

**VECTECH 190
SOLDERING TESTER**

**Soldering iron temperature
tester**

Instruction manual

1. Notes:

1. The grounding column on the test plate is convenient for users to connect with crocodile clips, and its interior is connected to the simulated ground, please do not loosen it, so as not to have poor grounding.
2. The temperature sensor is very thin, only $\phi 0.2$ in diameter, and must be very careful, if too much force is used, it will cause a break.
3. The test point of the temperature sensor is specially treated, but frequent testing will cause it to wear, so once there is wear, it should be replaced immediately to ensure the accuracy of the test.
4. When there is flux at the terminal, it should be wiped clean with an alcohol-stained cloth, and it cannot be cleaned with paint thinners or benzene.
5. Before testing, new solder is applied to the soldering iron head, which is necessary to ensure good contact between the soldering iron tip, the temperature sensor and the test plate.
6. During the test, please do not touch the soldering iron tip to the non-stiff steel platform under the test point, so as not to cause measurement errors.
7. The overflow flag is -1 or 1, and during the test voltage and resistance, the soldering iron tip and the test plate do not contact, at which point a numerical value shows that this is normal.
8. In the process of testing voltage and resistance, the AC power

source required to be used must have a ground wire.

9. When testing voltage and resistance, if the data exceeds the specified value, check whether the tightening screw of the soldering iron tip is loose, tighten it, and then retest.

二、 The part name :

1. With R2-R1, the resistance $R=R2-R1$ between the soldering tip and ground can be obtained.

(5) Overflow display

2. The overflow code is 1, which indicates that the sensor is not connected when measuring the temperature of the soldering iron, and when measuring voltage and resistance, the soldering iron tip is not in contact with the test plate or that the ground wire inside the soldering iron is broken.
3. The overflow code is -1, possibly because the red or blue termination of the temperature sensor is reversed or the measured temperature is below 0°C

五、 Ground wire :

The grounding wire is the connection between the soldering iron grounding wire and the temperature tester, which is used to measure the voltage and resistance of the soldering iron tip to ground.

六、 Maintenance & Calibration :

1. If there is solder at the terminals, it can be wiped off with a soft cloth dipped in alcohol, not with diluents or benzene.
2. Repeated tests can wear out the sensor, if you need accurate measurements, replace the sensor with a new one.

1. The life of a sensor varies depending on the flux and solder you use, and in general, a single sensor can measure up to 50 times.
2. If you want to calibrate the temperature tester, contact your nearest dealer.

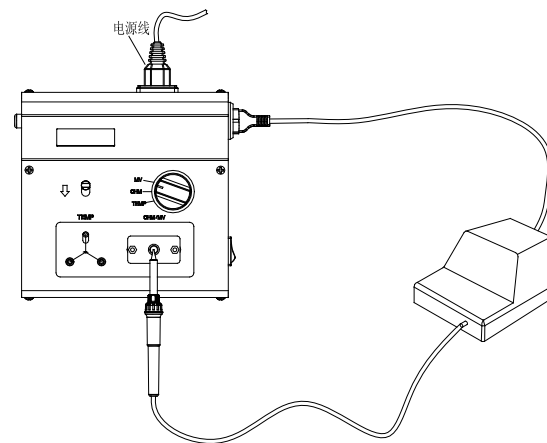
七、 Replaceable parts :

serial number	numbering	name
1	47112.1	Sensor [K thermocouple/10pcs.]
2	11012	Ground wire
3	12107.1	Power Supply Export Seat UL
4	12107	Power Supply Export Seat CCC

- 1.As shown in the image above, connect the temperature tester to the soldering iron.
- 2.If your soldering iron is a temperature-controlled soldering iron, set it to the use temperature and wait until it reaches thermal stability.
3. Dial the selection switch to "mV".
- 4.Connect the ground terminal to the grounding post on the test plate with the grounding pin.
- 5.Read display data V1 ◦
6. Disconnect the ground wire.
- 7.Clean the tip and apply new solder ◦
- 8.A small solder bead is placed in the center of the test plate and the solder beads are heated with a soldering iron until they are completely melted.
- 9.When the display is stable, read the data V2, if the power plug of the soldering iron is a crocodile clip, it is better than the three-core

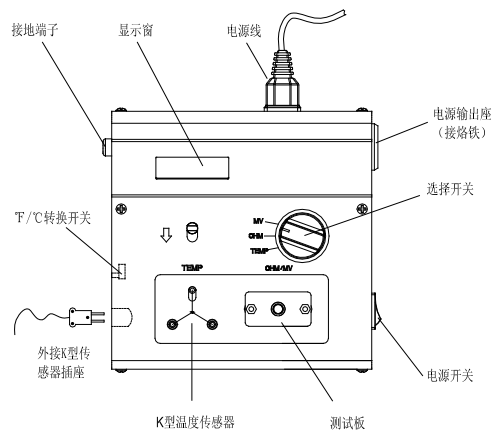
plug, just use the ground wire clip to connect the ground terminal, you can complete the measurement.

- 七、 With V2-V1, the voltage difference between the soldering tip and ground can be obtained $V=V2-V1$ ◦



(4) Measure the resistance between the soldering iron tip and ground

1. Dial the selector switch to the "OHM" file and measure R1 and R2 using the same method used to measure V1 and V2 ◦



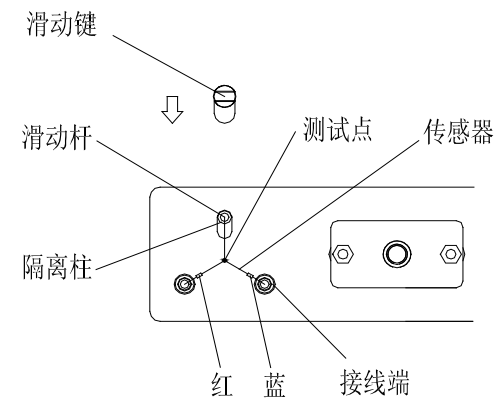
Temperature sensors	KType thermocouple	
display	LCD display(LCD)	3.5bit
	Out-of-range display	-1 , 1
Voltage measurement	Complies with MIL-STD-2000	
Rated power	1W	
size	200 (W) ×50 (H) ×120 (D) mm	
weight	approximately 1.1kg	
Usage environment	0-40°C / 32-104°F	0-80RH%

三、Technical indicators:

name	Temperature tester	
Scope of the test	temperature	0-600°C/32-1200°F
	voltage	0-90mV(AC)
	resistance	0-90Ω
resolution	temperature	1°C/1°F
	voltage	0.1mV
	resistance	0.1Ω
accuracy	temperature	±3°C ±6°F
	voltage	±(3%+2Word)
	resistance	±(1%+2Word)

四、Usage :

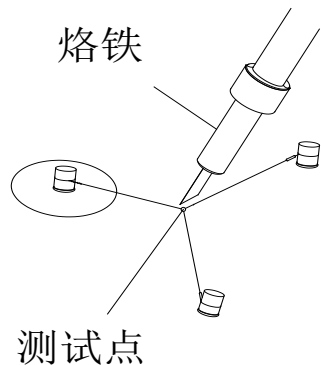
①Get ready



1. Press the sliding key in the direction indicated by the arrow and install the sensor (red-ended connection marker). There are red dot terminals, blue ends connecting blue dot terminals) °.
2. Plug in the power supply and turn on the power switch °.

② Test the temperature of the tip

1. Turn the °F/°C transfer switch to the appropriate position. (°F: shows Fahrenheit temperature, °C: shows Celsius temperature).
2. Toggle the selector switch toward the "TEMP" file.



3. Soldering iron tip, coated with new solder °.

4. Quickly place the tip on the test point of the temperature sensor

*If you need to test the temperature with an external K-type sensor, you need to insert the K-type sensor plug into the external K-sensor socket on the left side of the soldering iron tester (the sensor on the terminal of the temperature measurement zone must be removed).

5. The displayed value is constantly increasing, wait a few seconds, and then read it after the value stabilizes.

③ Measure the voltage difference between the tip and ground

