

Component Parameter Test Instruments

A. TH1778A Series DC Bias Current Source

Features

- Provide 0~20A of constant current output for single one
- Support 6 machines at most and reach 120A of constant current output
- Extreme refined current step: when <1A, reach 5mA; when <5A, reach 25mA; when <120A, reach 100mA
- Adopting a new generation AC/DC superposition test theory to adapt test requirements for high precision and high frequency
- Current output mode: single current, step scan
- Adopting new designed friendly graphical operation interface and providing multiple operation practice
- Providing real-time operation mode for all parameters and settings without waiting
- New file management system with easy, prompt and accurate operation
- Providing two kinds of SCPI command modes with good adaptability
- New foot control mode with 5 control modes
- Excellent tailing capability and extendibility, additional slave superposition depending on the demands
- Offering dual-progress bar indication and corresponding small tools
- Selectable Chinese and English interfaces



NEW

TH1778A

TH1778AS

Brief Introduction

■ Friendly interface, easy operation and excellent performance

The instrument adopts a new generation AC/DC superposition test theory to adapt test requirements for high precision and high frequency. The built-in embedded MCU with high-performance can quickly respond to host and slave machine condition or malfunction and make real time indication, which helps improve the work efficiency. The new designed friendly graphical operation interface, included 5 foot control modes and full touch operation provides convenience and efficiency for users. New file management system with easy, prompt and accurate operation can save a group of real-time setting file and 99 groups of user-defined setting files. It can provide pushed information indication and cache 2 real-time information. Being provided with two modes of SCPI instruction systems, it is convenient to set up production lines or single machine test. Also, it can connects with any device with serial port and which refer to the SCPI instruction system design of this machine.

New Trend of AC/DC Superposition Test By virtue of profound technology and extensive market survey in bias current field, Tonghui introduced the large power DC bias current source—TH1778A. CortexM3 ARM CPU with high-performance, graphical interfaces and full-touch operation make TH1778A series DC Bias Current Source convenient and efficient for you.

TH1778A series is appropriate for AC/DC superposition test of magnetic inductors and test occasion for large current. Also, it can provide magnetizing current for the analysis of magnetic materials. The adopted new software framework is adapt to real-time parameter adjustment and operation.

New Trend of AC/DC Superposition Test

- 1 Master-Slave connection mode is convenient for cutting and extending.
- 2 Graphic interface brings unprecedented operation convenience and rapid response to working condition of the machine.
- 3 Pushed information indication can keep concurrent status information.
- 4 Intelligent file management system makes file management and load not complicated any longer.
- 5 Multi-mode SCPI system makes the formation of production lines not tedious any more.
- 6 Multiple operator modes makes it easier to operate on the basis of personal habits.
- 7 Cabinet type system connection makes it convenient for users to arrange and set up production lines.

Specifications

Model	TH1778A	
Display	Display	480×272 16:9 24-bit truecolor TFT LCD
	Interface	Complete graphic user interface
Operation	Resistor type touch screen + entitative key + foot switch	
Current step	0mA-1.000A	5mA
	1.000A-5.000A	25mA
	5.0A-120.0A	100mA
Supporting test frequency	0Hz-2MHz	
Sweep adjustment time	0mA-1.000A	4ms-3600s
	1.000A-5.000A	10ms-3600s
	5.0A-120.0A	20ms-3600s
Minimum interval of sweep adjustment step	0mA-1.000A	5mA
	1.000A-5.000A	25mA
	5.0A-120.0A	100mA
Range	Host machine (TH1778A)	1.000A/5.000A/20.0A
	Slave machine (TH1778AS)	20.0A
Maximum output voltage	35V (when outputting 1.000A. For different ranges, please refer to the user manual)	
Maximum permitted DCR	$R_{max} = \frac{V_{max}}{I} (\Omega)$ (Calculation of R_{max} , please refer to the description in user manual)	
Maximum permitted inductance value	$L_{max} = \frac{V_{max}}{di/dt} (mH)$ (Calculation of L_{max} , please refer to the description in user manual)	
Range mode	Auto	
Control mode for START/STOP	START/STOP entitative key, 4 foot switches, Bus	
Max. current time for continuous loading	Keeping 2-3h, continuous output	
Function	Fault self-inspection; 99 groups of custom profile management; dual-progress bar indication; Chinese and English; soft switching of slave machine; real-time operation; SCPI command set; simple dual-display computer.	
Interface	RS232S, JaverLink	
Work environment	Temperature	0℃-55℃
	Humidity	<90%RH
Power requirement of adapter	Voltage	AC 220V/110V (1±10%)
	Frequency	50Hz/60Hz (1±5%)
Power	≤60VA	
Dimension (W×H×D) (mm)	Single one: 430×185×473 (mm) (not including equipment cabinet)	
Weight	Single one: 18kg (not including equipment cabinet)	