Edition No.: 2022 Rev 1

(CE, ISO9001)

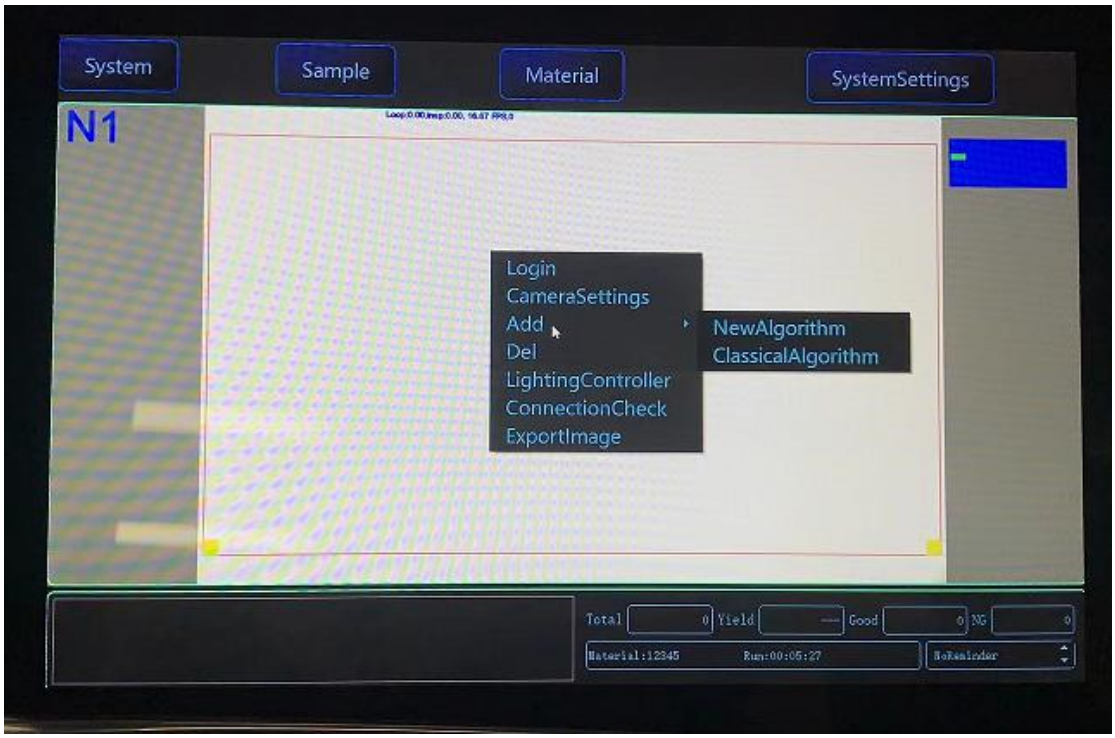
WIRE HARNEESING COLOR SEQUENCE DETECTOR (FOR EW-2515)

1. Know Before Use

1.The working voltage of this machine is 220V, please check whether it is consistent with the local power supply voltage.
2.In case any liquid or solid falls into the case, please unplug the power plug of the machine and ask professional technicians to check it before using it.
3.When you do not use this unit for several days, please unplug the power plug of this unit from the wall outlet. When unplugging the power cord, pull it out by holding the plug. Do not pull on the wire itself.
4.Even if the power of the machine is turned off, as long as its plug is still connected to the power socket, the machine will not be disconnected from the AC power source.
5.The device has ventilation holes (intake on both sides, exhaust on the top). Do not block the ventilation holes or place any objects next to the ventilation holes, otherwise internal heat storage may occur and damage the equipment.
6.Please keep the original packing box and packing materials so that they can be used at any time when transporting the equipment. In order to protect the body as much as possible, please repack the machine in the packing box used at the factory.

2. Login

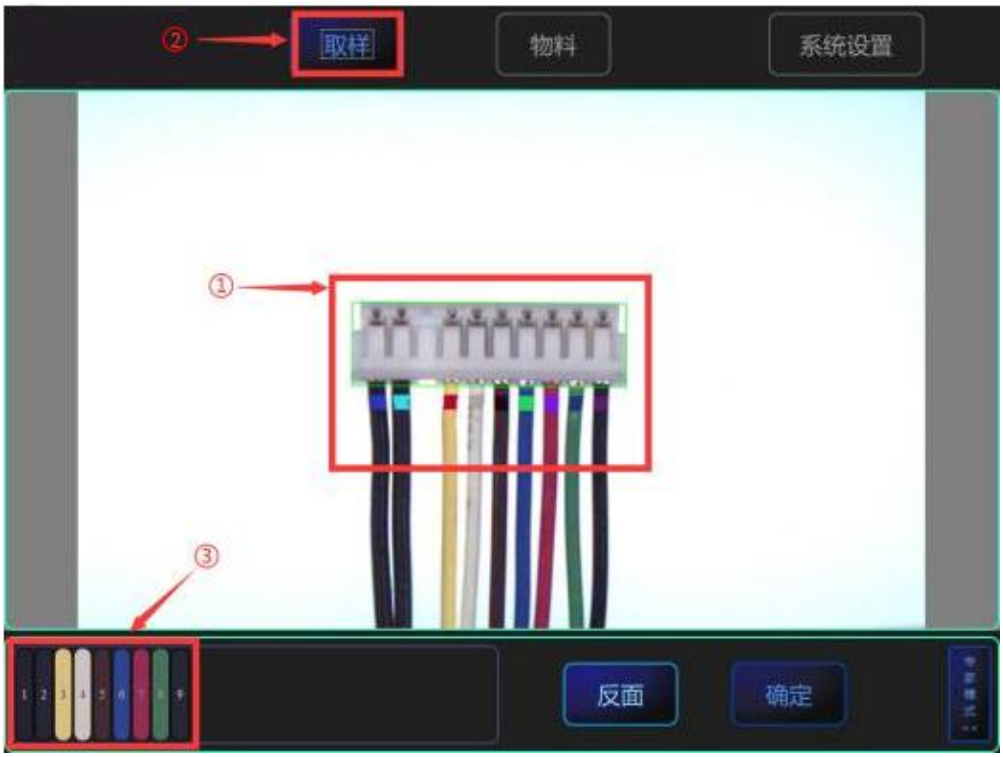
Enter the main interface of the instrument, right-click anywhere, click "Login", select the user identity, and enter the password.Click "OK" to complete the instrument login.



3. Single segment line sequence detection

1. Line sequence sampling

1)Enter the main interface of the instrument, place the wiring harness in advance, and click "Sampling". Check if the line sequence at the bottom left is consistent with the actual



2) After checking, turn the wiring harness over and click "reverse" to sample the reverse side of the wiring harness. Click "Confirm" after confirming that it is correct.

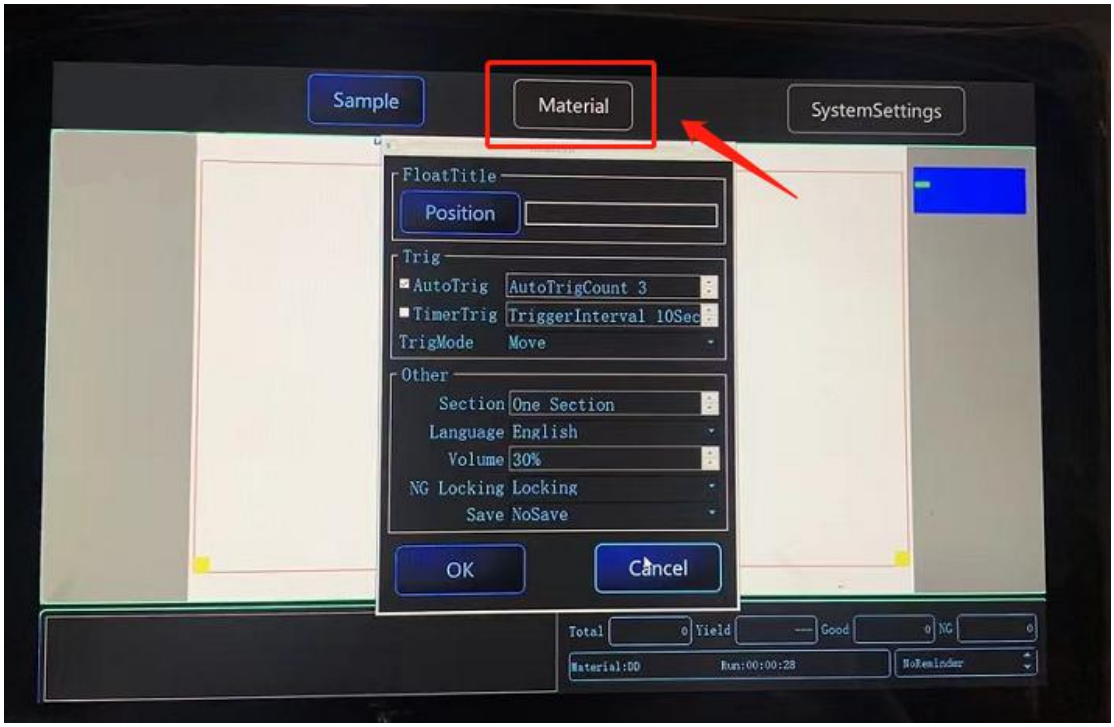
3) After checking, turn the wiring harness over and click "reverse" to sample the reverse side of the wiring harness. Click "Confirm" after confirming that it is correct

2. Line sequence detection

Take the same harness as the sample for testing. The test result of the wire harness shows "OK", that is, the wire sequence is correct.

3. Historical material selection

If you need to detect historical sampling materials, enter the main interface of the instrument. Click "Material", the material list box will pop up, you can select/delete historical sampling materials



4. Instrument settings

This machine provides "light source control" and "camera settings" adjustment settings. Appropriate adjustments have been made before the instrument leaves the factory, no adjustments are necessary if not necessary, just use the default settings.

1. Light source control

Right-click anywhere on the main interface of the instrument and click "Light Source Control" to enter the light source control interface. Click "Automatically adjust the front light" and "Automatically adjust the backlight" to complete the light source adjustment (if it is still too dark or too bright, you can manually adjust it)

2. Camera settings

Right-click anywhere on the main interface of the instrument and click "Camera Settings" to enter the camera settings interface. Here we mainly adjust the "color gain" to restore the colors in the image to true colors.

Select the white balance pull-down option to "Auto", and wait for the system to automatically adjust (if there are still obvious color differences, select the pull-down option to "Manual" and fine-tune the "Red Gain" or "Blue Gain").

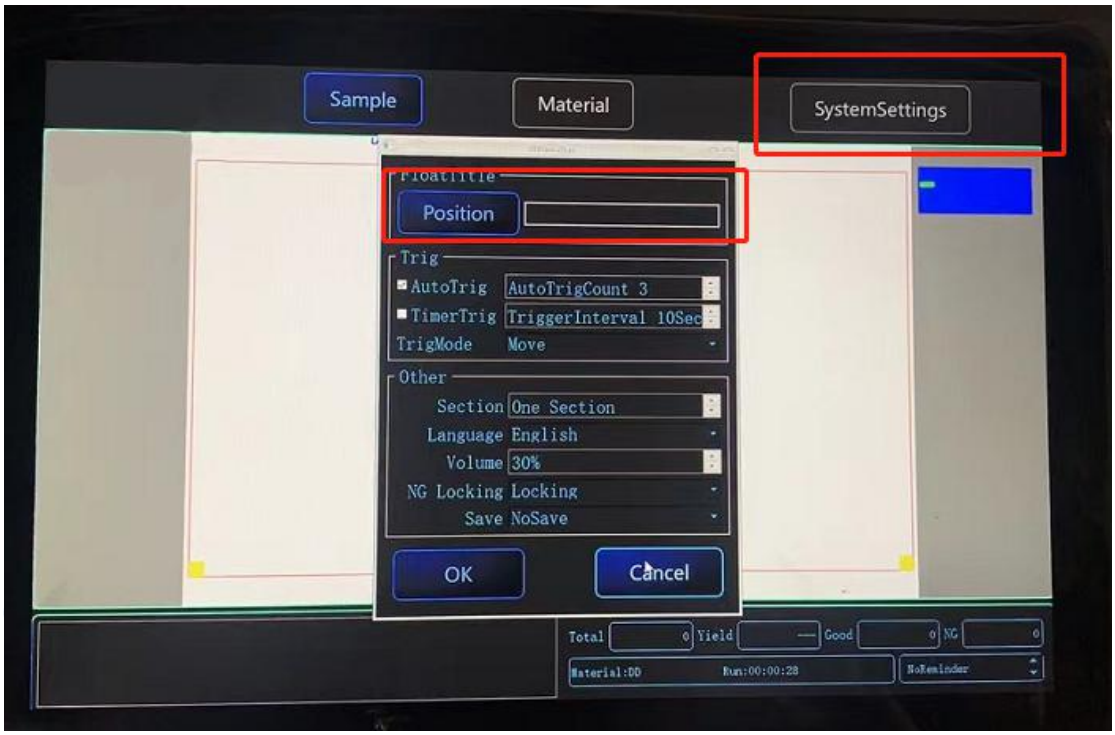
Thus, the camera settings can be completed.

5. Other functions

1. Floating title

Click "System Settings" in the upper right corner of the main interface, and enter the display content in the floating title box.

Then click "Position" and drag the title box to set the coordinates. After confirming the settings, the contents of the floating title can be displayed

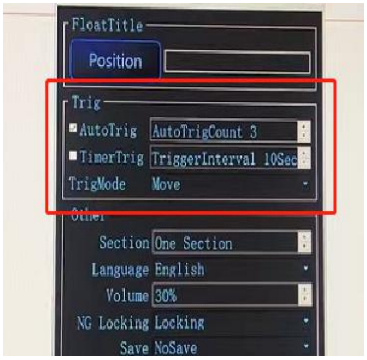


2. Trigger method

Automatic trigger: When detecting that the wire harness enters the frame, the wire harness detection is automatically performed. The trigger sensitivity depends on the "number of automatic triggers" set. The smaller the number, the higher the trigger sensitivity. The best value is generally set to 2 or 3.

Timing trigger: Set the timing to perform a line sequence detection every few seconds.

Click "System Settings" in the upper right corner of the main interface, and check the trigger mode that needs to be set, as shown in Figure 6-4. The system defaults to "automatic trigger" and it is not recommended to change it.



3. Interface language

Click "System Settings" in the upper right corner of the main interface, the system provides two interface languages: Chinese and English

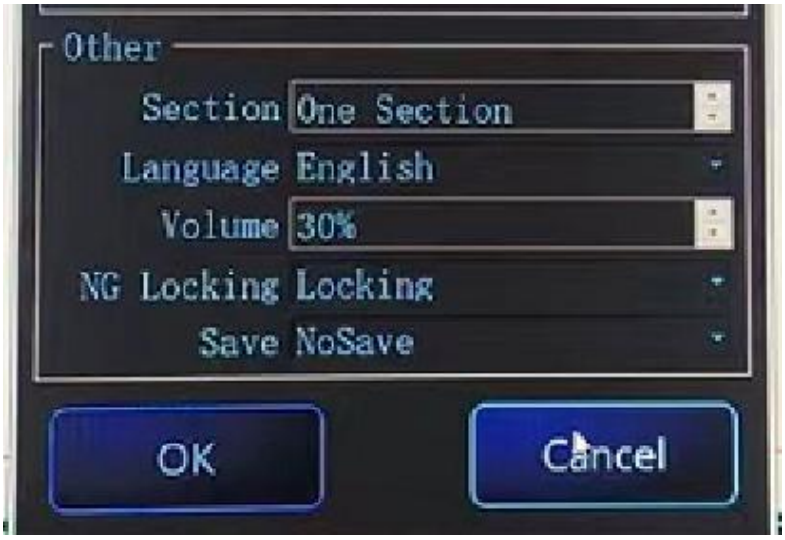
4. Volume

Click "System Settings" in the upper right corner of the main interface, the system provides mute, volume of any size

5.NG lock

Click "System Settings" in the upper right corner of the main interface, the system provides three line sequence detection NG pop-up prompts: lock, alarm lock, and password lock, as shown in Figure 6-7.

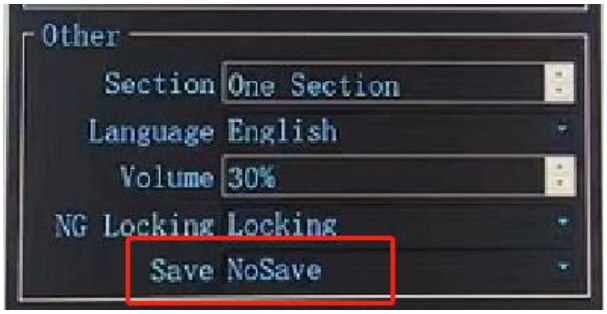
"Password lock" prompts that you need to select the operator identity and enter the password to unlock to continue testing.



6.Save inspection records

Click "System Settings" in the upper right corner of the main interface, the system provides four test record saving forms: no save, image, image and result, NG image and result, NG screenshot.

Note: You need to insert a U disk to use this function, and the picture files will be saved in the U disk.



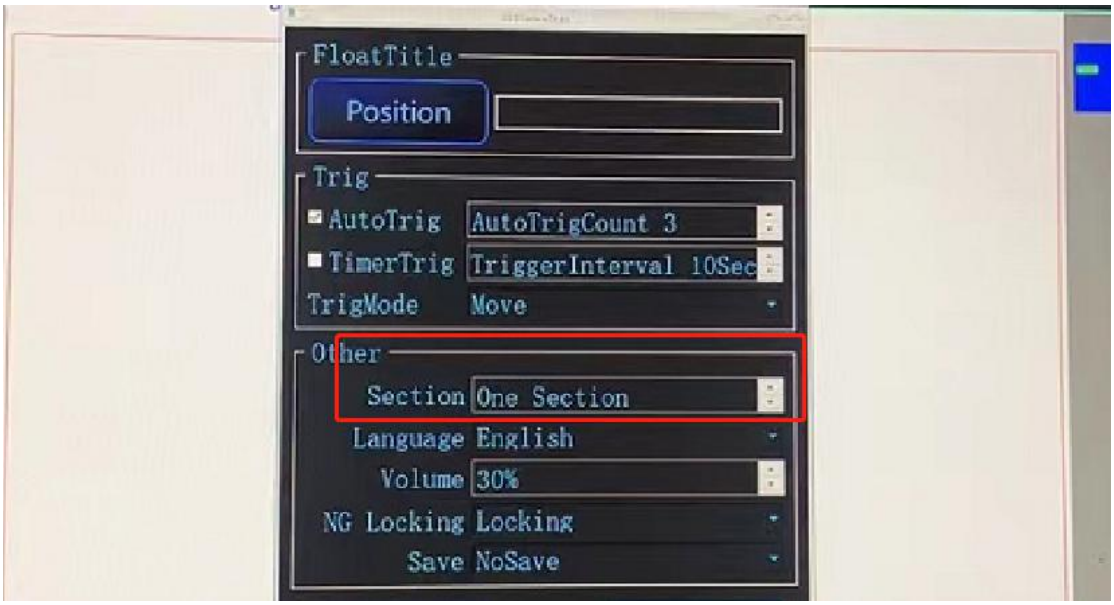
Take the "image" save format as an example. After detecting several harnesses, right-click anywhere on the main interface and select "Export Image".
The "Export Image" operation box pops up. After selecting the image to be exported, click "Export Image". Thus, the selected image can be saved to the "Pic" directory of the USB flash drive.

7.Check the sound settings
Right-click "System Settings" in the upper right corner of the main interface, and select "Advanced Settings" to pop out the settings box. Different sound effects can be set for "NG sound" and "OK sound" in the "Check Settings 1" column

6.Segmented line sequence detection

Segmented line sequence detection is "multi-segment line sequence detection". Multi-sections of different wire sequence wiring harnesses are used as the inspection group, and there is no need to manually switch the types of materials.
Note: Before “setting the number of segments”, right-click on the main interface and select “Delete” to delete the current detection template.

1.Set the number of segments
Click "System Settings" in the upper right corner of the main interface, and set the number of segments in the pop-up interface



2.Segmented sampling
Refer to "3.1 Line Sequence Sampling" for steps.
Note: Every time you complete the "line sequence sampling" operation, you need to verify that the sample is correct before proceeding to the next section of sampling.
3.Segmented line sequence detection
Refer to "3.2 Line Sequence Detection" for steps.

Note: When completing a "line sequence detection", you need to wait for the upper left corner "_section x_OK" (as shown in Figure 7-2) to change to "_section (x+1)" (As shown in Figure 7-3), the next segment can be detected, otherwise the (x+1) segment cannot be detected normally.

7. Continuity test

The continuity test needs to be used in conjunction with the wire sequence detection. Please perform the continuity test learning according to "8.1 single-head speed test" or "8.2 double-head test", and then complete the "8.3 wire sequence detection setting".

1 Single head speed test

Single-head speed test: Connect the harness connector to the continuity detection interface of the instrument, and the end without the connector touches the conduction table to detect whether the single-head harness is continuity. Take "a single-head harness with four-wire connector" as an example, the operation steps are as follows:

1) First connect one end of the wire harness to the continuity detection interface on the side of the instrument, and right-click on the main interface to select "Continuity Test".

2) After selecting "Single head speed test", touch the other end of the wire harness to the conduction table and click to learn. The corresponding wire harness pin on the left side of the interface turns green. As a result, the learning is successful, and the speed test of the single-head harness can be started.

2. Double-head test

Connect the connectors at both ends of the wire harness to the continuity detection interface of the instrument to detect whether the double-head wire harness is continuity. Here is an example of "double-ended wiring harness with a four-wire connector", the operation steps are as follows:

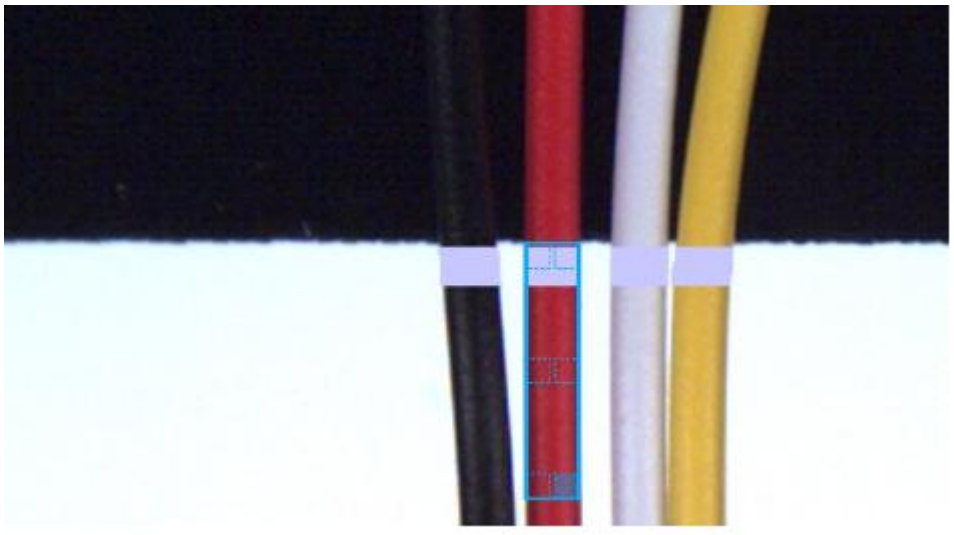
1 .First connect both ends of the wire harness to the continuity detection interface on the side of the instrument, and right-click on the main interface to select "Continuity Test"

2.After selecting "Dual head test", click Learn and OK. The corresponding pin of the wire harness on the left side of the interface turns green. As a result, the learning is successful and the continuity test of the double-ended wiring harness can be started.
Note: If there are multiple connectors at one end of the tested harness, it needs to be used in combination with multiple connectors.
Here is an example of "double-ended wiring harness with two four-wire connectors", the operation steps are as follows:
3. Replace the wire harness with a "double-headed wire harness with two four-wire connectors". After completing steps 1 and 2, click "Multi-connector" to pop out the prompt box. Unplug the last connector inserted during the operation, and then click "OK"
4. Jump out of the "last connected line" prompt box, check and confirm. If it does not contain the corresponding interface of the connector unplugged in step 8.2.3 and the corresponding point on the left is displayed in yellow. As a result, the "multi-connector" learning is successful, and the continuity test of the double-ended harness of the multi-connector can be started.

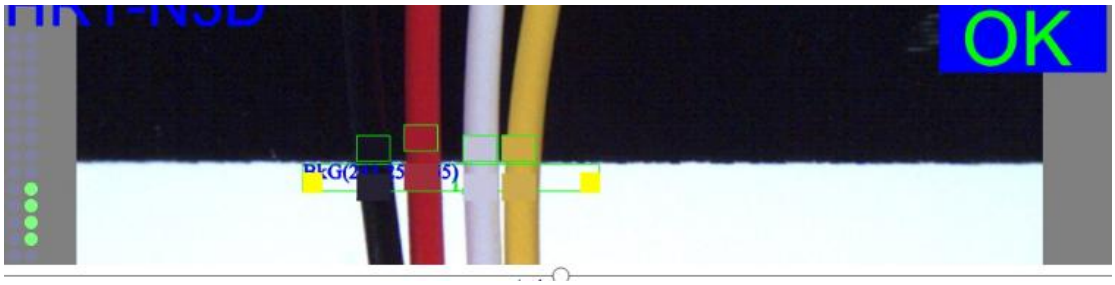
3.Line sequence detection settings

This machine provides the synchronous detection function of "Continuity" and "Line Sequence". After setting the above-mentioned conduction detection learning, it is necessary to cooperate with the classic algorithm of line sequence detection to realize the synchronous detection function. Here is an example of "single-head harness with only one four-wire connector", the operation steps are as follows:

1. Complete the continuity detection learning according to "7.1 Single-head Extreme Speed Test". Right-click on the main interface and select "Classic Algorithm" in "Add"
2. Set the inspection harness range. Click "check box", drag the rectangular box, adjust the inspection harness range
3. Set the line width of a single line. Click "Line Width" and drag the rectangular box to adjust the line width of a single line



4. Click "OK" to complete the classic algorithm learning and start synchronous detection. When the line sequence detection is completed, but the continuity detection is not completed, it will wait until the synchronization is completed.



Recommendation: When using continuity and line sequence synchronization detection, cancel the check of the trigger mode and choose not to segment

8.Test result information

In the lower right corner of the main interface, record the detection information of the cable harness, including: total number, pass rate, good product, and number of times.

1.Clear detection information

Right-click anywhere in the detection information area, and then select "Reset" to reset the detection information.

2.Reminder of the quantity of good products

When the number of detected good products reaches the set reminder value, an audible alarm will be issued.

Double-click the "no reminder box" to modify the number of any good products