TH283X Series

Compact Digital LCR Meters

A low-cost, high-density-design LCR bridge family for evaluating capacitors, inductors, cores, resistors, transformers and chip components — built for incoming inspection, production-line sorting and R&D bench use. Three models cover general bench testing, DC-bias-assisted measurement, and 24 V DC-powered automation-line integration.

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



- **0.05% basic accuracy** (LCRZ), 6-digit reading resolution
- Test frequency up to **200 kHz** (300 kHz on TH2832D)
- 4.3" TFT colour display with clear English UI
- Simultaneous **L–RDC** display (inductance + DC resistance in one reading)
- Built-in comparator with 10-bin sorting, count function, pass/fail annunciation
- 201-point list sweep across frequency, AC level or DC bias
- DC bias source built in (TH2832 / TH2832D): 0–±5 V / 0–±50 mA
- Software-controlled power switch, one-touch screen capture, data logging
- Empty-fixture and short/open detection to guard against bad contact readings
- USB Host/Device, RS232 standard; GPIB interface optional

Three models, one platform

TH2830

General-purpose bench testing

Frequency	50 Hz – 100 kHz
Basic accuracy	0.05%
DC bias source	— (DCR only)
Power	220 V AC

TH2832

Wider range, built-in DC bias

Frequency	20 Hz – 200 kHz
Basic accuracy	0.05%
DC bias source	0–±5 V / ±50 mA
Power	220 V AC

TH2832D

24 V DC powered for panel-mounted cabinets

Frequency	20 Hz – 300 kHz
Basic accuracy	0.05%
DC bias source	0–±5 V / ±50 mA
Power	24 V DC

TH2832D runs directly from a 24 V DC control-cabinet supply, making it easy to mount inside automation panels and cabinets. A custom frequency floor down to 10 Hz is available on request across all three models for medical-device test applications. HANDLER interface is optional on TH2832D (standard on TH2830/TH2832). All models support SCPI and MODBUS protocols.

Applications

Passive components

Capacitors, inductors, magnetic cores, resistors, piezoelectric devices, transformers, chip components and network components.

Other components

Printed circuit boards, relays, switches, cables and batteries.

Production & automation

Bin-sorted go/no-go inspection on component lines; 24 V DC-powered TH2832D for cabinet-mounted test cells.

Technical specifications

Parameter	TH2830	TH2832	TH2832D
Display	4.3" TFT LCD, 480 × 272		
Reading resolution	6 digits		
Basic accuracy — LCRZ	0.05%	0.05%	0.05%
— DCR	0.1%	0.1%	0.1%
Test frequency	50 Hz – 100 kHz	20 Hz – 200 kHz, 10 mHz step[2]	20 Hz – 300 kHz, 10 mHz step[2]
Signal source impedance	30 Ω / 100 Ω, selectable		
AC signal level	Voltage 10 mV–2 Vrms (10 mV res.); Current 100 µA–20 mArms (0.1 mA res.)		
RDC test signal level	1 V	5 mV – 2 V	5 mV – 2 V
DC bias source	—	0–±5 V (0.5 mV res.) / 0–±50 mA (0.5 µA res.)	0–±5 V (0.5 mV res.) / 0–±50 mA (0.5 µA res.)
Test parameters	L, C, R, |Z|, D, Q, |Y|, G, X, θd, θr, RDC, Vm, Im, Δ%		
DCR display range	0.00001 Ω – 999.999 MΩ		
LCR display range	|Z|,R,X: 0.00001 Ω–99.9999 MΩ | C: 0.00001 pF–9.99999 F | L: 0.00001 µH–99.9999 kH | D: 0.00001–9.99999 | Q: 0.00001–99999.9		
Measurement speed	Fast 12.5 ms · Medium 83 ms · Slow 167 ms		
Equivalent circuit	Series, Parallel		
Trigger mode	Internal, Manual, External, Bus		
Averaging	1 – 255 readings		
Correction	Open, Short, Load		
List sweep	201 points — frequency, AC voltage/current, DC bias voltage/current		
Comparator	10 bins (BIN1–BIN9, NG, AUX), bin counting, PASS/FAIL front-panel display		
Storage	Internal: 40 setting files · USB: setting files, CSV data, GIF screen captures		
Dimensions (rack / bench)	215×88×335 mm / 235×105×360 mm		
Weight	3.6 kg		
Power supply	220 V AC	220 V AC	24 V DC

[2] 10 mHz step applies below 100 Hz; resolution steps up progressively at higher frequencies (0.1 Hz to 1 kHz, 1 Hz to 10 kHz, 10 Hz to 100 kHz, 100 Hz above 100 kHz).

Interfaces

RS232 standard | **USB Host** standard | **USB Device** standard | **Handler** std.* | **SCPI / MODBUS** standard

GPIB optional

* Handler is optional on TH2832D (standard on TH2830/TH2832).



Rear panel interfaces

Standard accessories

Item	Description
—	EU power cable (Schuko, CEE 7/7)
TH26010	Gold-plated short-circuit board
TH26011CS	Four-terminal-pair Kelvin test cable
TH26048A	Four-terminal-pair test fixture

Optional test fixtures

Item	Description
TH26007A	Toroidal-core test fixture
TH26008A	SMD component test fixture
TH26009B	SMD component test tweezers
TH26077	Dielectric test fixture

More fixtures available on request — ask your Techmize contact or authorized distributor.

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