

Component Parameter Test Instruments

A. TH2816A/TH2816B/TH2817A Precision LCR Meter

Features

- 240×64 dot-matrix graphics LCD display
- Friendly user's interface and easy operation
- TH2816A: Over 12,000 frequency points available from 50Hz to 200kHz
- TH2816B: 37 typical frequency points
- TH2817A: 16 typical frequency points available from 50Hz to 100kHz
- Programmable single-voltage level from 10mVrms to 2.0Vrms
- World-level stability and accuracy
- 6 digit readout resolution
- Up to 30meas/sec measurement rate
- Precision LOAD correction function
- Selectable signal source output impedances: 30Ω, 100Ω
- Direct control function for TH1773/TH1775 DC bias source
- List sweep function for up to 4 frequencies, signal levels and DC bias levels
- Direct, Δ ABS and Δ% display modes
- 12 control setting files memory
- Built-in comparator, 10 Bins and bin counters (TH2816A/B)
- Built-in comparator, 4 Bins and bin counters(TH2817A)
- Test signal level monitor function
- Key lock function
- Handler interface
- RS-232C and optional GPIB interfaces

Brief Introduction

■ TH2816A/TH2816B/TH2817A is a new precision LCR meter combined with years of technical experience and newest measurement technology of instrument industry. With powerful measurement functions, high performance and low cost, TH2816A/TH2816B/TH2817A have been one of the world advanced instruments, and it provides users a super value measurement resolution and experience. The meter offers stable 6 digit resolution, wide frequency range (50Hz to 100kHz for TH2817A and 50Hz to 200kHz for TH2816A), programmable signal level (0.01V to 2.0V), up to 30 meas/sec measurement rate, 9 measurement ranges, 30Ω or 100Ω constant output impedance and friendly operation interface. TH2816A/TH2816B/TH2817A can be used for incoming inspection of components, quality control of product line and high accuracy laboratory use. The HANDLER, GPIB, RS232C interfaces make it easy to build an automatic component test system, communicate with the computer and record the test results.

Specifications

Measurement function		
Test parameter	Z , C, L, X, B, R, G, D, Q, θ	
Basic accuracy	TH2816A TH2817A	0.05%
	TH2816B	0.1%
Equivalent circuit	Series and Parallel	
Math function	Deviation and Percent Deviation	
Ranging mode	Auto, Hold	
Trigger mode	Internal, Manual, External and Bus	
Measuring speed	Slow: 1.5meas/sec Med: 10meas/sec Fast: 30meas/sec	
Correction function	Open, Short and Load corrections	
Measurement terminal	5 terminals	
Averaging rate	1—255, TH2816A/TH2817A only	
Delay time	0—60sec, with step of 1ms	
List sweep	List sweep for up to 4 frequencies, signal levels and DC bias levels	



TH2816A/TH2816B/TH2817A

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Display Mode	Direct, Δ ABS, $\Delta\%$, V/I(V/I monitor), Bin number and bin counter	
Display	240×64 dot-matrix LCD display, 6-digit resolution	
Test signal		
Signal frequency	TH2816A	50Hz to 200kHz , over 12,000 points
	TH2816B	50Hz to 200kHz , total 37 points
		50Hz, 60Hz, 80Hz, 100Hz, 120Hz, 150Hz, 200Hz, 250Hz, 300Hz, 400Hz, 500Hz, 600Hz, 800Hz, 1kHz, 1.2kHz, 1.5kHz, 2kHz, 2.5kHz, 3kHz, 4kHz, 5kHz, 6kHz, 8kHz, 10kHz, 12kHz, 15kHz, 20kHz, 25kHz, 30kHz, 40kHz, 50kHz, 60kHz, 80kHz, 100kHz, 120kHz, 150kHz, 200kHz
TH2817A	from 50Hz to 100kHz: 50Hz, 60Hz, 100Hz, 120Hz, 200Hz, 400Hz, 500Hz, 1kHz, 2kHz, 4kHz, 5kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz , 16 points	
Output impedance	30 Ω , 100 Ω	
Test level	10mVrms to 2.0Vrms, 10mV steps	

Measurement display range	
Z , R,X	0.00001 Ω — 99.9999M Ω
C	0.00001pF — 999.999mF
L	0.00001 μ H — 9.99999kH
G,B	0.00001 μ S — 999.999S
D	0.00001 — 9.99999
Q	0.00001 — 99999.9
θ (DEG)	-179.999° — 179.999°

θ (RAD)	-3.14159 — 3.14159	
$\Delta\%$	-999.999% — 999.999%	
Comparator, memory & interface		
Comparator Function	TH2816A TH2816B	10 Bins(BIN1 to BIN9 , OUT of bins), and additional AUX bin
	TH2817A	4 bins(BIN1 to BIN3, OUT of bins), and additional AUX bin
Memory	12 control settings memory for store/recall	
Interface	RS-232C, HANDLER, GPIB (Optional)	

Ordering Information

TH2816A Precision LCR Meter
 TH2816B LCR Meter
 TH2817A Precision LCR Meter

Instrument Accessories

TH26005A 4 terminal test fixture
 TH26011A 4 terminal Kelvin test clip leads
 TH26010 Gilded shorting plate

Options

TH26047 4 terminal test fixture
 TH26048 4 terminal test fixture
 TH26006 Axial component test fixture
 TH26007A Core inductor test fixture
 TH26008A SMD component test fixture
 TH26009B SMD Kelvin test tweezers
 TH26033 GPIB interface cable
 TH26034 RS232C interface cable
 TH10001 GPIB interface board
 TH12003 RS232C control software(TH2816A)
 TH12004 RS232C control software(TH2817A)