TH2515

Micro-Ohm DC Resistance Meter

A touch-screen DC low-resistance meter built on Techmize's impedance-test experience, combining 0.01% basic accuracy with 0.1 µΩ resolution for relay-contact, welding-hole, interconnect and conductor resistance testing. Offset voltage compensation and thermal-EMF elimination keep readings free of contact potential effects, while the HANDLER interface and 10-bin comparator make it equally suited to bench use and production-line sorting.

Rack mount: 215(W) × 88(H) × 335(D) mm · Bench: 235(W) × 105(H) × 360(D) mm · 3.6 kg



- **0.01% maximum accuracy**, minimum resolution 0.1 µΩ
- 5½-digit reading, resistance range 0.1 µΩ – 110 MΩ
- 4.3" 24-bit colour touchscreen, 480×272 resolution
- Multiple test-function combinations: R, LPR, T
- Low-voltage test mode (open voltage ≤60 mV) protects the DUT
- Temperature compensation (TC) and temperature conversion (Δt)
- Offset voltage compensation (OVC) and user self-correction (0 ADJ)
- 10-bin comparator (OVER/PASS/BEEP) with CpK, Cp statistics
- Maximum sampling rate 100 samples/sec, 4-terminal Kelvin connection
- RS232, USB Host/Device, LAN standard; HANDLER for inline operation; GPIB optional

At a glance

Basic accuracy	Resolution	Measurement range	Fastest test speed	Display
0.01%	0.1µΩ	0.1µΩ–110MΩ	7ms	4.3" touch TFT

Accuracy and resolution figures above are the instrument's best-case values; see the full range table on page 2 for accuracy by resistance range.

Applications

Components & connectors

Resistors, inductors, transformers, motors, relays, circuit solder joints and capacitor riveting points; stranded wire, connectors and switches.

Materials

Heat-sensitive materials such as fuses and thermistor sensors; conductive materials such as metal foil.

New energy & production

EV battery-pack connecting bridges and cell connection resistance; bin-sorted go/no-go inspection on production lines via the HANDLER interface.

Resistance range & accuracy

Range	Test current	Resolution	Basic accuracy ±(%Rd + %Fs)	Open-circuit voltage
20 mΩ	1 A ±5%	0.1 µΩ	0.25 + 0.001%	5 V max
200 mΩ	1 A ±5%	1 µΩ	0.25 + 0.001%	5 V max
200 mΩ	100 mA ±5%	1 µΩ	0.35 + 0.001%	2.6 V max
2 Ω	100 mA ±5%	10 µΩ	0.035 + 0.001%	2.6 V max
20 Ω	10 mA ±5%	100 µΩ	0.025 + 0.001%	2.6 V max
200 Ω	10 mA ±5%	1 mΩ	0.0100 + 0.0010%	2.6 V max
2 kΩ	1 mA ±5%	10 mΩ	0.0100 + 0.0010%	2.6 V max
20 kΩ	100 µA ±5%	100 mΩ	0.0100 + 0.0005%	2.6 V max
100 kΩ	100 µA ±5%	1 Ω	0.0100 + 0.0030%	13 V max
1 MΩ	10 µA ±5%	10 Ω	0.0200 + 0.0030%	13 V max
10 MΩ	1 µA ±5%	100 Ω	0.1000 + 0.0060%	13 V max
100 MΩ	100 nA ±5%	1 kΩ	1.0000 + 0.1000%	13 V max

1-year accuracy shown for OVC ON, SLOW2 speed, 23±5 °C, ≤80% RH (the instrument's best-case setting). OVC OFF and MED/SLOW1/FAST speeds have looser accuracy — see Operation Manual §5.3 for the full table. Outside 18–28 °C a temperature correction factor (K = 1–4×) applies.

Technical specifications

Parameter	Value
Display	4.3" TFT LCD, 480 × 272, touch screen
Reading digits	5½ digits
Resistance measurement time	FAST 7 ms · MED 22 ms · SLOW1 102 ms · SLOW2 402 ms (add 20 ms with display on)
Temp. measurement time	100 ± 10 ms
Test terminal	4-terminal (Kelvin)
Averaging	1 – 255 readings
Range switching	AUTO and Manual
Trigger mode	Internal, Manual, External, Bus
Power-frequency rejection	Selectable, suppresses power-line noise
Setting data storage	30 parameter groups
Low-voltage measurement	Open voltage ≤60 mV; effective on 2 Ω, 20 Ω, 200 Ω, 2 kΩ ranges
Thermal-EMF elimination	Yes
Statistics	AVG, MAX, MIN, overall/sample standard deviation, process capability (Cp, CpK)
Test-lead contact check	Detects incorrectly connected measurement cables
Multi-pole connector	Yes (optional high-resistance noise-abatement function)
Beep modes	Comparator, bin compare, key press
Key lock	Yes
Temperature measurement 1	Sensor PT500, −99.9–250 °C; 1-yr accuracy ±0.30%Rd±0.5 °C (≤39.9 °C) / ±1.0 °C (40–99.9 °C)
Temperature measurement 2	Analogue input 0–2 V; display range −99.9 – 999.9 °C; 1-yr accuracy ±1%Rd ±3 mV
Temp. compensation/conversion	Converts readings to a preset reference temperature; derives temperature rise from before/after resistance values
Comparator signal output	HI / IN / LO
Comparator limit setup	Absolute high/low limit, or percentage high/low limit + nominal value
Sorting	10 bins, absolute-value or percentage
External trigger delay	AUTO (based on range, low-voltage mode, OVC) or MANUAL 0.000–9.999 s
External trigger input	Rising or falling edge
Working condition	0–40 °C, ≤80% RH
Storage condition	−10–50 °C, ≤90% RH
Accuracy guarantee condition	18–28 °C, ≤80% RH
Power supply	99–242 V AC, 47.5–63 Hz, 30 VA
Dimensions (rack / bench)	215×87×335 mm (net) / 235×105×360 mm (with foam sheath)
Weight	Approx. 3.6 kg

Interfaces

RS232C	USB Host	USB Device	LAN	Handler	GPIB
standard	standard	standard	standard	standard	optional

LXI Class C compliant. USB Host also supports automatic operating-software updates and screen/data export to a USB drive.

Standard accessories

Item	Description
–	EU power cable (Schuko, CEE 7/7)
TH26050S	Four-terminal Kelvin test cable
PT500	Temperature sensor

Optional

Item	Description
–	GPIB interface module
–	High-resistance noise-abatement function for multi-pole connector

Additional test leads and fixtures available on request — ask your Techmize contact or authorized distributor.

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