

LCR7000 Series

Introduction

The LCR7000 series are high precision LCR meter with basic accuracy 0.1% and 0.05% (LCR7000A) and maximum measurement frequency up to 500kHz. The 5-digit 4.3-inch TFT LCD display gives easy reading. The RS-232 interface facilitates in remote control and analysis of measurement results. With its fast measurement speed, wide frequency range and low cost, the LCR7000 series are widely used in R&D, IQC, online quality control and automatic test system.

Features

- ✓ 32-bit core processor
- ✓ 5-digit 4.3-inch TFT LCD display
- ✓ 2 signal source output impedance: 30 Ω , 100 Ω (LCR7000)
- ✓ 4 signal source output impedance: 30 Ω , 100 Ω , 10/100, /10CC (LCR7000A)
- ✓ List mode function, 10 steps
- ✓ 100 sets memories for internal storage/save
- ✓ 500 memories for U disk storage/save, supports FAT16 and FAT32 files
- ✓ Save the last parameter settings before power off
- ✓ Standard interface: RS-232, HANDLER, USB HOST

Product photo



Specifications

| Model | LCR-7010 | LCR-7030 | LCR-7200 |
|----------------------------------|---|------------------------------------|------------------|
| Measurement function | | | |
| Test parameter | Z , Y , C, L, X, B, R, G, D, Q, θ | | |
| Test signal frequency | LCR-7010: 100Hz, 120Hz, 1kHz, 10kHz LCR-7030: 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 30kHz LCR-7200: 40Hz, 50Hz, 60Hz, 75Hz, 100Hz, 120Hz, 150Hz, 200Hz, 250Hz, 300Hz, 400Hz, 500Hz, 600Hz, 750Hz, 800Hz, 1kHz, 1.5kHz, 2kHz, 2.5kHz, 3kHz, 4kHz, 5kHz, 6kHz, 7.5kHz, 10kHz, 12kHz, 15kHz, 15.7kHz, 16.2kHz, 20kHz, 25kHz, 30kHz, 40kHz, 50kHz, 60kHz, 66.6kHz, 75kHz, 100kHz, 120kHz, 150kHz, 200kHz (38 points) | | |
| Basic accuracy | 0.15% | 0.1% | 0.1% |
| Equivalent circuit | Series, Parallel | | |
| Mathematical function | Absolute Deviation and Percentage Deviation | | |
| Range mode | Auto, Hold, Manual Selection | | |
| Trigger mode | Internal, Manual, External, BUS | | |
| Measurement speed | Fast: max.30, Medium: 10, Slow: 3 (times/second) (≥ 1 kHz) | | |
| Average times | 1-255 | | |
| Delay time | 0-60s, step 1ms | | |
| Calibration function | Open circuit, Short circuit, Load | | |
| Measurement terminal | 5-terminal | | |
| Display mode | Direct, Δ , $\Delta\%$, V/I (monitoring test voltage and current) | | |
| Display | 5 digit 4.3-in LCD display | | |
| List Mode | 10 steps | | |
| Measurement signal | | | |
| Output impedance | 30 Ω , 100 Ω | | |
| Test level | 0.1V, 0.3V, 1V | 0.1V, 0.3V, 1V | 0.05V to 1V |
| Test level accuracy | 5% | | |
| Measurement display range | | | |
| Z , R, X | 0.01m Ω - 99.999 M Ω | | |
| Y , G, B | 0.0001 μ S - 99.999 S | | |
| C | 0.0001 pF - 9.9999 F | | |
| L | 0.0001 μ H - 999.99 H | | |
| D | 0.0001 - 9.9999 | | |
| Q | 0.0001 - 9999.9 | | |
| θ (DEG) | -179.99 $^{\circ}$ - 179.99 $^{\circ}$ | | |
| θ (RAD) | -3.14159 - 3.14159 | | |
| $\Delta\%$ | -999.99% - 999.99% | | |
| Comparator and interface | | | |
| Comparator | N/A | 4-bin comparator | 5-bin comparator |
| Memory | 100 sets memories for internal parameter settings storage/save 500 sets for U disk parameter settings storage/save | | |
| Standard interface | Standard: RS232, USB HOST | Standard: RS232, USB HOST, HANDLER | |
| Optional interface | N/A | | |
| General | | | |
| Operating environment | 0 $^{\circ}$ C - 40 $^{\circ}$ C, $\leq 80\%$ RH | | |
| Power source | 110/220V $\pm 10\%$, 47~63Hz | | |
| Power consumption | ≤ 30 VA | | |
| Accessories | 4-terminal Kelvin test clip leads, RS232 cable, power cord, operation manual | | |
| Dimensions | 265W*100H*340D mm | | |
| Weight | Approx.3.5kg | | |

| Model | LCR-7100A | LCR-7200A | LCR-7300A | LCR-7500A |
|----------------------------------|--|-------------|-------------|-------------|
| Measurement function | | | | |
| Test parameter | Z , Y , C, L, X, B, R, G, D, Q, θ , DCR | | | |
| Test signal frequency | 12Hz~100kHz | 12Hz~200kHz | 12Hz~300kHz | 12Hz~500kHz |
| Min frequency step | 0.1mHz | | | |
| Basic accuracy | 0.05% | | | |
| Equivalent circuit | Series, Parallel | | | |
| Mathematical function | Absolute Deviation and Percentage Deviation | | | |
| Range mode | Auto, Hold, Manual Selection | | | |
| Trigger mode | Internal, Manual, External, BUS | | | |
| Measurement speed | Fast: max.75, Medium: 12, Slow: 3 (times/second) (≥ 1 kHz) | | | |
| Average times | 1-255 | | | |
| Delay time | 0-60s, step 1ms | | | |
| Calibration function | Open circuit, Short circuit, Load | | | |
| Display mode | Direct, Δ , $\Delta\%$, V/I (monitoring test voltage and current) | | | |
| Display | 6 digit 4.3-in LCD display (480x272 RGB5) | | | |
| List Mode | 10 steps | | | |
| Measurement signal | | | | |
| Output impedance | 30 Ω , 100 Ω , 10/100, 10/CC | | | |
| Test level and accuracy | Normal: 5mV~2Vrms, accuracy 10%, Min step1mV, Max.test current 20mA Constant level: 5mV~1Vrms, accuracy 6%, Min step1mV | | | |
| DC bias source | 0V, 1.5V, 2V Accuracy 1% | | | |
| Measurement display range | | | | |
| Z , R, X | 0.01m Ω - 99.9999 M Ω | | | |
| DCR | 0.001 m Ω - 99.9999 M Ω | | | |
| Y , G, B | 0.00001 μ S - 99.9999 S | | | |
| C | 0.00001 pF - 9.99999 F | | | |
| L | 0.00001 μ H – 99.9999 kH | | | |
| 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 and interface | | | | |
| Comparator | 10 bins (9 pass 1 fail) and 1 AUX bin | | | |
| Memory | 100 sets memories for internal parameter settings storage/save 500 sets for U disk parameter settings storage/save | | | |
| Standard interface | Standard: RS232, USB HOST, HANDLER, EAR PHONE, PEDAL interfaces | | | |
| Optional interface | GPIB | | | |
| General | | | | |
| Operating environment | 0°C - 40°C, $\leq 80\%$ RH | | | |
| Power source | 110/220V $\pm 10\%$, 47~63Hz | | | |
| Power consumption | ≤ 50 VA | | | |
| Accessories | 4-terminal Kelvin test clip leads, RS232 cable, power cord, operation manual | | | |
| Dimensions | 265W*100H*340D mm | | | |
| Weight | Approx.4.5kg | | | |

Specifications are subject to change without prior notice.