

TH0530 Precision Through-core Ammeter



1. Summary

TH0530 is a wide measurement range, high measurement accuracy, small and portable ammeter, using wideband current comparator technology, suitable for measuring wideband high current in the field, or for calibrating AC and DC high current sources and ammeters.

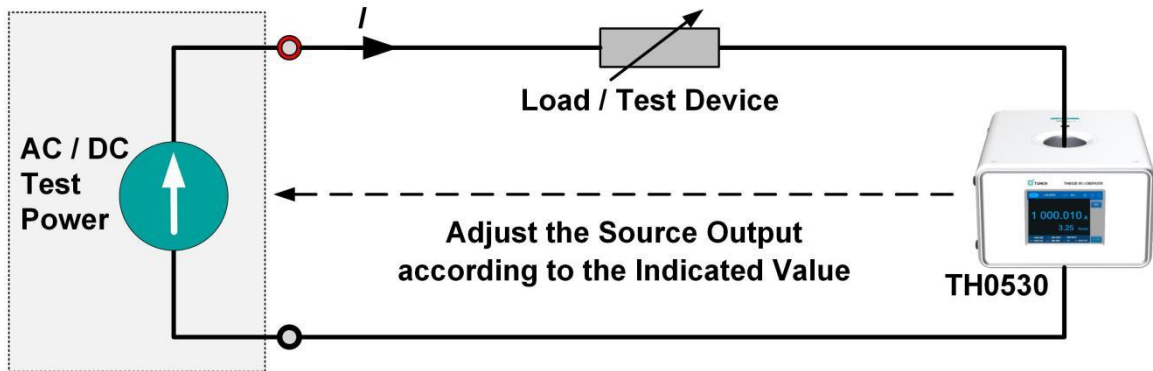
2. Features

- Available in 1 kA and 2 kA current specifications
- Measurement frequency: DC ~ 1 kHz
- Accuracy class: 0.005 / class 0.01
- Through-core and direct measurement
- The aperture of $\Phi 70$ mm facilitates penetration of high-current wires
- Analog I/V output mode is supported

3. Applications

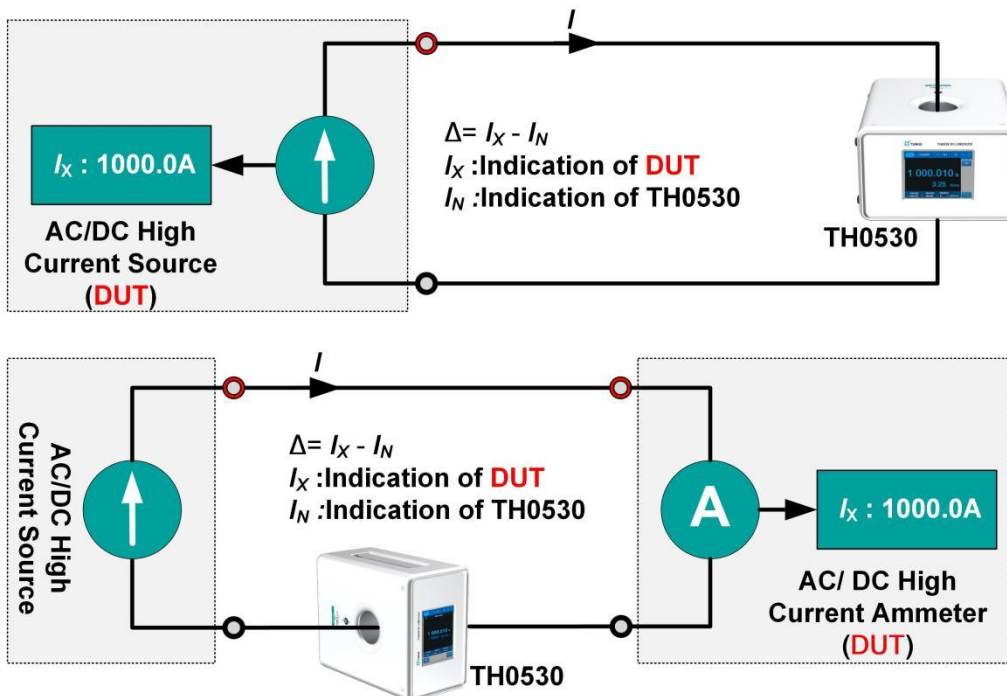
- Formation of AC and DC current measurement system
- DC stable power supply test
- Battery charge and discharge test and calibration
- Calibrate the multi-function calibrator
- Calibrate the AC and DC current source/meter
- Clamp meter calibration device traceability
- Voltage output reference
- Ripple and distortion measurement

☆ Set up a Precision High-Current Test System



- It can be combined with AC and DC test power supply or constant current source to form a precision current test system.
- Monitor current in industrial and metering application scenarios, such as battery charge and discharge test systems, regulated power supply test systems, etc

☆ Calibrate High Current Source/Meter



- **TH0530** can be used as a standard ammeter, calibrating AC and DC current sources or ammeters.

4. Characteristics

☆ Through-core or Direct Measurement

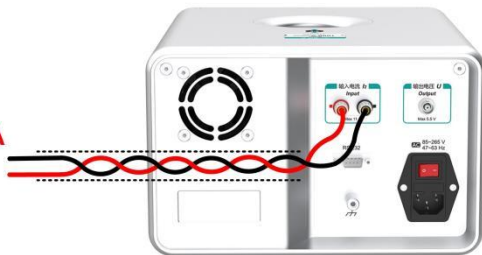
1 kA Specifications: $10\text{ A} < I \leq 1100\text{ A}$

2 kA specifications: $20\text{ A} < I \leq 2200\text{ A}$



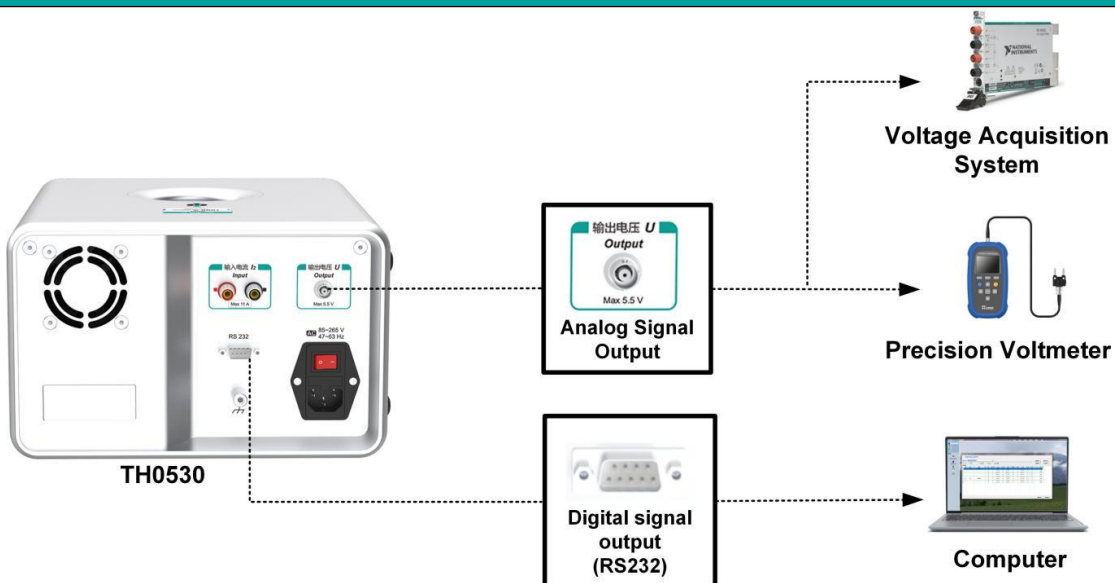
1 kA Specifications: $0.25\text{ A} \leq I \leq 10\text{ A}$

2 kA Specifications: $0.5\text{ A} \leq I \leq 20\text{ A}$



- It has two measurement methods: through-core and straight-in.
- The through-core type is suitable for measuring large currents, and is configured with a large aperture to facilitate the connection of high-current test wires.
- Small currents can be measured directly to ensure measurement accuracy.

☆ Digital and Analog Signal Output



- TH0530 supports both digital and analog outputs.
- It can directly output secondary analog I/V signals, making data acquisition more flexible and fast.

5. Specifications

5.1 AC Direct Current Measurement

Measurement Method	Current Range		Resolution	Frequency Hz	Measurement Uncertainty (k=2) (23°C±5°C)		Temperature Coefficient (°C). (0°C~50°C)	
	TH0530 -1 kA	TH0530 -2 kA			Class 0.005	Class 0.01	Class 0.005	Class 0.01
	(ppm*RD+ppm*RG) ^[1]							
Direct	2.5 A	5 A	1 μA	DC	40 + 10	80 + 20	3 + 2	6 + 4
				40≤F≤400	150 + 50	220 + 80		
				400<F≤1k	350 + 150	350 + 150		
	10 A	20 A	10 μA	DC	40 + 10	80 + 20	3 + 2	6 + 4
				40≤F≤400	150 + 50	220 + 80		
				400<F≤1k	350 + 150	350 + 150		
Through-core	250 A	500 A	100 μA	DC	40 + 10	80 + 20	3 + 2	6 + 4
				40≤F≤400	150 + 50	220 + 80		
				400<F≤1k	350 + 150	350 + 150		
	1 kA	2 kA	1 mA	DC	40 + 10	80 + 20	3 + 2	6 + 4
				40≤F≤400	150 + 50	220 + 80		
				400<F≤1k	350 + 150	350 + 150		

Note [1]: RD is the reading value and RG is the range value.

- Measurement up to 110%* measuring range
- Measurement frequency: DC ~ 1 kHz
- Range switching: manual/automatic gear shifting
- Display digits: 7 digits, decimal

5.2 Ripple and distortion measurement

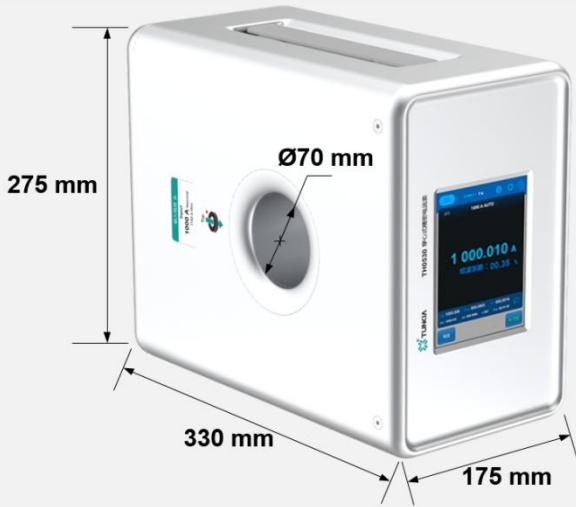
- With DC ripple measurement function, frequency range: 1 Hz ~ 10 kHz
- Features total harmonic distortion measurement

5.3 Secondary Voltage Output

Measurement Method	Primary Nominal Input Current		Secondary Nominal Output Voltage	Frequency Hz	Measurement Uncertainty (k=2), ppm*RG	
	TH0530 -1 kA	TH0530 -2 kA			Class 0.005	Class 0.01
Direct	2.5 A	5 A	5 V	DC	0.005	0.01
				$40 \leq F \leq 400$	0.02	0.03
				$400 < F \leq 1k$	0.05	0.05
	10 A	20 A	5 V	DC	0.005	0.01
				$40 \leq F \leq 400$	0.02	0.03
				$400 < F \leq 1k$	0.05	0.05
Through-core	250 A	500 A	5 V	DC	0.005	0.01
				$40 \leq F \leq 400$	0.02	0.03
				$400 < F \leq 1k$	0.05	0.05
	1 kA	2 kA	5 V	DC	0.005	0.01
				$40 \leq F \leq 400$	0.02	0.03
				$400 < F \leq 1k$	0.005	0.01

- A maximum output of 5.5 V is possible

6. General Specifications

Power Supply	AC:85 V ~ 265 V / 47 Hz ~ 63 Hz DC:120 V ~ 370 V
Maximum Power Consumption	100 VA
Warm Up Time	30 minutes
Working Environment	Temperature: 0°C ~ 50°C Humidity: 30% R·H ~ 80%R·H, no condensation. Others: No electromagnetic field interference.
Storage Environment	Temperature: -30°C ~ 70°C Humidity: 10% R·H ~ 90%R·H, no condensation.
Altitude	0 m ~ 3000 m
Communication Interface	RS 232×1
Size	175 mm (W) × 330 mm (D) × 275 mm (H) 
Display Screen	5.6-inch color LCD display
Quality	Approx 13 kg

7. Ordering Information

