

TK6500 Electric Welding Machine AC/DC Power Calibrator



1. Summary

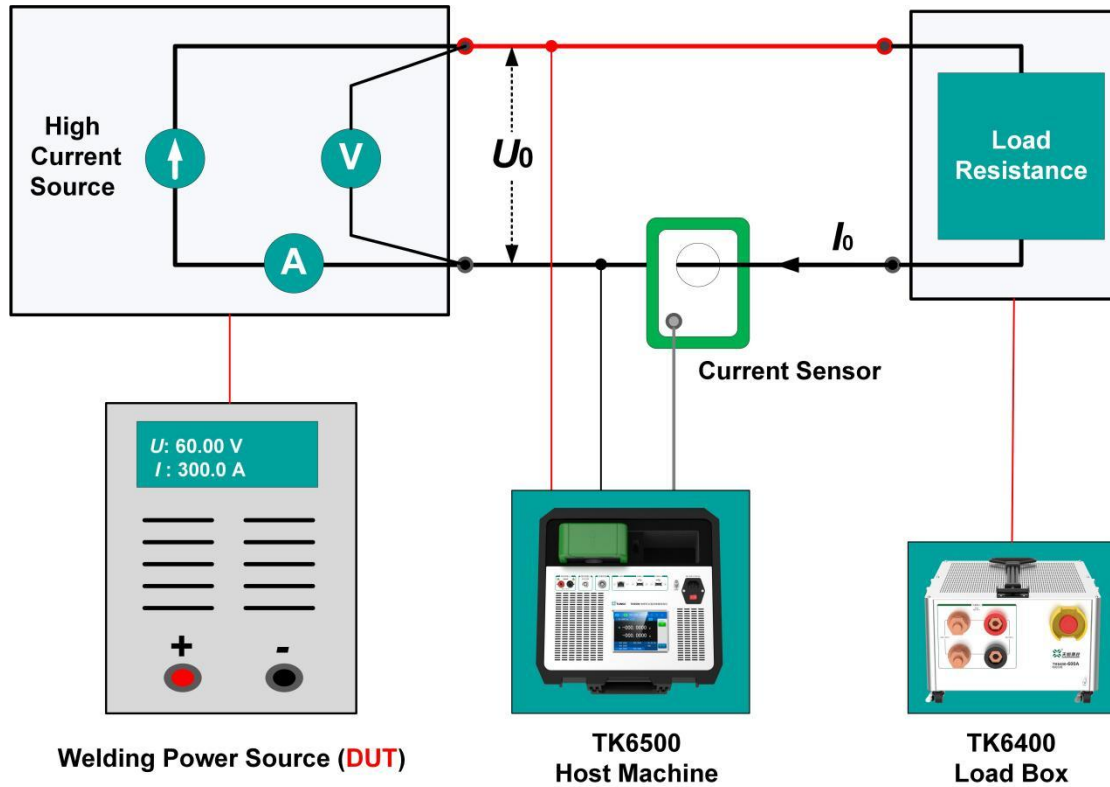
TK6500 is a precision AC-DC power calibrator for on-site calibration, which is suitable for calibrating the internal ammeter and voltmeter without disassembling the welding machine.

2. Features

- AC and DC Voltage Measurement: 5 V~180 V (optional 500 V).
- AC and DC Current Through-core Measurement: 10 A~3 kA
- F: DC, 40 Hz~1 kHz
- Voltage/Current Accuracy: class 0.05 / class 0.1
- Harmonic Measurement Function
- USB Data Export Function

3. Applications

☆ Calibrate the AC and DC Welding Machine Power Supply



- The AC-DC voltage measurement range is 5 V~180 V (optional 500 V). AC-DC current measurement range: 10 A~3 kA;
- The best accuracy of this equipment is class **0.05**, which is suitable for calibrating AC-DC arc welding power supply or other high-current output equipment of level 0.2 and below

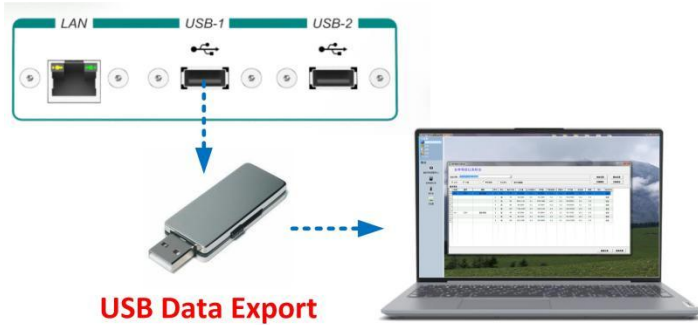
4. Characteristics

☆ Wide Range of Current Measurement



- The instrument adopts the method of measuring the current through the core, which can reduce the wiring work of the current loop and improve the work efficiency.
- The wide range measurement capability can cover the calibration of the commonly used AC and DC arc welding machine power supply, and the user can choose different specifications of current sensors (500 A/ 1 kA/ 2 kA/ 3kA) according to the needs, such a combination. It is beneficial to reduce the size and volume of the host, and the choice of lightweight sensor is more convenient to carry to the field for calibration work.

☆ USB Data Export



USB Data Export

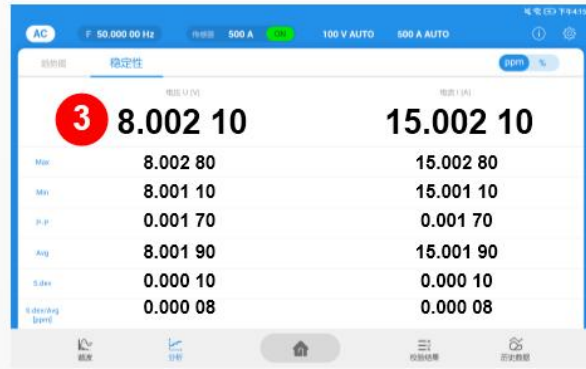
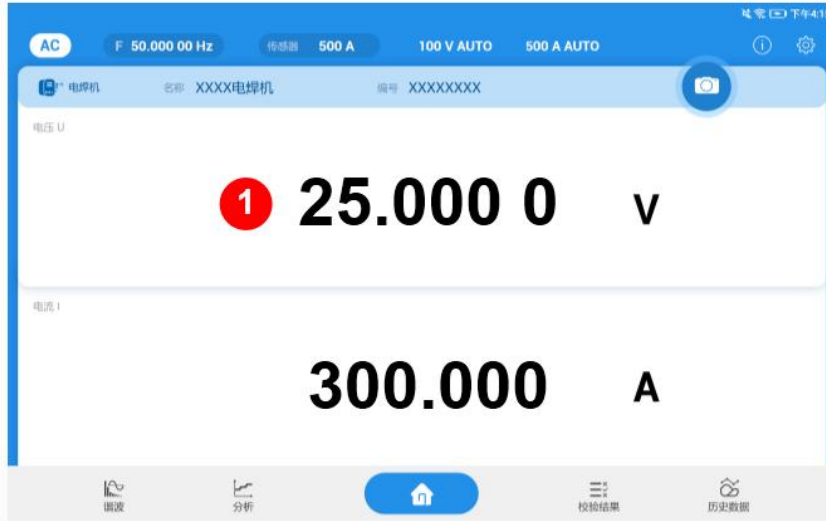
- Built-in **large-capacity memory**, the test data of the inspected equipment can be quickly saved on site.
- After the calibration work is completed, the original data can be exported to the computer through the U disk for sorting and analysis.

☆ APP Graphical and Intuitive Display



S/N	Function
1	AC power measurement has an oscilloscope function that displays the waveform of the AC signal under test in real time.
2	Calculate two types of harmonic distortion: THD/T (harmonic relative to full wave) and THD/F (harmonic relative to fundamental wave).
3	The amplitude (RMS), content (%) and phase of the 2nd~128th harmonic of voltage or current can be analyzed in real time.
4	Visualize the spectrum of each harmonic in the form of a histogram (100% fundamental).

☆ Data Statistical Analysis



S/N	Function
1	Visual Display Of The Measured Power: The measured voltage and current measurement results are displayed at the same time
2	Power Trend Test: Curve the power over time in real time during the test cycle.
3	Power Stability Analysis: calculate the maximum (MAX), minimum value (min), and peak-peak value of the measured electricity (P-P), mean (Avg) , standard deviation (S .dev) , divergence (Div) , etc.

5. Specifications

5.1 AC/DC Voltage Measurement

Voltage range	Resolution	Measurement uncertainty (k=2). (ppm*RD+ppm*RG) ^[1]		Temperature coefficient ppm*RD /°C @ (15~30) °C	
		Class 0.1	Class 0.05	Class 0.1	Class 0.05
50 V	100 μV	600 + 400	300 + 200	<20	<10
150 V	1 mV	600 + 400	300 + 200	<20	<10
500 V ^[2]	1 mV	600 + 400	300 + 200	<20	<10

Note [1]: RD is the reading value, RG is the range value, the same below. Note [2]: 500 V ranges are optional, other ranges can be customized upon request.

- Measuring Range: 5 V~180 V or 5 V~500 V (optional), direct measurement, manual or automatic range switching
- Measurement Band: DC, 40 Hz~1 kHz

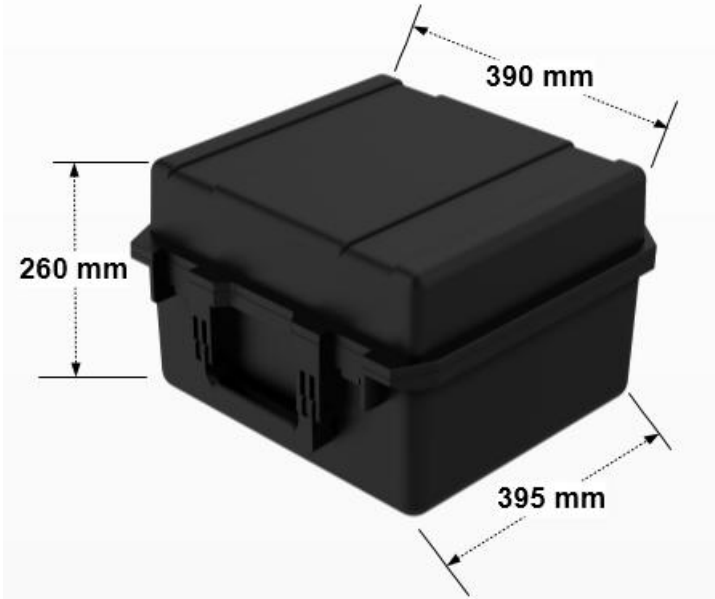
5.2 AC/DC Current Measurement

Current sensing selection ^[3]	Current range	Resolution	Measurement uncertainty (k=2). (ppm*RD+ppm*RG) ^[1]	
			Class 0.1	Class 0.05
TK6500-T-500A	100A、500A	1 mA	600 + 400	300 + 200
TK6500-T-1kA	200A、1kA	10 mA	600 + 400	300 + 200
TK6500-T-2kA	500A、2kA	10 mA	600 + 400	300 + 200
TK6500-T-3kA	1kA、3kA	10 mA	600 + 400	300 + 200

Note [3]: The current conversion is carried out by an external current sensor and measured by the host. Users can select the sensor with the right specification according to the size of the measured current to achieve the best measurement accuracy. Other current ranges can be customized by customers.

- Measuring Range: 10 A... 3 kA, indirect measurement, manual or automatic range switching
- Measurement Frequency: DC, 40 Hz~1 kHz

6. General Specifications

Power supply	AC (220 ± 22) V, (50 ± 2) Hz
Temperature performance	Working Temperature: 0°C~45°C; Storage Temperature: -20 °C ~ 70 °C
Humidity performance	Operating Humidity: < 80% @ 30°C, < 70% @ 40°C, < 40% @ 50°C Storage Humidity: (20%~80%) R· H, no Condensing
altitude	< 3000 m
Quality	Approx. 6.5 kg (without sensor).
Communication interface	USB、LAN
Size	390 mm(W) × 395 mm(D) × 260 mm(H)
	

7. Ordering Information

7.1 Main Instrument Ordering Information

TK6500- -

Accuracy Class	
Code	Note
500	Class 0.05
1 k	Class 0.1

Maximum Range of Voltage	
Code	Note
150V	150 V
500V	500 V

E.g. TK6500-500-500V means that the accuracy is Class 0.05, and the maximum range of voltage is 500 V.

7.2 Current Sensor Ordering Information

TK6500 - T - -

Sensor Specification	
Code	Note
500A	500 A
1kA	1 kA
2kA	2 kA
3kA	3 kA

E.g. TK6500-T-500A means that the maximum current range of this sensor specification is 500A.