

# TH0600 Precision AC Current Transformer



## 1. Summary

TH0600 precision AC current transformer is based on wideband current transformer technology. It can convert nominal current from 0.1 A to 10 kA AC into a voltage or current output in a certain proportion and maintains a high proportion uncertainty.

## 2. Features

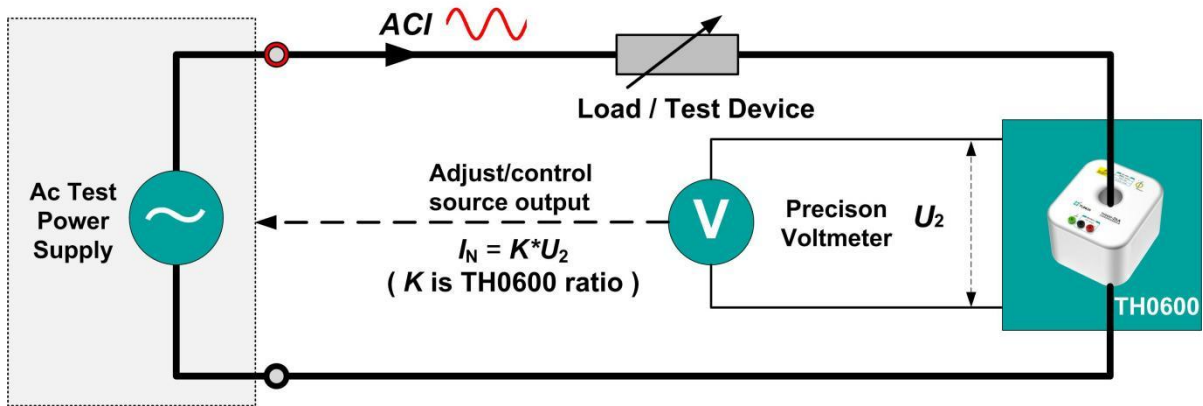
- Supports two current access modes, through core and direct connected type respectively.  
Direct connected type with the input current of 0.1 A... 200 A。  
Through-core type with the input current of 500 A... 10 kA。
- The secondary output signal is optional for voltage (I/V) or current (I/I).  
Type I/I: Optimal ratio uncertainty of 5 ppm  
Type I/V: Optimal ratio uncertainty up to 10 ppm
- Measurement frequency: 40 Hz~2.5 kHz.
- Optional digital display function and support digital signal output.

## 3. Applications

- Establish AC Current Precision Measurement System
- Calibrate an AC Current Source or Ammeter
- Calibrate AC Current Transformers/Sensors
- Calibrate the AC I/V Conversion Standard

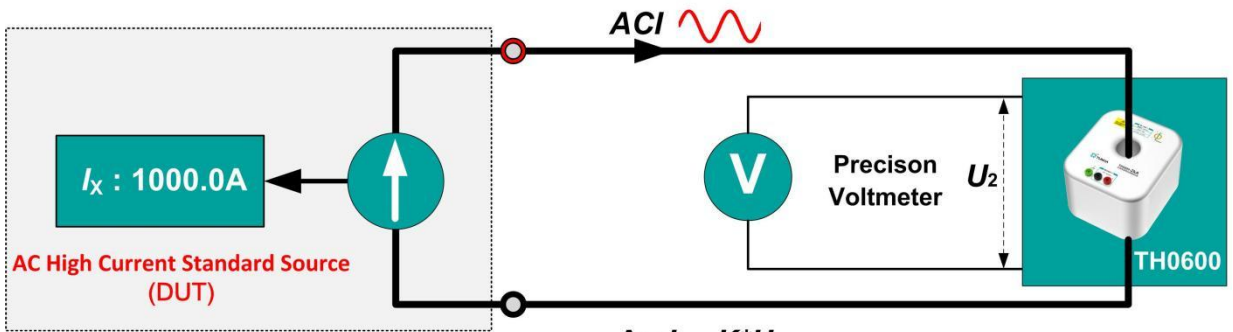
### 3.1 Application of I/V type TH0600

#### ☆ Set Up Precision Current Test System



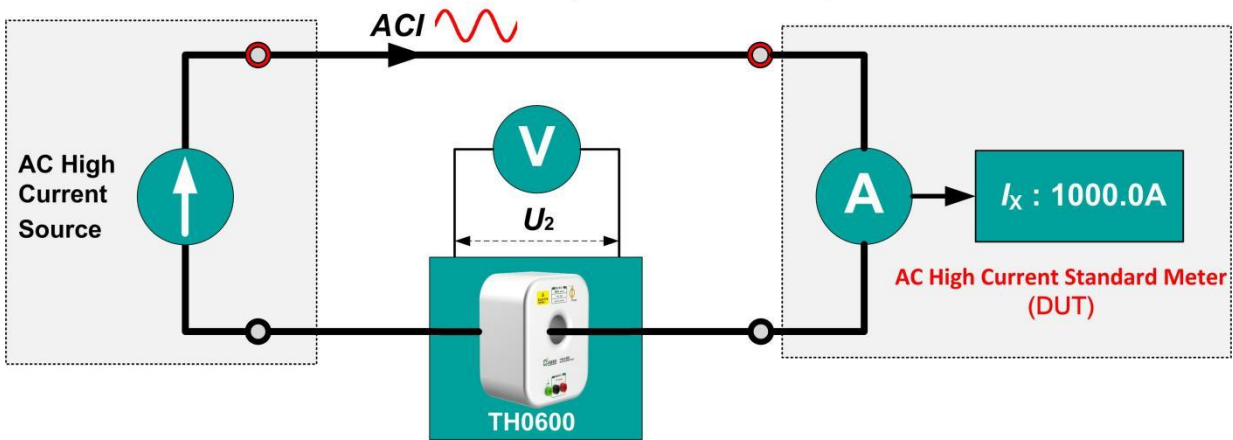
- It can be used with AC test power supply or constant current source to form a precision current test system.
- Provide accurate and stable AC current signals for test devices and loads.

☆ Calibrate AC High Current Source / Meter

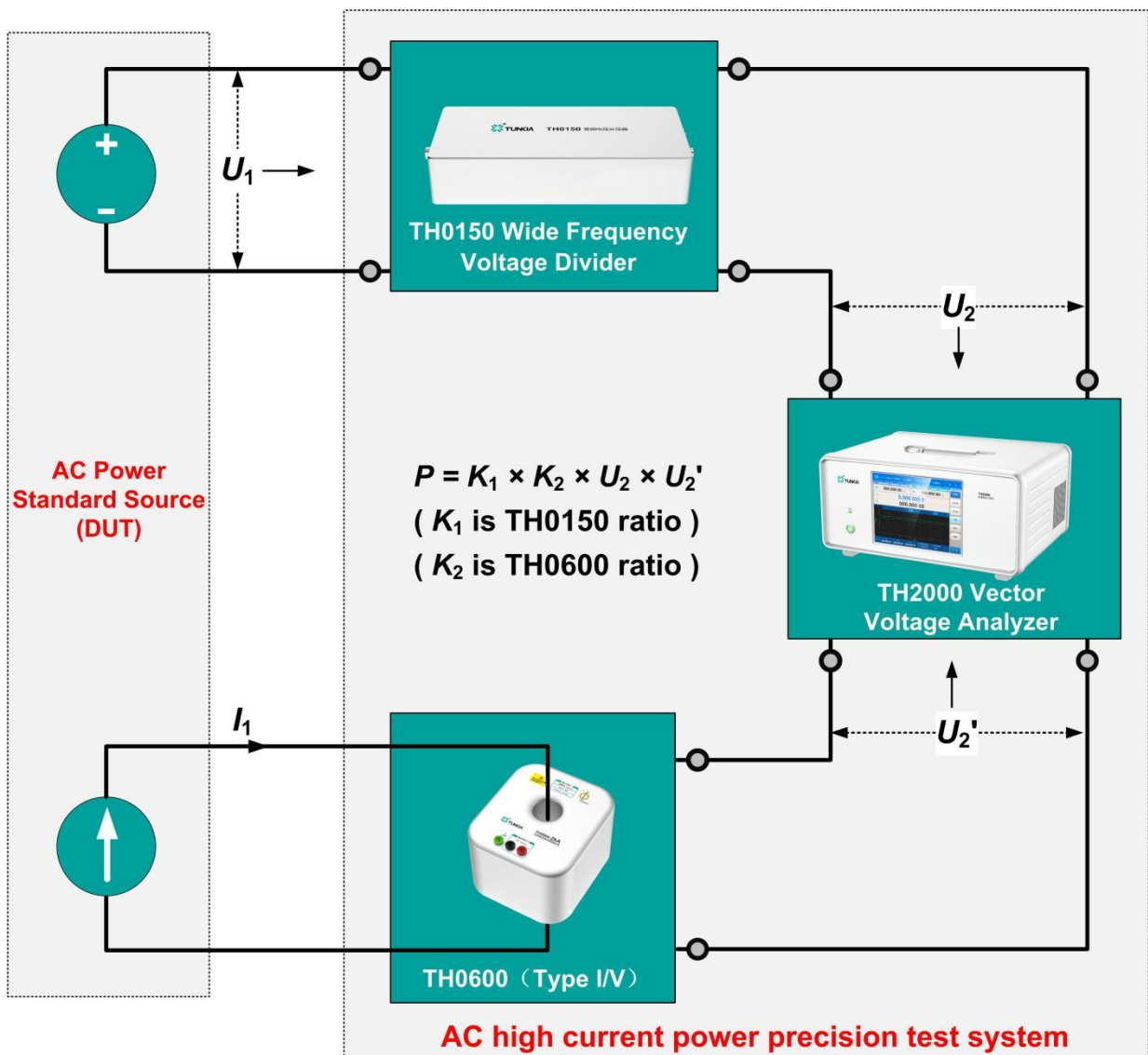


$$\Delta = I_x - K \cdot U_2$$

( K is TH0600 ratio )



- It can be used to calibrate AC high current standard sources/meters with precision voltmeters.

**☆ Build High Current Power/Energy Measurement System**


- TH0600 (Type I/V) can be used with V/V conversion equipment such as TH0150 wideband voltage divider, TH018 0 precision AC and DC high voltage divider, etc.), TH2000 vector voltage analyzer to form a high-current power/energy precision measurement system.
- It is used to measure the output power of high-power power supply, the efficiency of conversion equipment, calibrate high-current power source, power meter and other equipment.

## 3.2 I/I type TH0600 Applications

## ☆ Calibrate Instrument Transformer And i/v Converter

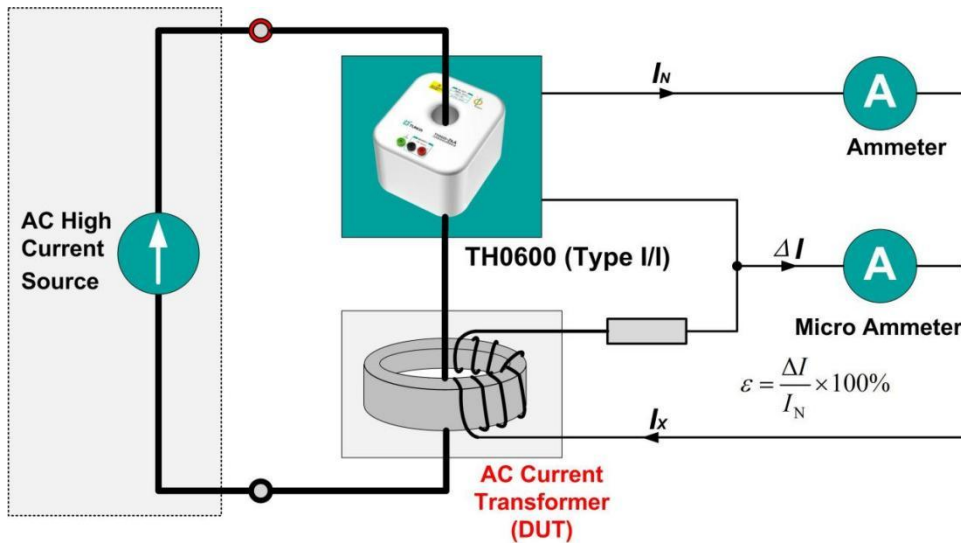


Figure (a) Calibration of AC current transformer by difference method (same proportion)

- If the selected TH0600 is proportional to the instrument transformer under test, it can be calibrated using the difference method.

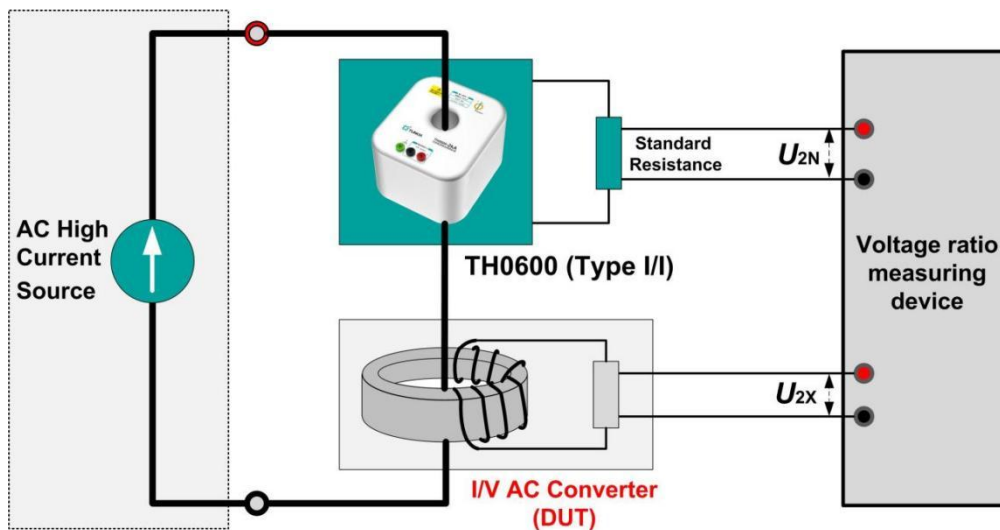


Figure (b) Calibration of I/V AC Converter by comparison method (Not the Same proportion)

- If the TH0600 selected is not proportional to the transformer or I/V converter under test, it can be calibrated using the comparative method .
- Note: The DUT is a current transformer, and an external standard resistor must be connected for I/V conversion.

## 4. Specifications

### 4.1 Direct I/I conversion standard

Model	Primary Nominal Current (A)	Secondary Nominal Current (A)	Load Resistance (Oh)	Measurement Accuracy ( $\pm \mu\text{A/A}$ , Corresponding Full-Scale Value). @50Hz	Phase shift ( $\mu\text{rad}$ , Corresponding Full-Scale Value). @50Hz
TH060 0-I-D-01A-01A-5	0.1	0.1	100	5	80
TH060 0-I-D-02A-01A-5	0.2	0.1	50	5	50
TH060 0-I-D-05A-01A-5	0.5	0.1	20	5	15
TH060 0-I-D-1A-01A-5	1	0.1	10	5	10
TH060 0-I-D-2A-01A-5	2	0.1	10	5	10
TH060 0-I-D-5A-01A-5	5	0.1	10	5	10
TH060 0-I-D-10A-01A-5	10	0.1	10	5	10
TH060 0-I-D-20A-01A-5	20	0.1	10	5	10
TH060 0-I-D-50A-01A-5	50	0.1	10	5	10
TH060 0-I-D-100A-01A-5	100	0.1	10	5	10
TH060 0-I-D-200A-1A-5	200	1	10	5	10

- Measuring range:  $\pm(10\sim120\%)*\text{FS}$ ; Measurement frequency: 40 Hz~2.5 kHz

### 4.2 Through-core I/I conversion standard

Model	Primary Nominal current (A)	Secondary Nominal Current (A)	Load Resistance (Oh)	Measurement Accuracy ( $\pm \mu\text{A/A}$ , Corresponding Full-Scale Value). @50Hz	Phase Shift ( $\mu\text{rad}$ , Corresponding Full-Scale Value). @50Hz
TH0600-I-T-200A-01A-20	200	0.1	10	20	20
TH0600-I-T-500A-01A-10	500	0.1	10	10	10
TH0600-I-T-1kA-1A-10	1 k	1	1	10	10
TH0600-I-T-2kA-1A-10	2 k	1	1	10	10

- Measuring range:  $\pm(10\sim120\%)*\text{FS}$ ; Measurement frequency: 40 Hz~2.5 kHz

### 4.3 Direct I/V Conversion Standard

Model	Primary Nominal Current (A)	Secondary Nominal Voltage (V)	Measurement Accuracy ( $\pm 1 \times 10^{-6}$ , Corresponding Full-Scale Values). @50Hz	Phase Shift ( $\mu$ rad, Corresponding Full-Scale value). @50Hz
TH0600-U-D-0.1A-1 V-30	0.1	1	30	30
TH0600-U-D-0.2A-1V-30	0.2	1	30	30
TH0600-U-D-0.5A-1 V-30	0.5	1	30	30
TH0600-U-D-1A-1 V-30	1	1	30	30
TH0600-U-D-2A-1 V-30	2	1	30	30
TH0600-U-D-5A-1 V-30	5	1	30	30
TH0600-U-D-10A-1 V-30	10	1	30	30
TH0600-U-D-20A-1 V-30	20	1	30	30
TH0600-U-D-50A-1 V-30	50	1	30	30
TH0600-U-D-100A-1 V-30	100	1	30	30
TH0600-U-D-200A-1 V-30	200	1	30	30

- Measuring range:  $\pm(10 \sim 120\%)*FS$ ; Measurement frequency: 40 Hz~2.5 kHz

### 4.4 Through-core I/V Conversion Standard

Model	Primary Nominal Current (A)	Secondary Nominal Voltage (V)	Measurement Accuracy ( $\pm 1 \times 10^{-6}$ , Corresponding Full-Scale Values). @50Hz	Phase Shift ( $\mu$ rad, Corresponding Full-Scale Value). @50Hz
TH0600-U-T-200A-1 V-30	200	1	30	30
TH0600-U-T-500 A-1 V-30	500	1	30	30
TH0600-U-T-1K A-1 V-30	1 k	1	30	30
TH0600-U-T-2K A-1 V-30	2 k	1	30	30
TH0600-U-T-3k A-1 V-30	3 k	1	30	30

TH06 0 0-U-T-5 k A-1 V-30	5 k	1	30	30
TH06 0 0-U-T-6k A-1 V-30	6 k	1	30	30
TH06 0 0-U-T-10k A-1 V-30	10 k	1	30	30

- Measuring range:  $\pm(10\sim120\%)*FS$ ; Measurement frequency: 40 Hz~2.5 kHz

## 5. General Specifications

<b>Power Supply</b>	—
<b>Warm-up Time</b>	—
<b>Temperature Performance</b>	Working temperature: 18°C~28°C; Storage temperature: -10 °C ~ 55 °C
<b>Humidity Performance</b>	Operating humidity: < 80% @ 30°C, < 70% @ 40°C, < 40% @ 50°C Storage humidity: (20%~80%) R· H, no condensing
<b>Altitude</b>	< 3000 m



## 6. Ordering Information

