Technical Specifications

Specifications	UT272A			UT275A		
	Range	Resolution	Accuracy	Range	Resolution	Accuracy
Earth resistance (Auto range)	0.01Ω~0.19Ω	0.01Ω	±(1.5%+0.05Ω)	0.01Ω~0.199Ω	0.001Ω	±(1%+0.02Ω)
	0.20Ω~1.95Ω	0.05Ω	±(1.5%+0.1Ω)	0.20Ω~1.99Ω	0.01Ω	±(1%+0.05Ω)
	2.0Ω~49.9Ω	0.1Ω	±(1.5%+1Ω)	2.0Ω~49.9Ω	0.1Ω	±(1%+0.5Ω)
	50.0Ω~99.5Ω	0.5Ω	±(2%+2Ω)	50.0Ω~99.5Ω	0.5Ω	±(1.5%+1Ω)
	100Ω~199Ω	1Ω	±(2.5%+5Ω)	100Ω~199Ω	1Ω	±(2%+2Ω)
	200Ω~400Ω	5Ω	±(5%+10Ω)	200Ω~395Ω	5Ω	±(5%+5Ω)
				400~590Ω	10Ω	±(10%+10Ω)
				600Ω~880Ω	20Ω	±(20%+20Ω)
				900Ω~1.20KΩ	30Ω	±(25%+30Ω)
AC Current (Auto range/50Hz/60Hz)				1.00mA~9.99mA	0.01mA	±(2.5%+1mA)
				10.0mA~99.9mA	0.1mA	±(2.5%+5.0mA)
				100mA~999mA	1mA	±(2.5%+10mA)
				1.00A~9.99A	0.01A	±(2.5%+0.2A)
				10.0A~30.0A	0.1A	±(2.5%+0.5A)

Features	UT272A	UT275A
Functional	1, Earth resistance test; 2, Loop resistance test	1, Earth resistance test; 2, Loop resistance test; 3, AC current test
Max measurable conductor dia.	Max Φ44mm	Max Φ44mm
Display	4 digit LCD	4 digit LCD
Sampling rate	2 time/s	2 time/s
Data storage	500 set	500 set
Bluetooth		√
Over range indication	√	√
Data recall	√	√
APO	Around 10 minutes without operation	Around 10 minutes without operation
Insulation resistance	50MΩ/1000V	50MΩ/1000V
Power consumption	Around 50mA (max: 100mA)	Around 50mA (max: 100mA)
Working temp	-10°C~50°C relative humidity below 85%, no condensation.	
Storage temp	-20°C~60°C relative humidity below 85%, no condensation.	
IP rating	IP40	IP40
Safety regulation grade	IEC 61010-1: 2001 (CATIV 300V; Pollution: 2) IEC 61010-2-032: 2002 IEC 61326: 2000 (EMC standard)	IEC 61010-1: 2001 (CATIV 300V;Pollution: 2) IEC 61010-2-032: 2002 IEC 61326: 2000 (EMC standard)

Product is preliminary and subject to change pending final release information.

UNI-TREND TECHNOLOGY

meters.uni-trend.com

UNI-T

EARTH CLAMP METERS

UT27X Series

The UT27X Series Earth Clamp Meter is a device for measuring ground resistance, featuring easy operation, portability, high accuracy and strong anti-interference capability; it is widely used in telecommunications, power, equipment rooms and other fields.

- Earth resistance test
- AC current — AC Current test (UT275A only)
- Data storage
- Blutooth App (UT275A only)
- Auto power off

Strong anti-interference & High accuracy

Permalloy is used as the core material of the clamp head, which has strong anti-interference ability.

Permalloy has extremely high magnetic permeability, which enables the clamp meter to achieve high-precision and high-sensitivity measurement under the condition of extremely weak alternating magnetic field.

Characteristics	Permalloy	Silicon Steel Sheet	Soft Ferrite
Initial Permeability (μi)	Extremely high (up to 105,000 or higher)	Relatively low (usually 1,500 - 6,000)	Medium to high (usually 1,400 - 15,000)
Maximum Permeability (μm)	Extremely high (up to 100,000 or more)	Significantly lower than permalloy	Significantly lower than permalloy
Saturation Magnetic Induction (Bs)	Medium (about 0.8T)	High (1.8T - 2.0T)	Low (0.3T - 0.5T)
Coercivity (Hc)	Extremely low	Relatively high	Low
Resistivity	Relatively low (about 55 μΩ·cm)	Very low (about 50 μΩ·cm)	Very high (about 10^3 μΩ·cm)
Relative Cost	High	Low	Low

Large clamp size

Max measurable conductor diameter: 44mm, suitable for most of application scenarios.

Data communication

500 set
Data storage

Data recall

Bluetooth app

UNI-T Smart Measure

- Generating testing report;
- Generating real-time charts;
- Export multiple test data: PDF/XLS/JPEG/CSV;

UNIT Smart Measure (Google play)

UNI-T Smart Measure (iOS-app store)

Self-calibration


1Ω resistance loop


10Ω resistance loop

Before testing, the standard-equipped test loops can be used for testing to check whether the device works accurately. The test loops are 1Ω test loop and 10Ω test loop respectively.

Application scenarios


Measurement of Tower Ground Resistance


Measurement of Transformer Ground Resistance


Measurement of AC Current in Distribution Cabinets


Measurement of Ground Resistance of solar Panels