

TH0110 Programmable DC Voltage Reference



1. Summary

TH0110 is an ultra-precise DC voltage reference with high stability, high accuracy, low temperature drift and small size.

2. Features

- Output voltage range: $\pm (0 \sim 10 \text{ V})$.
- Reference voltage output: 2.5 V / 4.096 V / 5 V / 10 V
- Typical short-term stability: 0.2 ppm/min
- Resolution: 1 nV (8 bits).

3. Application

- Detect ADC chip linearity
- Calibrate a high-precision DC voltmeter
- Calibrate the digital nanovoltmeter
- Calibrate the potentiometer

4. Specifications

Range	Resolution	Annual uncertainty (k=2). $\pm (\text{ppm} \cdot \text{setpoint} + \mu\text{V})$.
10 mH	1 nV	15 + 0.12
1 00m H	10 nV	7.5 + 0.4
1 V	100 nV	5.0 + 0.7
10 V	1 μV	3.0 + 2.5

- Output range: $\pm (0 \sim 10 \text{ V})$.
- Manual/automatic shifting, 8-digit display

5. General Specifications

Power supply	Power supply: AC (220 $\pm$ 22) V, (50 $\pm$ 2) Hz;
Warm-up time	Not less than 1 hour, and the warm-up time again after shutting down in the middle should not be less than 2 times the shutdown time;
Temperature performance	Working temperature: 15 °C ~ 35 °C; Storage temperature: -40 °C ~ 50 °C;
Humidity performance	Operating humidity: (0 ~ 90%) R·H @ $\leq 28^\circ\text{C}$, no condensing; $\leq 80\% \text{R} \cdot \text{H} @ \leq (28^\circ\text{C} \sim 35^\circ\text{C})$, no-condensing; Storage humidity: (0 ~ 90%) R·H, no condensing.
Altitude	< 3000 m