

# **Horizontal plug and pull testing machine**

**RCB-WS-01B**

# **Operation**

# **Manual**

# Foreword

Thank you for purchasing our high-performance horizontal plug-in testing machine.

This manual details the operating procedures, maintenance methods and simple troubleshooting and precautions for use.

Please read this manual carefully and follow the prescribed procedures to ensure that you can operate it smoothly every time. Please keep in mind the precautions to avoid machine failure due to improper human operation. Proper maintenance methods can extend the life of the machine .

All products of our company have passed strict quality control inspection before leaving the factory, you can use it with peace of mind, if you have any difficulties or problems, please contact our company directly .

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# 1. Introduction

## 1.1.1. Main uses

This controller is specially developed for plug-in force testing machine. It is suitable for the insertion and withdrawal test of various connectors, and can automatically obtain the mechanical characteristic data in the test process.

## 1.1.2. Main features

- ◆ The sampling rate is up to 1000 times/second, which can accurately capture the peak value of plugging and unplugging.
- ◆ The photoelectric switch is used to detect the number of insertions and withdrawals. Every time a photoelectric switch signal is detected, it is calculated to be inserted and removed once.
- ◆ " Start and stop solid state relay " is used to control the start and stop of the motor, and it will automatically stop after reaching the set number of plugging and unplugging.

## 1.1.3. Normal Working condition

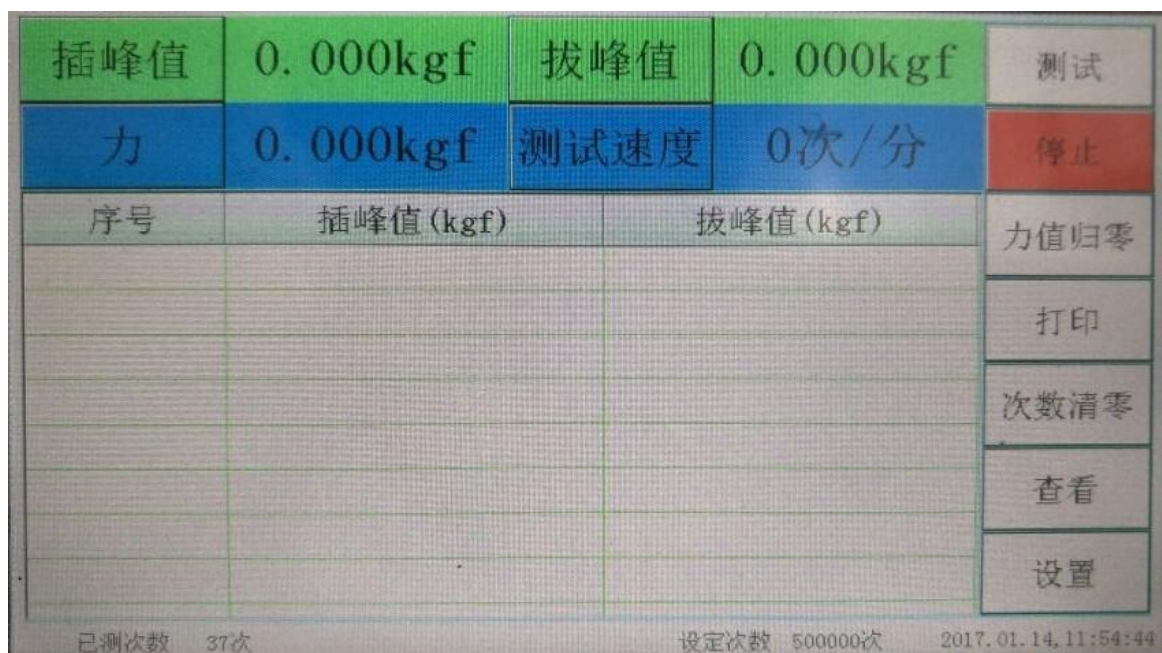
- ★ In the range of 0 ~55°C;
- ★ The relative humidity is not more than 80%;
- ★ Power supply 220± 10 %VAC , frequency 50 Hz ;
- ★ Keep away from strong electromagnetic interference.

### 1.1.4. Appearance and installation dimensions



## 2. Operation guide

### 2.1.1. Operation guide



Button response when testing the interface:

Button "Test " : Perform test;

Button "Stop " : Click this button during the test to end the test;

Button "Reset force value " : reset the value of force, peak value insertion, peak value extraction, etc.;

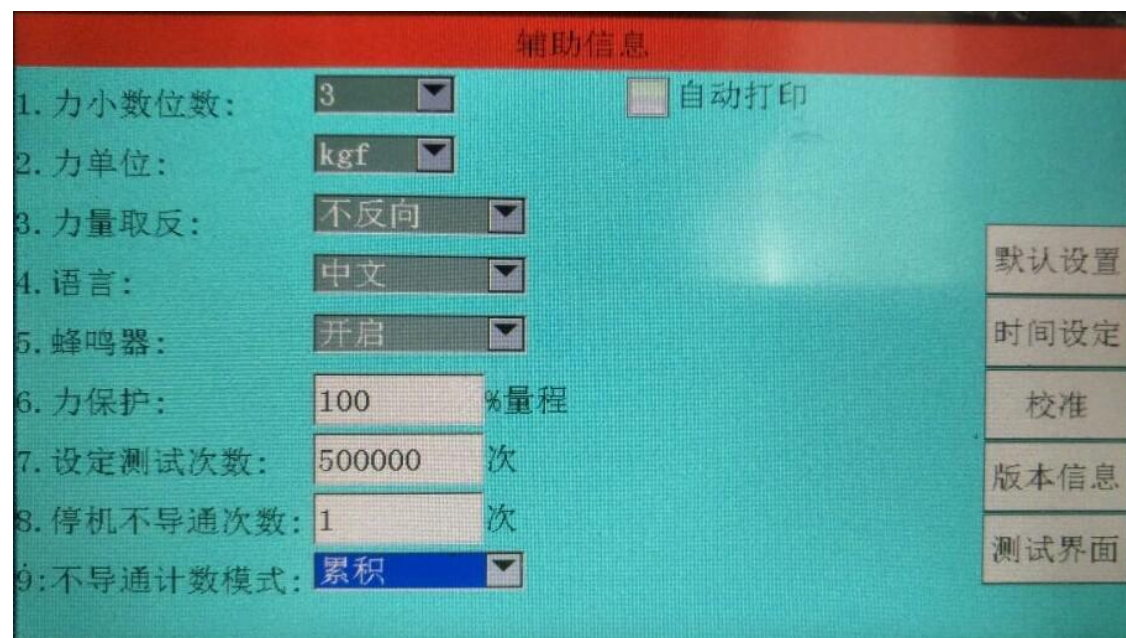
Button "print " : print test results;

Button "Clear Times " : Clear the measured times;

Button "View " : Enter the test result viewing interface;

Button "Set " : Enter the parameter setting interface;

### 2.1.2. Supplementary information



① Force decimals: set the number of digits displayed after the decimal point of the force value;

② Force unit: Switch the force value unit, there are "kgf", "N", "lbf", "gf", "KN", "t" optional;

③ Reverse the power: switch the direction of the force value;

④ Language: switch the language display, there are "English", "Chinese" optional;

⑤ Buzzer: turn on the buzzer;



- ⑥ Force protection: set force value protection;
  - ⑦ Set the number of tests: set the total number of tests;
  - ⑧ Non-conduction times during shutdown: set the non-conduction times during shutdown;
  - ⑨ Non-conducting counting mode: there are "accumulative" and "continuous" optional, the test will end when the accumulated non-conducting times are accumulated, and continuous means that the test will end when the set non-conducting times are continuously reached;
- ( Articles 8 and 9 are only available if you check the use of conduction in the calibration )

Automatic printing: print a group after testing once after checking;

Button "default setting": restore parameters to factory default settings;

Button "Time Setting": Set the time;

Button "Calibration": Enter the calibration password to enter the calibration interface;

Button "version information": view controller version information;

Button "Test Interface": Return to the main test interface.

### 2.1.3. View interface



Button "Move up " : Select a group of test results to move up;

Button "Move Down " : Select a group of test results to move down;

Button "print " : print test results;

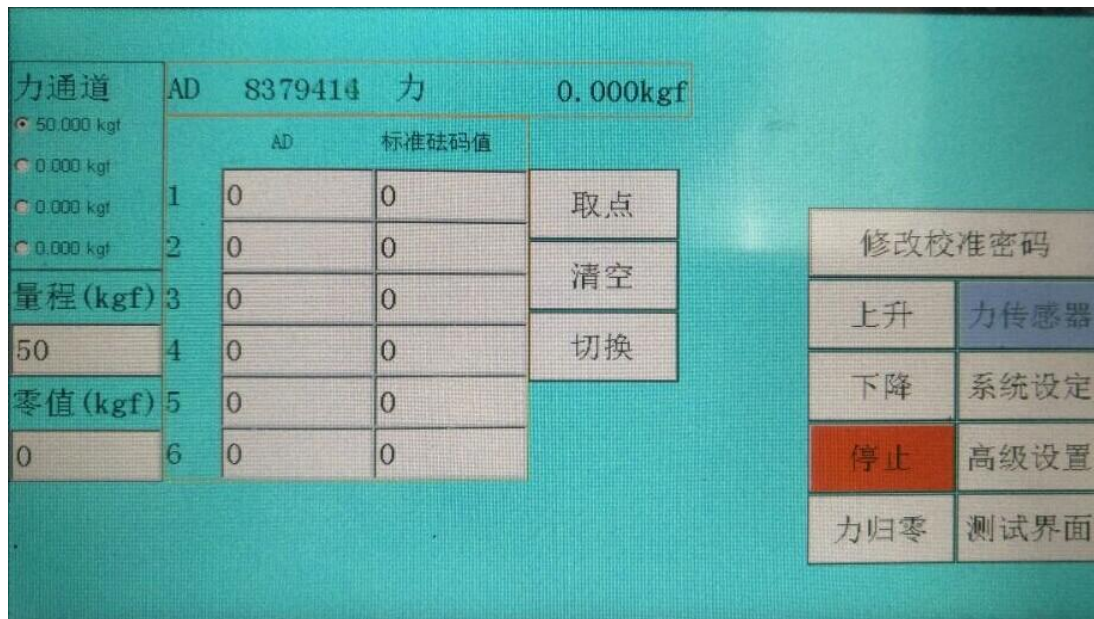
Button "Delete " : delete the selected test result;

Button " Delete All " : delete all test results;

Button "test interface " : return to the main test page;

### 3. Calibration

#### 3. 1. 1. Force sensor



- (1) After selecting the channel to be calibrated in the upper left corner, the first step must be to calibrate the "zero point", first click the "clear" button to clear the data in the calibration data table, and then click the "force zero" button and make the force sensor unbearable Any load, and then press the "take point" button, the first point "zero point" is calibrated;
- (2) At this time, put a weight on the force sensor and set the "standard weight value" in the second row and second column of the "calibration data table" as the weight of the weight (in kg), and wait for the weight After stabilization, press the "take point" button to calibrate the second point;
- (3) Similarly, recalibrate the following points, or only 2 points;
- (4) Click the "force zero button", and then put the weight on the sensor. After the weight is stable, see if the value of the "current force" is equal to the weight. If they are equal, click the "Set" button to return to the test main The interface completes the calibration, and vice versa, repeat steps 1-3 until the value of "current force" is equal to the weight of the weight.
- (5) Advanced settings: Enter the password to enter the advanced trial period function settings

**Note:** If the calibration exceeds 2 points, the weight of the weight added during the calibration process must be increased in sequence, and the AD value displayed on the top line of the screen during the weight addition process must also become larger. If



the AD is found when the weight is added. If the value is decreasing, you need to change the wiring of the two signal lines of the force sensor; if only 2 points are calibrated, there is no such limitation.

In addition, for the calibrated machine, it is best to record the calibration data (the data in the calibration table in the above figure), so that if the calibration data is modified by mistake during the future use, you only need to re-enter the recorded data. It can return to normal, no need to re-calibrate with weight or calibrator.

## 4. Technical parameters

Supply voltage	220V±10%
Frequency range	0~999999
Speed range	15 ~ 60 times / minute
Measuring range	0~50kgf
Stroke adjustment range	0~ 20mm
Machine weight ( approx. )	65 k g
Machine size	450* 500* 500mm

## 5. Operation steps

① Install the product to be tested, select the appropriate amount of displacement (start to manually adjust the eccentric device to the appropriate position, turn on the power switch and use the inching function to debug);

② Turn on the power switch;

③ Set the number of counter tests according to product requirements;

- ④ Press the start switch, the indicator light is on, and the product is tested (Note: Please do not put your hand on the workbench during the test to avoid crushing your hand);
- ⑤ At the same time, adjust the test speed according to the product requirements. The speed can be seen in the tachometer (the left-hand speed of the governor is slow, the right-hand speed is fast)
- ⑥ Depending on the product testing situation, you can press the stop button. To continue testing, press start.
- ⑦ When the test times are reached, the machine stops running;
- ⑧ Turn off the power of the machine and remove the specifications.

## **6. Maintenance**

- 1) When not used for a long time, turn off the power and wrap the case.
- 2) Do not place the machine in a humid environment when it has not been used for a long time.
- 3) During normal use, the power supply must be safe and stable.
- 4) During normal use, please do not test with a force exceeding the maximum range of the sensor to avoid permanent damage to the sensor.
- 5) It is strictly forbidden to scrub the electric control panel with water to prevent damage to the instrument.

- 6) The timing of the rust preventive oil and butter marked to ensure smooth rotation of the apparatus .
- 7) In case of failure, please do not open it without permission, please inform our company to be repaired by professionals in time.