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Datasheet

UTE9806+ Smart Digital Power Meter

1. Characteristics and Advantage

- VA broken code screen display for intuitive reading.
- Multi-window simultaneous display of voltage, current, active power, apparent power, power factor, voltage frequency, current frequency, voltage peak and current peak.
- Measurement parameter of each window can be switched. User can set the reading sequence according to your own habits.
- Voltage, current range can switch to auto range or manual range.
- Average filter function can make the reading more stable and it suitable for measuring the load or power with large variations.
- Data upgrade period can be set. User can select a faster upgrade period according to the test needs, so as to improve the test efficiency.
- Communication interface supports RS-232 and RS-485. Communication protocol supports SCPI and Modbus-RTU for communicating with computer or PLC.
- It can freely set the upper and lower limit of voltage, current, active power, apparent power and power factor. The digital power meter will automatic judge whether the test value is exceed. And the alarm time can also be set.

Sound and light alarm indication, it is convenient for batch detection to improve the measurement efficiency.

- Mute key
- Measuring range

Measuring range of voltage: 0.5V ~ 700V

Measuring range of current: 50uA ~ 10A

Measuring range of frequency: 40Hz ~ 400Hz

- Operating voltage range: AC 100V~240V, frequency 50/60Hz.

2. Product Overview

UTE9806+ smart digital power meter is an economic and portable measuring instrument. It is a multi-functional measuring instrument which integrating voltage, current, active power, apparent power, power factor, voltage frequency, current frequency, voltage peak and current peak. The products is widely used in production, testing, evaluation and scientific research and multi-field.

UTE9806+ smart digital power meter adopts high speed CPU for data processing, the sampling resistance of voltage and current are all use low temperature drift resistor, therefore, the stability and accuracy of measurement data are guaranteed.

The instrument has perfect functions, superior performance and simple operation. It meets the needs of high-speed measurement in production sites, as well as laboratory and R&D measurements. It is widely used in in the fields of lighting appliances, power tools, household appliances, electric motors and electric heating appliances of production lines, laboratories and quality inspection departments.

3. Design Highlights

VA broken code screen display, data and state display directly

Multi-window can display at the same time and parameter of each window can all be switch.

A window can display voltage, current, active power and apparent power.

B window can display voltage, current, active power and power factor.

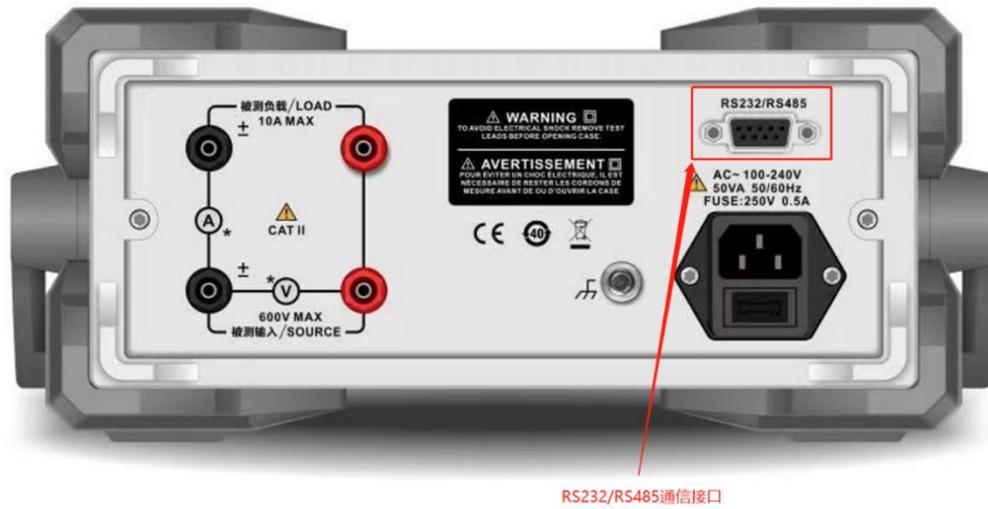
C window can display voltage, current, active power, voltage positive peak (maximum value), voltage negative peak (minimum value), current positive peak (maximum value) and current negative peak (minimum value).

D window can display voltage, current, active power, voltage frequency, current frequency and power factor.



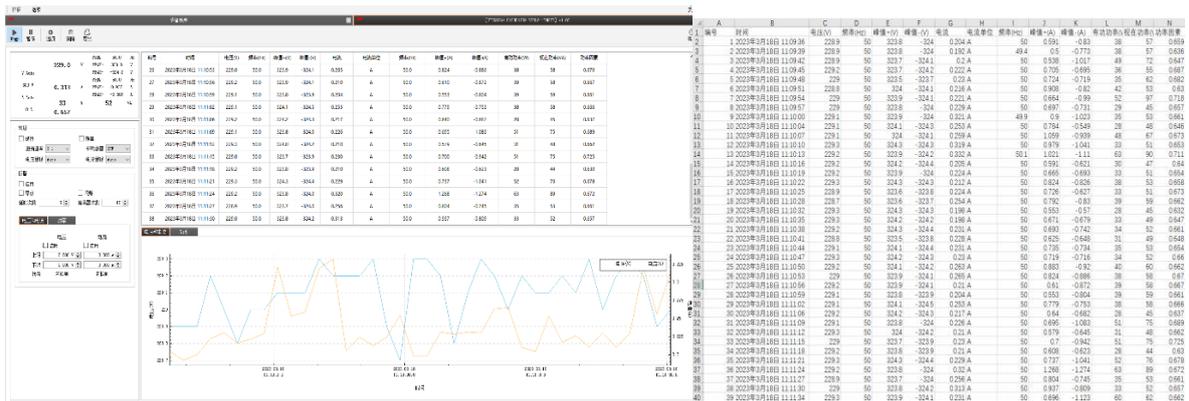
Multiple interface and communication protocol

UTE9806+ supports RS232 and RS485 communication interface and with SCP, Modbus communication command. It make sure that the instrument has good compatibility in the system integration of automatic test equipment.



Complete upper computer control software

The instrument can be remote control via the upper computer control software, it can also visually display the measurement data and the historical trend of the measurement data, and save the historical data to the computer in CSV file format for further analysis.



4. Technical Index

Note: * f represent the frequency of input signal in the below table.

Model	UTE9806+	Remarks
Display	VA broken code display, 5 digits, four windows	Accuracy guarantee range of voltage/current: range of 1%~10%.
Display Update Rate	0.1S, 0.25S, 0.5S, 1S, 2S, 5S	
Measuring Object	V, A, W, VA, PF, HZ, Vpeak, Apeak	
Measuring Mode	AC	
Measuring Range of Voltage	0.5V-600V	
Voltage Range	60V/600V	
Accuracy of Voltage	40Hz≤f≤66Hz: ±(0.4% reading+ 0.1 range+1 character) 66Hz≤f≤400Hz: ±(0.3% reading+ 0.2 range+1 character)	
Voltage Resolution	0.01V/0.1V	
Measuring Range of Current	0.05mA~10A	
Current Range	0.05mA~10A	
Accuracy of Current	40Hz≤f≤66Hz: ±(0.4% reading+ 0.1 range+1 character) 66Hz≤f≤400Hz: ±(0.3% reading+ 0.2 range+1 character)	
Current Resolution	0.1mA/0.1 mA/1 mA	
Switching Range	Auto/Manual	
Power Range	1W~6000W	
Accuracy of Power	40Hz≤f≤66Hz: ±(0.4% reading+ 0.1 range+1 character) 66Hz≤f≤400Hz: ±(0.3% reading+ 0.2 range+1 character)	Voltage value is higher than range of 10%. Current value is higher than range of 1%.
Power Resolution	0.001W/0.01W/1W	

Power Factor Range		-1.000~1.000	
Accuracy of Power Factor		± 0.01	
Measuring Range of Frequency		40Hz~400Hz	Voltage value is higher than range of 10%. Current value is higher than range of 10%.
Accuracy of Frequency		±0.1% reading	
Auto Range Switching	Voltage Range Increasing	Measured value exceeds the measuring range about 120 %.	
	Voltage Range Decreasing	Measured value is less than the lower part range about 100 %.	
	Current Range Increasing	Measured value exceeds the measuring range about 120 %.	
	Current Range Decreasing	Measured value is less than the lower part range about 100 %.	
Pre-heating Time		>30 minutes	
Current Peak		The maximum display 24A	
Maximum of Allowed Input for Continuous		Voltage 720V, Current 12A	
Maximum of Allowed Input for Instant		1000V, 20A (1 minute)	
Input Impedance		Voltage about 2 MΩ, Current is less than 0.02Ω	
Upper/Lower limit		Upper/Lower limit of voltage (U)	
		Upper/Lower limit of current (I)	
		Upper/Lower limit of active power (P)	
		Upper/Lower limit of apparent power (VA)	
		Upper/Lower limit of power factor (PF)	
Alarm Delay		√	

Average Function	√
Interface	RS232 (DB9 ; 2-pin: TX, 3-pin: RX, 5-pin: GND)
	RS485(DB9 ; 8-pin: A , 9-pin: B)
Baud Rate	1200, 2400, 4800, 9600, 19.2K, 38.4K, 57.6K, 115.2K, default 9600. It follows communication protocol of standard SCPI and Modbus.
Display Hold	√
Mute Key	√
Lock Key	√
Power Source	Input power: AC 100V~240V Frequency 50/60Hz
Precision Environment	18°C~28°C, 30%~75%RH (28°C < operating temperature <18°C(when in 18°C, it needs to add temperature coefficient): reading of 0.005%/°C)
Storage Temperature	-10°C~50°C, non-condensing below 80% RH
Operating Altitude	≤2000 meters
General Characteristic	
Color	Gray
Weight	3.2kg
Size	214mm×88mm×340mm
Standard Accessories	Specialized power cable x1 RS232 serial port line X1
Optional Accessories	UTE-L10A 10A three-pronged plug convert banana head plug connection cable x1
	UTE-L16C 16A connection cable with alligator clip x1
	UTE-L16A 16A three-pronged plug convert banana head plug connection cable x1

Standard Packing Quantity	2	
Standard Packing Size	400mm*300m*325mm	
Gross Weight of Standard Packing	9kg	

5. Accessories and Optional

Model	Description	Length	Specification of Voltage/Current
UTE-L10A	 <p>10A three-pronged plug convert banana head connect wire</p>	1.2m	250V/10A
UTE-L16A			
UTE-L16A	 <p>16A three-pronged convert banana head connect wire</p>	1.2m	250V/16A
UTE-L16C			
UTE-L16C	 <p>16A connect wire with alligator clip</p>	1.2m	250V/16A

6. Contact Us

UNI-T Technical Support Hotline: 400-876-7822

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