

# Resistance Tester

## High-Precision DC Resistance Meter TR-2301 Series

### Product description:

4.3-inch 24-bit true color LCD screen maximum sampling rate of 100 times/second, 5½ digit high-resolution measurement result display, maximum resistance accuracy 0.01%, test range 0.1 $\mu\Omega$  up to 2G $\Omega$ , temperature accuracy: 0.1°C; intelligent detection of test state faults; R, LPR, T and other test function combinations support PT100 and PT500 temperature sensors, low voltage test mode to effectively protect the DUT, temperature compensation function (TC), offset voltage compensation function (OVC), user self-calibration function (Zero : 0 ADJ) statistical function, providing CpK, Cp and other statistical quantities, screenshot function, data recording and parameter saving function, simultaneous output of 10 level comparison results (out of limit, qualified and alarm), Handler interface for online operation



### Features

- 4.3 inch 24-bit true color LCD screen 480×272 resolution.
- The maximum sampling rate is about 100 times/second
- 5½ Digit high-resolution measurement result display
- Highest resistance accuracy: 0.01%, minimum resolution: 0.1 $\mu\Omega$
- Intelligent detection of test status faults
- Supports PT100 and PT500 temperature sensors
- Low voltage test mode, effectively protecting the device under test
- Statistical function, providing statistics such as CpK, Cp, etc.
- Screen capture function, data recording and parameter saving function
- Handler interface is used to implement online operations
- Simultaneously output 10-level comparison results (out of limit, qualified and alarm)
- Handler interface is used to implement online operations
- Test range up to 2G $\Omega$
- Basic temperature accuracy: 0.1°C
- R, LPR, T and other test function combinations
- Offset voltage compensation function (OVC)
- Temperature compensation function (TC)
- User self-calibration function (0ADJ)



### Ordering Informations

**TR-2301**: 0.1 $\mu\Omega$  ~ 110M $\Omega$  DCR Meter

**TR-2301+**: 0.1 $\mu\Omega$  ~ 2000M $\Omega$  DCR Meter

### Standard Accessories :

- User Manual
- Four-terminal Test Lead
- Power cord
- Temperature sensor

### Specifications

Model	TR-2301	TR-2301+																								
Display	24-bit true color LCD screen 480×272 resolution																									
Reading Digits	5½ Digits																									
Measurement Range	0.1 $\mu\Omega$ ~ 110M $\Omega$																									
Resistance Range	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>20m<math>\Omega</math></td><td>200m<math>\Omega</math></td><td>2<math>\Omega</math></td><td>20<math>\Omega</math></td><td>200<math>\Omega</math></td><td>2k<math>\Omega</math></td><td>20k<math>\Omega</math></td><td>100k<math>\Omega</math></td><td>1M<math>\Omega</math></td><td>10M<math>\Omega</math></td><td>100M<math>\Omega</math></td><td>2000M<math>\Omega</math></td> </tr> <tr> <td>1A</td><td>100mA</td><td>10mA</td><td>1mA</td><td>100<math>\mu</math>A</td><td>10<math>\mu</math>A</td><td>1<math>\mu</math>A</td><td>100nA</td><td>10nA</td><td>1nA</td><td>TR2301 only</td><td>TR2301+ only</td> </tr> </table>		20m $\Omega$	200m $\Omega$	2 $\Omega$	20 $\Omega$	200 $\Omega$	2k $\Omega$	20k $\Omega$	100k $\Omega$	1M $\Omega$	10M $\Omega$	100M $\Omega$	2000M $\Omega$	1A	100mA	10mA	1mA	100 $\mu$ A	10 $\mu$ A	1 $\mu$ A	100nA	10nA	1nA	TR2301 only	TR2301+ only
20m $\Omega$	200m $\Omega$	2 $\Omega$	20 $\Omega$	200 $\Omega$	2k $\Omega$	20k $\Omega$	100k $\Omega$	1M $\Omega$	10M $\Omega$	100M $\Omega$	2000M $\Omega$															
1A	100mA	10mA	1mA	100 $\mu$ A	10 $\mu$ A	1 $\mu$ A	100nA	10nA	1nA	TR2301 only	TR2301+ only															
Basic Meas. Accuracy	0.01% ( For detailed information , refer to the instruction manual)																									
Resistance Meas. Time	Fast : 7ms Med : 22ms Slow 1 : 102ms Slow 2 : 402ms																									
Temp. Meas. Time	50 ± 10ms																									
Test Terminal	4-Wire																									
Low Voltage Measurement	Open circuit voltage : ≤60mV Effective range : 2 $\Omega$ 20 $\Omega$ 200 $\Omega$ 2k $\Omega$																									
Thermo Electromotive Force Elimination	√																									
Statistics Function	Average, Max, Min, Total standard deviation, Sampling standard deviation, Engineer capability index Dispersion Cp, Bias, CpK																									
Setting Data Storage	30 groups																									
Temperatare Meas.	Sensor : Pt100, Pt500, Range -10°C ~ 299.9°C, Display : -99.9°C ~ 999.9°C																									
Other Functions	Temperature compensation function, Temperatare conversion function																									
Signal O/P	HI/IN/LO																									
Comparator Beep	Beep mode : OFF, IN, HI/LO																									
Limit set-up	10 grids, absolute upper/lower limits, % upper/lower limits +normal value																									
Interface	USB Deivce, USB Host, RS232, LAN, HANDLER, GPIB (Option)																									
Working Environment	Temperatare : 0 ~ 40°C, Humidity : ≤80%RH																									
Storage Environment	Temperatare : -10 ~ +40°C, Humidity : ≤90%RH																									
Input Power	99 ~ 240Vac 47.5 ~ 63Hz																									
Dimension (WxHxD)	215x88x335 mm.																									
Weight	3.6 kg																									