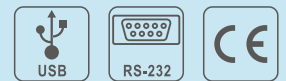# Bench LCR Meter

## 10kHz / 30kHz / 100kHz / 200kHz / 300kHz / 500kHz

**Twintex**

## LCR7000 / A SERIES



## FEATURES

- 32bit core processor
- 5 digits 4.3-inch TFT LCD display (LCR7000)
- 6 digits 4.3-inch TFT LCD display (LCR7000A)
- 2 signal source output impedance: 30Ω, 100Ω (LCR7000)
- 4 signal source output impedance: 30Ω, 100Ω, 10/100, 10/CC (LCR7000A)
- 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 RS-232 interface for PC remote control
- Standard USB Host interface for external save & recall
- Standard HANDLER interface (not available on LCR-7010)
- Standard EAR PHONE and PEDAL interface (LCR7000A)
- Optional GPIB interface  (LCR7000A)

# Bench LCR Meter

## 10kHz / 30kHz / 100kHz / 200kHz / 300kHz / 500kHz

| Model | LCR-7010 | LCR-7030 | LCR-7200 | LCR-7100A | LCR-7200A | LCR-7300A | LCR-7500A |
|---|---|---|---|---|---|---|---|
| **Measurement function** | | | | | | | |
| Test parameter | \|Z\|, \|Y\|, C, L, X, B, R, G, D, Q, θ | | | \|Z\|, \|Y\|, C, L, X, B, R, G, D, Q, θ, DCR | | | |
| Test signal frequency | LCR-7010: | 100Hz, 120Hz, 1kHz, 10kHz | | | | | |
| | LCR-7030: | 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 30kHz | | | | | |
| | LCR-7200: (38 points) | 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 | | | | | |
| | LCR-7000A: | 12Hz~100kHz / 200kHz / 300kHz / 500kHz continuously adjustable with min. step 0.1mHz | | | | | |
| Basic accuracy | 0.15% | 0.1% | 0.1% | 0.05% | 0.05% | 0.05% | 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 (≥1kHz) | Fast: max.30; Medium: 10; Slow: 3 (times/second) | | | Fast: max.75, Medium: 12, Slow: 3 (times/second) | | | |
| Average times | 1-255 | | | | | | |
| Delay time | 0-60s, step 1ms | | | | | | |
| Calibration function | Open circuit, Short circuit, Load | | | | | | |
| Measurement terminal | 5 terminals | | | | | | |
| Display mode | Direct, Δ, Δ%, V/I (monitoring test voltage and current) | | | | | | |
| Display | 5 digits 4.3-in LCD display | | | 6 digits 4.3-in LCD display | | | |
| List scan | N/A | | | 10 points list scan | | | |
| **Measurement signal** | | | | | | | |
| Output impedance | 30Ω, 100Ω | | | 30Ω, 100Ω, 10/100, 10/CC | | | |
| Test level | 0.1V, 0.3V, 1V accuracy 5% | 0.1V, 0.3V, 1V accuracy 5% | 0.05V~1V accuracy 5% | Normal: 5mV~2V, accuracy 10%, Min step 1mV, Max. test current 20mA Constant level: 10mV~1V, accuracy 5%, Min step 1mV | | | |
| DC bias source | N/A | | | 0V, 1.5V, 2V, accuracy 1% | | | |
| **Measurement display range** | | | | | | | |
| \|Z\|, R, X | 0.01mΩ~99.999 MΩ | | | 0.01mΩ~99.9999 MΩ | | | |
| DCR | NA | | | 0.001mΩ~99.999 MΩ | | | |
| \|Y\|, G, B | 0.0001μs~99.999s | | | 0.00001μs~99.9999s | | | |
| C | 0.0001pF~9.9999F | | | 0.00001pF~9.99999F | | | |
| L | 0.0001μH~999.99H | | | 0.0001μH~9999.99H | | | |
| D | 0.0001~9.9999 | | | 0.00001~9.99999 | | | |
| Q | 0.0001~9999.9 | | | 0.00001~9999.99 | | | |
| θ (DEG) | -179.99°~179.99 ° | | | -179.999°~179.999 ° | | | |
| θ (RAD) | -3.14159~3.14159 | | | -3.14159~3.14159 | | | |
| Δ% | -999.99%~999.99% | | | NA | | | |
| **Comparator and interface** | | | | | | | |
| Comparator | N/A | 4 bins | 5 bins | 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 | RS-232, USB HOST HANDLER (for LCR-7200 only) | | | RS-232, USB HOST, HANDLER, EAR PHONE, PEDAL | | | |
| Optional interface | N/A | | | GPIB | | | |
| **General** | | | | | | | |
| Operating environment | 0°C~40°C, ≤80%RH | | | | | | |
| Power source | AC 110/220V±10% selectable, 50/60Hz, Max. 30VA | | | | | | |
| Accessories | Power cord x1, Operation manual x1, RS-232 cable x1, 4-terminal Kelvin test clip leads x1 | | | | | | |
| Dimensions (WxHxD) | 265x100x340mm | | | | | | |
| Weight | Approx. 3.5kg | | | Approx. 4.5kg | | | |