



Datasheet

UTR2810+ Series Digital LCR Meter

V1.0 2024-07-10

1. Main Features

2.8" TFT true color LCD

Multiple measurement frequency: 100Hz, 120Hz, 1kHz, 10kHz, accuracy: 0.02%

Highest measurement accuracy: 0.1%

The main and auxiliary parameters can be matched freely, with 42 combinations in total

Test speed: slow / medium / fast

The fastest test speed is 33 times / s

Automatic LCR measurement function

Comparator function (4th gear sorting)

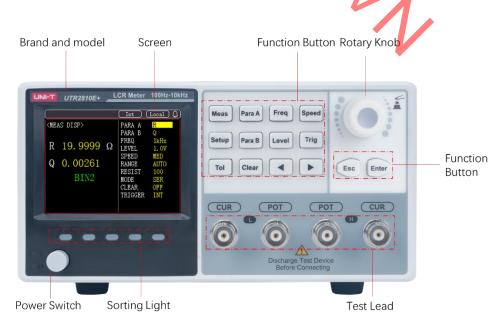
UTR2810E can send sorting signal through Handler interface

UTR2810E can be connected to the upper computer for statistical analysis

UTR2810E has bus trigger and external trigger functions

2. Product Overview

UTR2810+ series LCR digital bridge is a new generation of low frequency component measuring instrument. Small size, light weight, beautiful appearance, simple operation, ultrahigh cost performance and good test stability. It can meet the needs of production line quality assurance, incoming material inspection and automatic production





3. Design Highlights

Four stage sorting

The full series of UTR2810+ is equipped with four gear sorting comparators, BIN1, BIN2, BIN3, NG. Cooperate with auxiliary parameter AUX to realize multi-stage sorting function. Help you

better and more carefully control the quality of electronic components.

[nt) (Local	I) (J)	[Int	Local 🗘
<tolera< th=""><th>NCE></th><th></th><th></th><th></th><th><me#< th=""><th>AS DISP></th><th></th><th>PARA A</th><th>R</th></me#<></th></tolera<>	NCE>				<me#< th=""><th>AS DISP></th><th></th><th>PARA A</th><th>R</th></me#<>	AS DISP>		PARA A	R
PARA A	R	STAND	+000.000	Ω				PARA B	Q
PARA B	Q	COMP	ON		D	10.0157	6	FREQ	1kHz
MODE	ABS	AUX	ON		К	10.0157	22	LEVEL	1.0V
	F 0 7		F 0 7		~	0 00005		SPEED	MED
LOW	[Ω]	HIGH	[Ω]		Q	0.00265		RANGE	AUTO
BIN1	+010.000	BIN1	+015.000			BIN1		RESIST	100
BIN2	+015.000	BIN2	+025.000			DINI		MODE	SER
BIN3	+000.000	BIN3	+000.000					CLEAR	OFF
AUX	+000.000	AUX	+000.000	[-]				TRIGGER	INT

2.8inch TFT LCD display

UTR2810+ series is equipped with 2.8inch full-color LCD display. More parameters are displayed, and the color discrimination of measurement results is more intuitive. It is more conducive to human-computer interaction and improve the use experience.

	Int Local Q	[Int (Local 🗘
<pre><system setting=""></system></pre>		<me.< td=""><td>AS DISP></td><td></td><td>PARA A</td><td>R</td></me.<>	AS DISP>		PARA A	R
COMMUNICATION MODE	RS232				PARA B	Q
BAUD RATE	115.2k	Б	6 67604	\sim	FREQ	1kHz
PASS SOUND	ON	ĸ	6.67604	55	LEVEL	1.0V
FAIL SOUND	ON	~	0.00074		SPEED	MED
KEY SOUND	ON	Q	0.00274		RANGE	AUTO
LANGUAGE	ENGLISH				RESIST	100
DEFAULT SETTING	ENTER		NG		MODE	SER
AUTO LCR	OFF				CLEAR	OFF
SAVE SET	OFF				TRIGGER	INT
SYS INFO	HWV2.2 SWV1.6					

Full screen display

Long press the [Meas] key, the test result could be displayed in full screen.

(Int Local Q	Int Local Q
<meas disp=""></meas>	PARA A R	<meas disp=""></meas>
R 0.37621	PARA B Q FREQ 1kHz	FREQ 1kHz LEVEL 0. 3V
K 0. 57021	♀ LEVEL 0. 3V SPEED SLOW	R 0.37608 Ω
Q 0.00296	RANGE AUTO	
	RESIST 100 MODE SER	Q 0.00295
	CLEAR OFF	
	TRIGGER INT	

High measurement accuracy

The basic accuracy of UTR2810+ series measurement can reach 0.1%. Provide multi frequency, multi-level, multi internal resistance and other measurement parameters. Make the measurement results more accurate and meet a variety of application scenarios

	Int (Local 🗘	[Int	Local 🗘
<meas disp=""> Cs 353. 491uF Q 7. 18589</meas>	PARA A PARA B FREQ LEVEL SPEED RANGE RESIST MODE CLEAR TRIGGER	C Q 1kHz 1.0V MED AUTO 100 SER OFF INT		AS DISP> 19. 9999 0. 00261 BIN2	Ω	PARA A PARA B FREQ LEVEL SPEED RANGE RESIST MODE CLEAR TRIGGER	R Q 1kHz 1. OV MED AUTO 100 SER OFF INT

Remote control

The UTR2810E+ uses the RS232 interface to connect the upper computer, so as to realize remote control. With the host computer software, the data record and filtering can be displayed at the same time. Support SCPI protocol, which can be applied to automatic construction.

File 🖂 System	m ~		UNIT,UTR28	10E+,CDB2024140002,REVA2	2.8				- 0
Para A	c ~		C:43.1838u			Q:10.66	86		
Para B	Q ~	id	Date	С	Q	COMP	SET		
Freq	1.00E+03 ~	11	2024:06:25 17:22:24	43.1793u	10.6611	Nominal	0		
Level	1V ~	12	2024:06:25 17:22:25	43.1814u	10.6661	Comp Mode	ABS V		
Range	AUTO V	13	2024:06:25 17:22:26	43.1854u	10.6662		с		Q
Speed	MED V	14	2024:06:25 17:22:27	43.1838u	10.6686	Comp Switch	OFF V	Comp Switch	OFF V
Resist	100 ~					High1	0	High	0
lode	PAR V					Low1	0	Low	0
						High2	0		
ime	18 🗸	· · · · · · · · · · · · · · · · · · ·				Low2			
Pause							0		
						High3	0		
		< 1 2 >				Low3	0		
							Set		
				γ_{\wedge}					
i.T	echr	nical Ind	lex						
Mod	اما		UTR2811F+	-		JT R281	NF+		

4. Technical Index

Model		UTR2811E+	UTR2810E+		
Test signal Frequency		100Hz,120Hz,1kHz,10kHz 🔶	100Hz,120Hz,1kHz,10kHz		
frequency Accuracy		0.02%	0.02%		
AC level	Voltage	0.1V,0.3V,1V	0.1V,0,3V,1V		
	range				
	Accuracy	±10%×set value	±10%×set value		
Internal Resistanc		30Ω / 100Ω	30Ω / 100Ω		
resistance of	е				
AC source	Accuracy	±5%	±5%		
Measurement p	parameters	Main parameters:	Main parameters:		
		Cp,Cs,Lp,Ls,Z,R,G,Y	Cp,Cs,Lp,Ls,Z,R,G,Y		
		Secondary parameters:	Secondary parameters:		
		D,Q,X,B,Rp,Rs, θ r, θ d	D,Q,X,B,Rp,Rs, θ r, θ d		
		Auto LCR	Auto LCR		
		Free collocation of main and	Free collocation of main and		
		auxiliary parameters	auxiliary parameters		
Test speed (ms	: / time)	Fast: 43ms; Medium speed:	Fast: 43ms; Medium speed:		
		185ms; Slow speed: 350ms	185ms; Slow speed: 350ms		

						
Display range	R, X, Ζ : 0.00001Ω ~	R, X, Ζ : 0.00001Ω ~				
	99.9999MQ;	99.9999MΩ;				
	G, B, Y : 0.00001uS ~	G, B, Y : 0.00001uS ~				
	999.999S;	999.999S;				
	L: 0.00001uH~9.99999kH;	L: 0.00001uH~9.99999kH;				
	C: 0.00001pF~999.999mF;	C: 0.00001pF~				
	D: 0.00001~9.99999;	999.999mF;				
	Q: 0.00001~99999.9;	D: 0.00001~9.99999;				
	θ d: -179.999° ~ 179.999°;	Q: 0.00001~99999.9;				
	θ r: -3.14159 ~ 3.14159;	θ d: -179.999° ~ 179.999°;				
		θ r: -3.14159 ~ 3.14159;				
Basic accuracy	C: 0.1% (1+ Cx/Cmax+ Cmin/Cx	(1+Dx (1+ks+kv+kf)ke				
,	L: 0.1% (1+ Lx/Lmax+ Lmin/Lx)	(1+1/Qx)(1+ks+kv+kf)ke				
	Z: 0.1% (1+ Zx/Zmax+ Zmin/Zx)	(1+ks+kv+kf)ke				
	R: 0.1%(1+ Rx/Rmax+ Rmin/Rx					
	D: 0.0010(1+ Zx/Zmax+ Zmin/Zx)(1+Dx+Dx2)(1+ks+kv+kf)ke					
	0:00015(1+ Zx/Zmax+ Zmin/Z>					
Test end configuration	Open circuit, short circuit	Open circuit, short circuit				
Clear function	Open circuit, short circuit	Open circuit, short circuit				
Equivalent mode	Series, parallel	Series, parallel				
Range mode	Hold, auto	Hold, auto				
Trigger mode	Internal, manual	Internal, manual, external,				
		bus				
Mathematical operation	Direct reading, $\triangle ABS, \triangle \%$	Direct reading, $\triangle ABS$, $\triangle \%$				
Comparator	Para A 4-gear sorting, BIN1-	Para A 4-gear sorting, BIN1-				
	BIN3, NG, Para B 2-gear	BIN3, NG, Para B 2-gear				
	sorting, AUX, NG, front panel	sorting, AUX, NG, front panel				
	LCD display	LCD display				
Interface	-	RS232, HANDLER				
Upper computer function	-	Statistical analysis of upper				
		computer				
Power	110V/220V 50/60Hz 20W-	110V/220V 50/60Hz 20W-				
	30W	30W				
Display	2.8" TFT LCD 240×320	2.8" TFT LCD 240×320				
Product size (W×H×D)	267mm×174mm×88mm	267mm×174mm×88mm				
Product net weight	2.15kg	2.15kg				
-						

5.Accessory

Name Number		Description
UTR-001 1		Short circuit board (UTR2810E+)
UTR-L10kE 1		Kelvin test cable with crocodile clip
UTR-S100KE	1	4-wire test box (UTR2810E+)
Communication cable 1		RS232 Communication cable (UTR2810E+)
Power cable	1	Fits the standard of destination country
Fuse 2		0.25A for 220V, 0.5A for 110V

6. Limited Warranty and Liability

Uni-T guarantees that the Instrument product is free from any defect in material and workmanship within three years from the purchase date. This wananty does not apply to damages caused by accident, negligence, misuse, modification, contamination or improper handling. If you need warranty service within the warranty period, please contact your seller directly. Uni-T will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by using this device. For the probes and accessories, the warranty period is one year. Visit instrument.uni-trend.com for full warranty information.



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