperature: 0 ~ 40°C
- 4.2. Relative Humidity: ≤ 85%
- 4.3. Power Supply: AC 220V ± 10% 60 Hz
- 4.4. Power Consumption: < 200 W

5. Instrument Illustration:



1. LCD Screen 2. Function Buttons 3. Thermal Printer 4. Boosting Voltage Switch 5. Status Indicator 6. Cover 7. Temperature and Humidity Sensor 8. Grounding Terminal 9. Power Socket 10. Power Switch 11. Indicator Light 12. Oil Vessel Assembly

① **LCD Screen:** Display date and time, working temperature and humidity, menus, parameters and test results

② **Function Buttons:** Select, set up parameters, start test, and print

③ **Thermal Printer:** Print out each results

④ **Boosting Voltage Switch:** Choose the rate of rising voltage

⑤ **Status Indicator:** Up lights on means the current status is rising voltage. Down means the voltage is declining. Beater means stirring.

⑥ **Cover:** When testing, do make sure the cover is closed.

⑦ **Temperature and Humidity Sensor:** Real-time monitoring environmental temperature and humidity

⑧ **Grounding Terminal:** Connect grounding wire

⑨ **Power Socket:** Connect power line

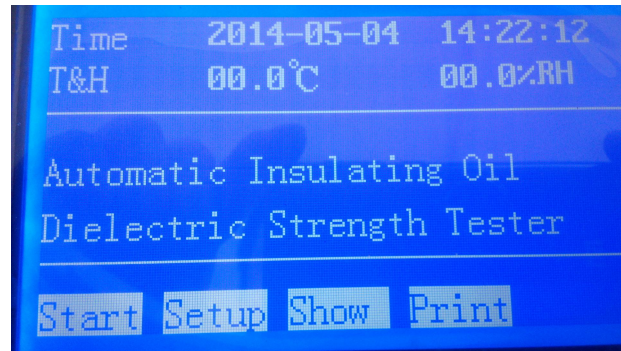
⑩ **Power Switch:** Power on or off the device

⑪ **Indicator Light:** Lighting, make the test chamber more brightness

⑫ **Oil Vessel Assembly:** Filled with oil sample

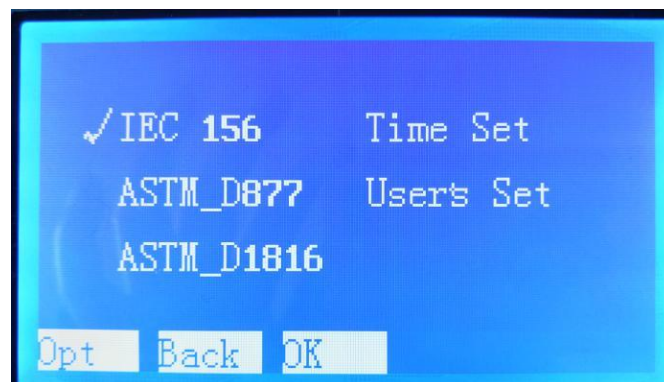
6. Operating Steps

6.1. Power on the device, the LCD screen displays date, time, temperature, humidity, the full name of device, and main menu.



Picture 1 Main Menu

6.2. Press **setup** and enter into frame (picture2)



Picture2 select standards and customize set up

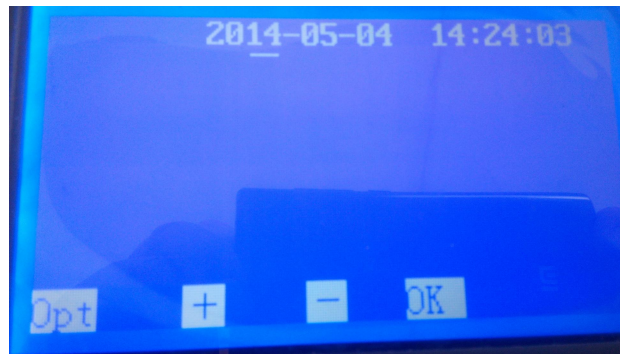
6.3 Press **opt** to select test standards , press **OK** to enter into *ASTM D877* Voltage set up (picture3).



Picture 3 ASTM D877 MTV set up

Press **opt** and move cursor to MTV (maximum test voltage), to press **+** or **-** to set figure of MTV, the default is 100kV, The optional scope is 10 kV ~ 100 kV(the increment $\Delta = 10 \text{ kV}$). After the choice, to press **OK** to return the main menu, press **start**, then it automatically testing.

6.4. Picture 2 ,press **opt**, and move cursor **✓** to time set , to press **OK** to confirm(picture 4).



picture 4 time set

To press **opt**, and move cursor **✓** to year month day hour minute. to press **+** or **-** for true time. After the choice, to press **OK**, to return the starting-up frame.

6.5. Picture 2, press **opt** and move cursor **✓** to **user's set**, to press **OK**, to enter into the **user's set** .(picture 5)



Picture 5 user's set

Wait time default 15min scope 1-15 min (the increment $\Delta = 1$)

Pause default 5min scope 1-10 min (the increment $\Delta = 1$)

Stir default 10s scope 5-90s (the increment $\Delta = 5s$)

MTV (maximun test voltage)

default 100kV scope 10-100kV (the increment $\Delta = 10kV$)

instrument will stop raising voltage, when voltage has been raised MTV (maximun test voltage) ,to hold mode, go on 50 seconds with no breakdown, the default of MTV (maximun test voltage) is the breakdown voltage of the electric insulating oil

Breakdowns default 6 times

scope 1-6 times (the increment $\Delta = 1$)

After the choice, to press **OK** , to return the starting-up frame, to press **start** , it is testing.

7.Safety Precautions

7.1 Please read the operation manual carefully before using the instrument.

7.2. The instrument operators should have a good knowledge of the electrical equipment and the analytical instrument.

7.3. This instrument can be used both indoors and outdoors, but should avoid places such as rain, corrosive gas, high concentration of dust, high

temperature or direct sunlight.

7.4. Keep oil vessel dry and clean. During un-energize period, sufficient amount of dry and qualified insulating oil should be added to keep the oil cup free from moisture and electrode oxidation

7.5. The electrodes should be check periodically and do necessary maintenance. Keep the electrode gap confirm to standards.

7.6. Instrument maintenance and debugging must be done by professionals.

7.7. Before the power on , please check if the wire connected well or not. And the shell of instrument must be grounding.

7.8. After the power on , the operators strictly prohibit to touch the case cover, refrain dangerous shock.

7.9. If any abnormal, Please power off and contact to supplier.

8. Trouble Shooting

8.1	Not working when power on	Check the power line and fuse
8.2	Voltage do not rise	Check if the cover closed or not
8.3	Rising voltage but not withstand	Check your set up voltage
8.4	No results display after breakdown	Check the oil vessel
8.5	Don't print	Check the print paper

9. Standard Packing List

1	Instrument	1 set
2	Oil Vessel	1 unit
3	Power Line	1 unit
4	Go and no-go Gauge	1 unit
5	Fuse	2 pc (3A)
6	Stir	2 pc
7	Tweezers	1
8	Print Paper	1
9	User Manual	1
10	Warranty Card	1
11	Factory Test Report	1

10. After-sales Service

There are product quality problems within one year from the date of purchase ,it is free warranty. We can provide maintenance and technical services all instrument's life. If it is found that the instrument is not normal or defective, please contact with our company, In order to arrange scheme of the most convenient and effective treatment.